

REPORT TO THE CONGRESS

Medicare and the
Health Care
Delivery System

MEDPAC

Medicare
Payment Advisory
Commission

The Medicare Payment Advisory Commission (MedPAC) is an independent congressional agency established by the Balanced Budget Act of 1997 (P.L. 105–33) to advise the U.S. Congress on issues affecting the Medicare program. In addition to advising the Congress on payments to health plans participating in the Medicare Advantage program and providers in Medicare’s traditional fee-for-service program, MedPAC is also tasked with analyzing access to care, quality of care, and other issues affecting Medicare.

The Commission’s 17 members bring diverse expertise in the financing and delivery of health care services. Commissioners are appointed to three-year terms (subject to renewal) by the Comptroller General and serve part time. Appointments are staggered; the terms of five or six Commissioners expire each year. The Commission is supported by an executive director and a staff of analysts, who typically have backgrounds in economics, health policy, and public health.

MedPAC meets publicly to discuss policy issues and formulate its recommendations to the Congress. In the course of these meetings, Commissioners consider the results of staff research, presentations by policy experts, and comments from interested parties. (Meeting transcripts are available at www.medpac.gov.) Commission members and staff also seek input on Medicare issues through frequent meetings with individuals interested in the program, including staff from congressional committees and the Centers for Medicare & Medicaid Services (CMS), health care researchers, health care providers, and beneficiary advocates.

Two reports—issued in March and June each year—are the primary outlets for Commission recommendations. In addition to annual reports and occasional reports on subjects requested by the Congress, MedPAC advises the Congress through other avenues, including comments on reports and proposed regulations issued by the Secretary of the Department of Health and Human Services, testimony, and briefings for congressional staff.

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Francis J. Crosson, M.D., Chairman
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June 14, 2019

The Honorable Michael R. Pence
President of the Senate
U.S. Capitol
Washington, DC 20510

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
U.S. Capitol
Room H-232
Washington, DC 20515

Dear Mr. President and Madam Speaker:

I am pleased to submit the Medicare Payment Advisory Commission's June 2019 *Report to the Congress: Medicare and the Health Care Delivery System*. This report fulfills the Commission's legislative mandate to evaluate Medicare payment issues and to make recommendations to the Congress.

The 12 chapters of this report include:

- Beneficiary enrollment in Medicare: Eligibility notification, enrollment process, and Part B late-enrollment penalties
- Restructuring Medicare Part D for the era of specialty drugs
- Medicare payment strategies to improve price competition and value for Part B drugs
- Mandated report on clinician payment in Medicare
- Issues in Medicare beneficiaries' access to primary care
- Assessing the Medicare Shared Savings Program's effect on Medicare spending
- Ensuring the accuracy and completeness of Medicare Advantage encounter data
- Redesigning the Medicare Advantage quality bonus program
- Payment issues in post-acute care

- Mandated report: Changes in post-acute and hospice care after implementation of the long-term care hospital dual payment-rate structure
- Options for slowing the growth of Medicare fee-for-service spending for emergency department services
- Promoting integration in dual-eligible special needs plans

I hope you find this report useful as the Congress continues to grapple with the difficult task of controlling the growth of Medicare spending while preserving beneficiaries' access to high-quality care and providing sufficient payment for efficient providers.

Sincerely,

A handwritten signature in black ink that reads "Francis J. Crosson M.D." The signature is written in a cursive, flowing style.

Francis J. Crosson, M.D.

Enclosure

Acknowledgments

This report was prepared with the assistance of many people. Their support was key as the Commission considered policy issues and worked toward consensus.

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Executive summary

Executive summary

As part of its mandate from the Congress, each June the Commission reports on refinements to Medicare payment systems and issues affecting the Medicare program, including broader changes in health care delivery and the market for health care services. The 12 chapters of this report include:

- ***Beneficiary enrollment in Medicare: Eligibility notification, enrollment process, and Part B late-enrollment penalties.*** Under current law, the government does not notify all individuals that they are eligible for Medicare. As a result, eligible persons who are not notified might not enroll in Part B when required to do so and then have to pay a late-enrollment penalty. We suggest several steps to help rectify this issue.
- ***Restructuring Medicare Part D for the era of specialty drugs.*** We explore a new policy approach to improve plan sponsors' financial incentives for managing drug spending and to potentially restrain manufacturers' incentives to increase prices.
- ***Medicare payment strategies to improve price competition and value for Part B drugs.*** We explore the potential of applying reference pricing and binding arbitration more broadly in an effort to improve price competition and value for Part B drugs.
- ***Mandated report on clinician payment in Medicare.*** We conclude that the statutory updates for clinician services from 2015 through 2019 have been sufficient to maintain beneficiary access to clinician services. However, there is no certainty this relationship will continue to hold in future years.
- ***Issues in Medicare beneficiaries' access to primary care.*** The Commission recommends eliminating "incident to" billing for advanced practice registered nurses and physician assistants and refining their specialty designations to give Medicare a fuller accounting of the services provided by these clinicians and to improve policymakers' ability to target resources toward primary care. Policymakers may also want to explore a scholarship or loan repayment program for geriatricians to increase access to their services.
- ***Assessing the Medicare Shared Savings Program's effect on Medicare spending.*** We estimate that Medicare spending on beneficiaries in the Medicare Shared Savings Program (MSSP) treatment group grew slightly less than it would have in the absence of the MSSP and note that this estimate is sensitive to how the treatment and comparison groups are defined.
- ***Ensuring the accuracy and completeness of Medicare Advantage encounter data.*** To improve encounter data so that they can be used for program oversight and comparisons with traditional fee-for-service (FFS) Medicare, we recommend that the Congress direct the Secretary to establish thresholds for the completeness and accuracy of Medicare Advantage (MA) encounter data, a payment withhold to encourage MA plans to submit the data, and a mechanism for provider submission of claims to Medicare Administrative Contractors.
- ***Redesigning the Medicare Advantage quality bonus program.*** We find that the current MA quality bonus program is flawed and propose to replace it with an MA value incentive program that is consistent with the Commission's quality measurement principles.
- ***Payment issues in post-acute care.*** Following up on our June 2016 evaluation that concluded that a unified post-acute care (PAC) prospective payment system (PPS) design would establish accurate payments and increase the equity of payments across conditions, we examine three further issues—stay-based versus episode-based designs, functional assessment data, and approaches for establishing aligned requirements for providers under a PAC PPS.
- ***Mandated report: Changes in post-acute and hospice care after implementation of the long-term care hospital dual payment-rate structure.*** For long-term care hospitals (LTCHs), we found—consistent with the objectives of the dual payment-rate structure enacted by the Pathway for SGR Reform Act of 2013—that from 2015 through 2017, spending, the number of LTCH stays, and the number of facilities decreased, but the share of cases meeting the criteria for the standard LTCH PPS rate increased.
- ***Options for slowing the growth of Medicare fee-for-service spending for emergency department services.*** The volume of services per Medicare FFS beneficiary and spending for hospital emergency department (ED) visits have increased in recent years. We find

these changes may in part be the result of providers coding visits at high acuity levels and recommend that the Secretary create and implement national coding guidelines for ED visits that would result in more accurate payments.

- **Promoting integration in dual-eligible special needs plans.** We examine the type of integrated managed care plan with the largest enrollment that provides both Medicare and Medicaid services, the MA dual-eligible special needs plan (D–SNP). We describe several policy changes that could improve the low level of integration between D–SNPs and state Medicaid programs.

Beneficiary enrollment in Medicare: Eligibility notification, enrollment process, and Part B late-enrollment penalties

Some individuals may be at risk for substantial late-enrollment penalties in Medicare because of a lack of government notification. Although some individuals (those who applied for or are receiving Social Security payments 4 months before they turn 65 years old) are notified and automatically enrolled in Part A and Part B of the Medicare program when they turn 65, individuals who have not applied for or received Social Security benefit payments before they turn 65 do not get a notification from either the Social Security Administration (SSA) or CMS alerting them that they are eligible to enroll in Medicare when they turn 65. (In fact, the SSA does not notify CMS of an individual’s eligibility for Medicare until he or she applies for Social Security benefits.) Because full retirement age for Social Security benefits is gradually increasing from age 65 to age 67 by year 2027, full retirement age is becoming increasingly greater than the age of Medicare entitlement, and more individuals may not be notified and thus may have to pay a late-enrollment penalty.

In Chapter 1, we look specifically at enrollment in Part B of Medicare. We are concerned that a significant number of newly eligible Medicare beneficiaries do not know that they might incur late-enrollment penalties added to their Part B premiums for the duration of their Medicare enrollment if they do not enroll in the program when first eligible. We estimate about 800,000 beneficiaries were paying a late-enrollment penalty for Part B in 2016. We also estimate that up to about 20 percent of beneficiaries paying Part B late-enrollment penalties may not have known about the penalties when they turned age 65. We

do not know how many of these beneficiaries would have enrolled on time had they been aware of the potential for penalties.

Also, there is a growing trend of beneficiaries enrolling in Part A but not Part B. The number of beneficiaries enrolled in Part A only has increased from about 3 million in 2006 (about 7 percent of beneficiaries) to about 5 million in 2017 (about 9 percent of beneficiaries). We do not know how many of those “Part A–only” beneficiaries would enroll in Part B as well if there were no late-enrollment penalty.

The lack of a notification process ensuring that individuals are aware of their eligibility for and their need to enroll in Medicare as they turn 65 should be addressed. Improvement in the timeliness of notification to eligible individuals about Medicare enrollment and potential late-enrollment penalties is essential. The Secretary could work with the SSA to ensure that prospective beneficiaries receive adequate and timely notification of their pending Part B eligibility and the consequences of delaying enrollment. CMS could also work with State Health Insurance Assistance Programs to address the notification issue.

The Secretary could explore the implications of delaying the late-enrollment penalties until the beneficiary begins receiving Social Security benefits or Part A. The Secretary could also explore granting special enrollment periods to beneficiaries who had been covered by either a Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) or Marketplace (Patient Protection and Affordable Care Act of 2010) plan because they can be unaware that they may be subject to late-enrollment penalties when they enroll in Medicare. These actions could help address the unexpected late-enrollment penalties for unnotified beneficiaries.

More broadly, the Secretary could examine whether the late-enrollment penalties are having the desired effects. Currently it is not known whether, or to what extent, the penalties are causing beneficiaries to further delay enrollment.

Restructuring Medicare Part D for the era of specialty drugs

Since the start of the Part D program in 2006, the distribution of drug spending has changed dramatically. Early on, the vast majority of spending was attributable to prescriptions for widely prevalent conditions. After the 2012 wave of patent expirations of small-molecule

brand-name drugs, manufacturers turned to producing drugs that treat smaller patient populations for conditions such as rheumatoid arthritis, hepatitis C, and cancer. These newer therapies are often launched at very high prices, with annual costs per person sometimes reaching tens of thousands of dollars or more, and spending for specialty drugs and biologics has risen rapidly.

Most plan sponsors use formularies that include a specialty tier with coinsurance of 25 percent to 33 percent for expensive therapies, and above Part D's out-of-pocket (OOP) threshold, enrollees who do not receive Medicare's low-income subsidy (LIS) pay 5 percent coinsurance with no OOP maximum. Although many specialty drugs have no rebates, when patients use rebated drugs, they pay effective rates of coinsurance (as a percentage of a drug's net price) that are even higher than the stated coinsurance amount because manufacturers provide rebates to plans long after patients fill their prescriptions, and plans charge coinsurance on the higher "gross" price at the pharmacy. There is some evidence that high patient cost sharing can pose a financial hurdle to treatment, potentially affecting certain beneficiaries' decisions to fill their prescriptions. Further, paying coinsurance on gross prices tends to move enrollees toward Part D's OOP threshold—the point at which Medicare's reinsurance pays for 80 percent of benefits—more quickly.

Chapter 2 introduces a new policy approach that would modify Part D's defined standard benefit and its catastrophic phase to improve plan sponsors' financial incentives for managing drug spending and potentially restrain manufacturers' incentives to increase prices. The approach would retain certain features of the Commission's 2016 recommendations for Part D, such as requiring plans to bear more risk for catastrophic spending, but the new design would also eliminate the need for some previously recommended measures. The new changes would also create a more consistently defined standard basic benefit to apply to both enrollees without Part D's LIS as well as those with the LIS.

The new approach would restructure the Part D benefit in several ways. First, it would eliminate the coverage-gap discount that currently applies to non-LIS enrollees, making plan sponsors responsible for a consistent 75 percent of benefits between the deductible and OOP threshold. Second, the new design would require manufacturers of brand-name drugs to provide a discount

in the catastrophic phase of the benefit rather than in the gap phase, as they do today. The manufacturer discount would be newly applicable to the spending of LIS beneficiaries. Third, the new design would lower enrollee cost sharing or include a hard overall OOP cap to improve the affordability of high-priced drugs and provide more complete financial protection for all enrollees. Plan sponsors would be responsible for a larger share of catastrophic benefits, and Medicare's reinsurance would be smaller. In general, we expect the approach would provide stronger incentives for plan sponsors to manage enrollees' spending and potentially restrain manufacturers' incentives to increase drug prices or launch new products at high prices.

Consistent with the Commission's 2016 recommendations for Part D, we expect that any policy change that requires plan sponsors to take on more insurance risk would be combined with other changes that would provide sponsors with greater flexibility to use formulary tools. Part D's risk adjustment system would need to be recalibrated to counterbalance plan incentives for selection. Finally, Chapter 2 discusses a key parameter of this policy approach: where to set the OOP threshold. The approach's financial impact on stakeholders, including Part D beneficiaries and taxpayers who finance the Medicare program, would depend on the specific threshold chosen and behavioral responses to the changes.

Medicare payment strategies to improve price competition and value for Part B drugs

Medicare Part B covers drugs and biologics that are administered by infusion or injection in physician offices and hospital outpatient departments (HOPDs). Medicare Part B also covers certain other drugs provided by pharmacies and suppliers. Medicare pays for most Part B drugs and biologics at a rate of 106 percent of the average sales price (ASP). In 2017, the Medicare program and beneficiaries together paid about \$32 billion for Part B-covered drugs and biologics.

Medicare Part B drug spending has grown rapidly, with more than half of the growth in Part B drug spending between 2009 and 2016 accounted for by price growth, which reflects increased prices for existing products and shifts in the mix of drugs, including the launch of new high-cost drugs. In 2017, the Commission recommended several improvements to payment for Part B drugs including an ASP inflation rebate that would address price growth in the years after products launch, consolidated

billing codes for biosimilars and originator biologics that would spur price competition among these products, and a voluntary alternative to the ASP payment system that would use vendors to negotiate lower prices and share savings with providers and beneficiaries.

Building on our June 2017 recommendation, Chapter 3 examines two strategies that were elements of that recommendation—reference pricing and binding arbitration. We explore the potential to apply these two approaches more broadly in the Medicare program in an effort to improve price competition and value for Part B drugs. Both approaches could also be applied in Part D, although there would be operational differences from their use in Part B.

We have found that the structure of the ASP payment system does not promote price competition among some groups of drugs with similar health effects. Building on the Commission’s 2017 consolidated billing code recommendation—under which an originator biologic and its biosimilars would be assigned the same billing code and paid the same rate—we discuss Medicare’s use of internal reference pricing, a policy that aims to reduce drug prices by spurring price competition among single-source products with similar health effects. Applying this policy to Part B drugs, Medicare would establish a reference payment amount for groups of drugs with similar health effects currently assigned to separate billing codes. Internal reference pricing gives the provider and patient strong incentives to consider lower cost therapeutic alternatives within each group.

For costly new drugs that face limited competition, such as the first drug in a class or a product that offers added clinical benefit over existing treatments, manufacturers have significant market power to set prices and payers currently have very limited ability to influence those prices. In Chapter 3, we explore a potential policy that would permit the Secretary, under certain circumstances, to enter into binding, baseball-style (i.e., final-offer) arbitration with drug manufacturers for high-cost Part B drugs with limited competition. The new arbitration price could become the basis of Medicare payment for the Part B drug, which could be operationalized by reducing the Medicare payment rate (with a requirement that the manufacturer honor that price for Medicare patients) or by instituting a manufacturer rebate.

Binding arbitration is one of the few potential tools with which Medicare could affect the price of drugs with

limited competition. Binding arbitration has the potential to incorporate value, affordability, and an appropriate reward for innovation into the determination of Medicare’s payment for Part B drugs. Because Part A providers such as inpatient hospitals also face challenges negotiating prices for drugs with few alternatives, there could also be benefits to Part A providers in extending prices achieved through binding arbitration.

Mandated report on clinician payment in Medicare

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) repealed the previous formula for setting clinician fees (the sustainable growth rate), established permanent statutory updates for clinician services in Medicare, created an incentive payment for clinicians who participate in certain types of payment arrangements, and created a new value-based purchasing program for all other clinicians. MACRA also required the Commission to conduct a study of the statutory updates to clinician services from 2015 through 2019 and the effect these payment updates have on the access to and supply and quality of clinician services.

To fulfill this mandate, in Chapter 4, we review the rate-setting and update process for Medicare’s fee schedule for clinicians and measures of payment adequacy over the last decade. Over that time, annual fee schedule updates ranged from 0 percent to 1 percent. The Commission assesses the payment adequacy of the clinician sector every year and makes a recommendation on any necessary update. To conduct the payment adequacy assessment for physician and other health professional services, the Commission reviews a direct measure of access to care (a telephone survey), two indirect access measures (the supply of clinicians billing Medicare and changes in the volume of services billed), quality measures, and clinician input costs. Using these measures, we find that payment updates over the last decade have been associated with generally stable measures of access to clinician services for Medicare beneficiaries and that access for Medicare beneficiaries continues to be as good as or slightly better than access for individuals with private insurance. Our ability to detect and report national trends for Medicare clinician quality is limited.

The statutory mandate directing the Commission to conduct this evaluation requires us to make recommendations for future updates to fee schedule rates that would be necessary to ensure Medicare beneficiaries’ access to care. The trends we have observed over the last

decade suggest that updates in the range of 0 percent to 1 percent have been sufficient to ensure beneficiary access to care. However, there is no certainty that this relationship will hold in future years. Therefore, each year we will continue to evaluate the most currently available data on measures of payment adequacy and advise the Congress annually on our recommended payment updates as we have in the past. We will also monitor other factors (e.g., site-of-service shifts) in our annual assessment.

Issues in Medicare beneficiaries' access to primary care

High-quality primary care is essential for creating a coordinated health care delivery system. Primary care services—such as ambulatory evaluation and management visits—are provided by physicians and other health professionals, such as advanced practice registered nurses (APRNs) and physician assistants (PAs). Physicians who focus on primary care are generally trained in family medicine, internal medicine, geriatric medicine, and pediatrics.

The Commission has a long-standing interest in ensuring that Medicare beneficiaries have good access to primary care services. This goal includes ensuring payments for primary care services are accurate and that the supply of primary care clinicians remains adequate to support access. In Chapter 5, we address two aspects of this issue, ensuring an adequate supply of primary care physicians and improving information on APRNs and PAs, who provide an increasing share of services to Medicare beneficiaries.

To date, based on beneficiary surveys, we find that beneficiaries have access to clinician services that is largely comparable with (or in some cases, better than) access for privately insured individuals, although a small number of beneficiaries report problems finding a new primary care doctor. However, we have concerns about the pipeline of future primary care physicians. Though the number of family medicine and internal medicine residents has grown in recent years, the majority of internal medicine residents plan careers in a subspecialty such as cardiology or oncology. Significant disparities in expected compensation between primary care physicians and other specialists could be deterring medical residents from pursuing primary care careers.

Although the findings on the influence of medical school debt on specialty choice are mixed, some studies find

that debt is modestly related to medical students' career decisions. Almost half of medical school graduates in 2018 planned to participate in programs to reduce their educational debt. However, existing programs are not Medicare specific, and policymakers may wish to consider establishing a scholarship or loan repayment program for physicians who provide primary care to Medicare beneficiaries. Although physicians in several specialties furnish primary care to beneficiaries, to ensure the best use of scarce resources, a Medicare-specific scholarship or loan repayment program should target those physicians most likely to treat beneficiaries. Therefore, a Medicare-specific program could target geriatricians because they specialize in managing the unique health and treatment needs of elderly individuals. In 2017, only a little more than 1,800 geriatricians treated beneficiaries in traditional FFS Medicare (less than 1 percent of all physicians who treated FFS beneficiaries in that year). Between the 2013–2014 academic year and the 2017–2018 academic year, the number of residents in geriatric medicine declined by 2 percent, which raises concerns about the future pipeline of geriatricians. By reducing or eliminating educational debt, a Medicare-specific scholarship or loan repayment program could provide medical students and residents with a financial incentive to choose geriatrics. We begin exploring design choices for this program in Chapter 5 and plan to continue examining them in future work.

Although the Commission has concerns about the supply of primary care physicians, the number of APRNs and PAs has increased rapidly and is projected to continue to do so in the future. The growth in the number of nurse practitioners (NPs)—one type of APRN—and PAs who bill Medicare has been particularly rapid. From 2010 to 2017, the combined number of NPs and PAs who billed Medicare more than doubled, reaching 212,000 in 2017. However, because of the way some NPs and PAs bill, Medicare does not have a full accounting of the services provided by these clinicians. In addition, the share of NPs and PAs who furnish primary care is obscured because CMS collects little up-to-date information regarding the specialty in which NPs and PAs practice. We make two recommendations to address these concerns.

First, Medicare allows NPs and PAs to bill under the national provider identifier (NPI) of a supervising physician if certain conditions are met, a practice known as “incident to” billing. While the existing literature on the prevalence of “incident to” billing is limited, we conducted

two analyses that suggest that a substantial share of services furnished by NPs and PAs to FFS beneficiaries were likely billed “incident to” in 2016. Therefore, the Commission recommends that the Congress require APRNs and PAs to bill the Medicare program directly, eliminating “incident to” billing for services they provide.

Second, Medicare collects little up-to-date information regarding the specialty in which NPs and PAs practice. While NPs and PAs have historically been concentrated in primary care, more recent patterns suggest that NPs and PAs are increasingly practicing in specialty fields. Therefore, the Commission recommends that the Secretary refine Medicare’s specialty designations for APRNs and PAs. Together, these recommendations are designed to give the Medicare program a fuller accounting of the breadth and depth of services provided by NPs and PAs and improve policymakers’ ability to target resources toward primary care.

Assessing the Medicare Shared Savings Program’s effect on Medicare spending

Organizations of providers that agree to be held accountable for cost and quality of care in Medicare FFS are called accountable care organizations (ACOs). About a third of Medicare fee-for-service beneficiaries are now assigned to ACOs, mostly those in the MSSP, a permanent ACO model established in the Patient Protection and Affordable Care Act of 2010. The first MSSP ACO started in April 2012, and the MSSP has grown rapidly to 561 ACOs in 2018. In Chapter 6, we assess the cost performance of the MSSP through 2016.

An individual ACO’s financial reward—called “shared savings”—is determined by comparing its spending with the benchmark set for it by CMS. In contrast, evaluations of MSSP performance in the literature use a “counterfactual,” that is, an estimate of what spending growth would have been if the MSSP did not exist. Benchmarks and counterfactuals differ because benchmarks are set in advance and designed to create incentives for individual ACOs and to fulfill policy goals. Counterfactual analysis is done after the fact using trends in expenditures for beneficiaries in comparison groups.

To evaluate the effect of the MSSP on Medicare program spending, the Commission used a counterfactual approach to compare spending for beneficiaries assigned to MSSP ACOs with what spending would have been in the absence of the MSSP. We found that decisions on how the treatment group (those treated by the ACO) and comparison group (those not treated by the ACO) are

defined can affect the magnitude and validity of estimates of program savings.

CMS assigns beneficiaries to ACOs by service use, and a change in health care status that alters a beneficiary’s service use can lead to a change in assignment (either into or out of the ACO). We found that beneficiaries who are assigned into and out of ACOs tend to have high spending and growing risk scores and are more likely to be hospitalized in the year of reassignment. Defining the treatment group as “beneficiaries ever assigned to an ACO” places a large number of these reassigned beneficiaries in the treatment group and will thus be unlikely to find savings from ACOs. Conversely, defining the treatment group as “beneficiaries continuously assigned to ACOs” (which places reassigned beneficiaries in the control group) would be biased toward finding large savings from ACOs.

Using an approach that mitigates the effects of reassigned beneficiaries by including some in the treatment group and some in the comparison group, we found that the growth in Medicare spending for beneficiaries in the MSSP treatment group was 1 percentage point to 2 percentage points lower over a four-year period than it would have been without the MSSP, with somewhat larger savings for beneficiaries assigned to physician-only ACOs than for beneficiaries assigned to ACOs with physicians and hospitals as members. This estimate does not include any shared savings payments that were made to ACOs during that period. The program will generate net savings only if MSSP bonus payments (shared savings) are less than spending reductions resulting from lower service use.

If MSSP reductions in spending on health services continue to be small, unintended consequences will have to be carefully monitored. Although it appears that patient selection was not a significant issue in the early years of the MSSP, recent changes to the program give all ACOs the option of retrospective assignment of beneficiaries, which could result in increased patient selection. To limit the risk to the program, CMS could require use of prospective assignment. In addition, under prospective assignment, ACOs would have some protection from adverse selection.

Ensuring the accuracy and completeness of Medicare Advantage encounter data

Information on the “encounters” beneficiaries enrolled in MA plans have with their providers (interactions that would create a claim in the traditional FFS program)

could be used to inform both FFS and MA payment policies. Analysis of MA encounter data could inform improvements to MA payment policy, provide a useful comparator with the FFS Medicare program, and generate new policy ideas that could be applied more broadly to the Medicare program.

Chapter 7 describes how MA encounter data could be used to improve the administration of the MA program and inform potential refinements to the traditional FFS Medicare program. For example, it could be used to help determine the risk adjustment factors used to adjust payments to plans and to conduct quality review and improvement activities. We also make recommendations to improve the accuracy and completeness of MA encounter data to increase their utility for CMS.

MA encounter data for 2012, 2013, and 2014 and preliminary data for 2015 were available in time to be included in Chapter 7. For 2014 and preliminary 2015 data, we assessed the face validity and completeness of the data by counting the number of unique MA plans and unique MA enrollees and comparing the MA encounter data with other Medicare data sets. Based on our evaluation of the 2014 and 2015 MA encounter data, we conclude that encounter data are a promising source of information and should continue to be collected. We believe having complete, detailed encounter data about the one-third of Medicare beneficiaries enrolled in MA would be of significant value to policymakers and researchers. CMS has released the preliminary 2015 encounter data to researchers for specified analyses. However, given the data errors and omissions that we found, the Commission does not currently support using the data to compare MA and FFS utilization.

Given the value of complete encounter data for the Medicare program and the significant gaps we found in the encounter data, the Commission recommends that the Congress direct the Secretary to establish thresholds for the completeness and accuracy of MA encounter data and:

- rigorously evaluate MA organizations' submitted data and provide robust feedback and
- concurrently apply a payment withhold and provide refunds to MA organizations that meet thresholds.

Further, the Secretary should institute a mechanism for direct submission of provider claims to Medicare Administrative Contractors as a voluntary option for all

MA organizations that prefer this method and, starting in 2024, for MA organizations that fail to meet thresholds or for all MA organizations if program-wide thresholds are not achieved.

Together these policy changes are designed to improve the completeness and accuracy of encounter data so that they can be used for program oversight; performance comparisons across FFS, MA, and ACOs; and additional policy priorities.

Redesigning the Medicare Advantage quality bonus program

The Commission has formalized a set of principles for quality measurement in the Medicare program. The Commission recently applied these principles to design a hospital value incentive program that includes a small set of population-based outcome, patient experience, and value measures; scores all hospitals based on the same absolute and prospectively set performance targets; and accounts for differences in patients' social risk factors by distributing payment adjustments through peer grouping.

In Chapter 8, we find that the current MA quality bonus program (QBP) is flawed and is inconsistent with the Commission's principles for quality measurement. First, the QBP includes almost 50 quality measures, including process and administrative measures, instead of focusing on a small set of population-based outcome and patient experience measures. Second, the QBP ratings apply to MA contracts, which cover very wide areas—including noncontiguous states. Thus, the ratings are often not a useful indicator of the quality of care provided in a beneficiary's local area. Third, the QBP uses a "tournament model," scoring plans' performance relative to one another rather than in relation to predetermined performance targets. Fourth, the QBP's version of peer grouping to adjust for differences in plans' enrolled populations does not appear to sufficiently capture variation in quality among Medicare population groups (such as low-income beneficiaries and beneficiaries with disabilities).

We propose an MA value incentive program (MA–VIP) that is consistent with the Commission's quality measurement principles and is designed to be patient oriented, encourage coordination across providers and time, and promote improvement in the delivery system. An MA–VIP would use a small set of population-based outcome and patient experience measures to evaluate MA

quality; clear, prospectively set performance standards to translate MA performance on these quality measures into rewards and penalties; and an improved peer-grouping method in which quality-based payments are distributed to plans based on their performance for population groups, such as a plan's population of beneficiaries who are fully dual eligible for Medicare and Medicaid. Performance would be evaluated at the local market area, not by contract.

Unlike most quality incentive programs in FFS Medicare, which are budget neutral or produce program savings through penalties, the QBP is financed with about \$6 billion a year in additional spending. The proposed MA–VIP would be budget neutral, financed through a small percentage of plan payments. This design would better align MA and FFS quality incentives and would produce program savings. It should not be assumed that a budget-neutral MA–VIP that decreases aggregate plan revenues would lead to a decrease in extra benefits. The recent growth in MA enrollment and increased levels of extra benefits—during a period when MA payments were being reduced—suggests that plan revenues may have a limited effect on the level of extra benefits. Plans that recently received a bonus passed only a small share of their payment increases on to beneficiaries in the form of extra benefits. Plans could become more efficient if faced with greater financial pressure and could thus continue to provide generous extra benefits.

Ideally, an evaluation of quality in MA would be based in part on a comparison with the quality of care in traditional FFS Medicare, including ACOs, in local market areas. However, due to the lack of data sources for comparing MA with traditional FFS at the local market level, our proposed MA–VIP design does not yet include a component for FFS comparison. In the future, better encounter data from MA and expanded patient experience surveys would help enable comparisons of the two programs.

Payment issues in post-care care

Post-acute care (PAC) providers—skilled nursing facilities (SNFs), home health agencies (HHAs), inpatient rehabilitation facilities (IRFs), and long-term care hospitals (LTCHs)—offer Medicare beneficiaries a wide range of skilled nursing and rehabilitation services. In 2016, about 43 percent of all Medicare FFS patients discharged from an acute care hospital were discharged

to PAC, and in 2017, the program spent about \$60 billion across the four PAC sectors.

As mandated by the Congress, in June 2016, the Commission evaluated a prototype design and concluded a unified PAC prospective payment system (PPS), as opposed to the four separate payment systems used currently, would establish accurate payments and increase the equity of payments across conditions. Because the variation in profitability by clinical condition would be narrower compared with current payment policy, providers would have less incentive to selectively admit certain types of patients over others. Since 2016, the Commission has continued to examine various issues regarding a PAC PPS, including the level of aggregate PAC spending to base payments, the need for a transition, the monitoring required to keep payments aligned with the cost of care, and a way to increase the equity of PAC payments before a PAC PPS is implemented.

In Chapter 9, we examine three additional issues for a unified PAC PPS:

- the advantages and disadvantages of stay-based versus episode-based designs,
- the functional assessment data recorded by PAC providers, and
- current requirements for PAC providers and approaches for establishing aligned requirements under a PAC PPS.

The Commission evaluated an episode-based design and compared it with a stay-based design—that is, one that would pay for each PAC stay. An episode-based design would result in large overpayments for relatively short episodes and underpayments for long ones. An outlier policy could be designed to narrow the differences in profitability across episodes but would be unlikely to correct the large overpayments and underpayments based on episode length. Having evaluated the tradeoffs between the two designs, the Commission believes that a stay-based design is the better initial strategy for CMS to pursue. Once providers have adapted to the new PPS and practice patterns have converged, CMS could consider an episode-based design.

To evaluate the quality of the provider-reported functional assessment information, we examined the consistency of its reporting for the same beneficiaries discharged from one PAC setting and directly admitted to another

and between the new information recorded for quality reporting and the information used to establish payments. Though other administrative data, such as diagnoses included in claims data, are also provider reported and may be vulnerable to misreporting, patient functional status is more subjective and may be more difficult to audit. We found large differences in the broad levels of function assigned to patients at their discharge from one setting and at their admission to the next PAC setting, and between assessment items collected for payment purposes and the uniform items used in quality reporting. Further, the differences in the functional categories favored recording function that would raise payments in three of the settings and that would show larger improvement in quality performance, suggesting that Medicare should not rely on these data for payment purposes. We discuss possible strategies to improve the reporting of assessment data, the importance of monitoring the reporting of these data, and alternative measures of function that do not rely on provider-completed assessments.

Finally, we examine current requirements for PAC providers and discuss approaches for establishing aligned requirements under a PAC PPS. Because a unified PAC PPS would establish a common payment system, Medicare's existing setting-specific regulations would need to be aligned so that PAC providers face the same set of requirements for treating similar patients. Chapter 9 discusses a two-tiered regulatory approach. All PAC providers would be required to meet a common set of requirements that would establish the basic provider competencies to treat the average PAC patient. Providers opting to treat patients with specialized or very high care needs—such as those who require ventilator support or high-cost wound care—would be required to meet a second tier of requirements that would vary by the specialized care need. Medicare would periodically need to update the conditions assigned to the second tier to reflect changes in medical practice. Chapter 9 also discusses the changes that would be required to align coverage requirements across the PAC settings.

Mandated report: Changes in post-acute and hospice care after implementation of the long-term care hospital dual payment-rate structure

The most medically complex patients frequently need hospital-level care for extended periods, and some of these patients are treated in LTCHs. LTCHs are defined by Medicare as hospitals with an average length of stay

exceeding 25 days. Because LTCHs are intended to serve very sick patients, per case payments under the LTCH PPS are very high. However, until 2016, lack of meaningful criteria for admission resulted in admissions of less complex cases that could be cared for appropriately in other settings.

The Pathway for SGR Reform Act of 2013 fundamentally changed how Medicare pays LTCHs for certain types of cases by creating a dual payment-rate structure. Under this structure, certain LTCH cases continue to qualify for the standard LTCH PPS rate (“cases meeting the criteria”), while cases that do not meet a set of criteria are paid a lower, “site-neutral” rate. The site-neutral rate is the lower of a cost-based payment or a rate based on the inpatient PPS that is used to pay acute care hospitals (ACHs). The impact of this policy on LTCHs was expected to be substantial given that the base payment rate is 85 percent lower for ACHs than for LTCHs. The Congress, therefore, requested that the Commission report on the effect that the policy has had on LTCHs, other PAC and hospice providers, and beneficiaries. The Commission was also asked to opine on the necessity of the 25 percent rule, which limits the share of cases that can be admitted to certain LTCHs from a referring ACH. The Secretary eliminated the rule in fiscal year 2019. Chapter 10 summarizes our findings.

The Commission found that from 2015 through 2017, LTCH spending, the number of LTCH stays, and the number of LTCH facilities decreased, but the share of LTCH cases meeting the criteria for the standard LTCH PPS payment rate increased. Although nearly 50 LTCHs have closed since fiscal year 2016, most of these closures occurred in markets with multiple LTCHs. In aggregate, LTCHs that closed had a lower share of Medicare discharges that met the criteria and a lower occupancy rate in their last year of operation compared with the facilities that remained open. Because the payment rate for cases not meeting the criteria is substantially lower than that for cases that meet the criteria, an LTCH's financial stability under Medicare relies, in part, on the share of cases that meet the criteria. LTCHs with more than 85 percent of their Medicare population meeting the criteria continued to have positive financial performance under Medicare in 2017.

The LTCH quality program is relatively new, with few risk-adjusted measures currently appropriate for longitudinal comparisons. However, for cases cared for in

an LTCH, our examination of unadjusted measures—even after focusing on cases that met the criteria—did not find evidence that quality has been negatively affected by the dual payment-rate structure. Given the relatively small number of LTCH referrals, observing meaningful changes in discharge patterns to other PAC providers and hospice in response to the implementation of the dual payment-rate structure is challenging. We did, however, observe some small differences in certain Medicare severity–diagnosis related groups, including those involving wound care and, in some markets, tracheostomy.

In sum, the Commission observed changes in the LTCH setting consistent with the policy objectives of the dual payment-rate structure since its implementation for cost reporting periods beginning on or after October 1, 2015. Given the decades of concern regarding increases in LTCH use and the relatively high cost of LTCH services without a clear benefit for many case types, the trends we observed in the LTCH sector align with the Commission’s goal of paying for expensive LTCH care only for the sickest patients. Changes in the trends of LTCH use and spending following the policy’s implementation were expected, and the Commission expects to see further continuation of these trends as the dual payment-rate structure becomes fully implemented in 2020. Given the current partial policy phase-in, the Commission will continue to monitor changes in use and trends across other PAC and hospice providers, LTCH facility closures, and quality of care metrics for LTCH providers.

In regard to the 25 percent rule, the Commission posits that even under the LTCH dual payment-rate structure, ACHs continue to have an incentive to reduce their costs by shortening lengths of stay and shifting costly patients to LTCHs (and other PAC providers). Our analysis of data through 2017 suggests that, since 2016, the trends in LTCH use have begun to shift toward cases meeting the criteria, indicating a general shift away from lower severity cases and an underlying change in admission patterns in LTCHs, reducing the necessity for the 25 percent rule. The Commission expects additional changes in ACH referrals to LTCHs as the dual payment-rate structure is fully phased in, further reducing the need for the 25 percent rule.

Options for slowing the growth of Medicare fee-for-service spending for emergency department services

Medicare FFS beneficiaries’ use of hospital emergency departments (EDs) has increased in recent years, in both volume of services per beneficiary and overall program

and beneficiary spending. One driver of this increase is the increase in the share of ED visits that are coded at high acuity levels. In Chapter 11, we find these changes may be the result of changes in provider coding practices and recommend that the Secretary create and implement national coding guidelines for ED visits that would result in more accurate payments.

Under the hospital outpatient prospective payment system (OPPS), hospitals code each ED visit into one of five levels of intensity, with Level 1 as the least resource intensive and the lowest payment rate, and Level 5 as the most resource intensive and the highest payment rate. In 2005, Level 3 was the most frequently coded level, and Levels 1 and 5 were the least frequently coded. However, in recent years, coding of ED visits has steadily shifted to higher levels. In 2017, Level 4 was the most frequently coded level, and Level 5 was the second most frequently coded.

We examined various potential reasons for coding to have shifted, such as coding of ED visits to higher levels reflecting ED patients being older and sicker, or that the increased presence of urgent care centers pulls lower acuity patients away from EDs and results in an increased level of acuity among remaining ED patients. However, we found that hospitals are providing more intensive care to ED patients, but the conditions treated in EDs and the reasons that patients gave for seeking care in EDs were largely unchanged over time. These results suggest that hospitals are potentially coding ED patients in response to payment incentives and that Medicare is paying more than necessary for many patients who present in the ED setting.

Medicare could change the system of ED codes to improve its payment accuracy. Medicare could begin by developing a system of ED codes that are based on national coding guidelines and reflect the resources hospitals use to treat ED patients. The Current Procedural Terminology (CPT) codes that hospitals use to code ED visits reflect the work and resources of physicians, not hospitals. CMS has responded to this lack of CPT codes for hospitals by directing hospitals to develop their own internal guidelines for coding ED visits. Therefore, to improve the accuracy of Medicare payments for ED visits, the Commission recommends that the Secretary create and implement national coding guidelines. If done properly, the benefits of effective national coding guidelines for ED visits would include payments for ED visits that accurately reflect the resources hospitals expend when providing care in the ED setting, a clear set of rules for hospitals to code ED visits,

and a firm foundation for CMS to assess and audit the coding behavior of hospitals.

Promoting integration in dual-eligible special needs plans

Individuals who qualify for both Medicare and Medicaid, known as dual-eligible beneficiaries or “dual eligibles,” can receive care that is fragmented or poorly coordinated because of the challenges in dealing with two distinct and complex programs. Integrated managed care plans that provide both Medicare and Medicaid services could improve quality and reduce spending for this population because they would have stronger incentives to coordinate care than either program does when acting on its own. In fact, integrated plans have shown some ability to reduce enrollees’ use of inpatient and nursing home care, and CMS is testing the use of integrated plans on a broader scale through its financial alignment demonstration.

The Commission began an examination of integrated plans in its June 2018 report, noting that Medicare has several types of integrated plans. This chapter continues our analysis by examining the integrated plan type with the largest enrollment, the MA D–SNP. In 2019, D–SNPs are available in 42 states and the District of Columbia and have 2.2 million enrollees, which accounts for between 15 percent and 20 percent of the dual-eligible population. This popularity is partly due to the extra benefits that D–SNPs provide using MA rebates. These benefits typically differ from those offered by traditional MA plans, with D–SNPs spending a much larger share of their rebates on supplemental benefits such as dental, hearing, and vision services. However, the level of integration between D–SNPs and Medicaid is generally low; only about 18 percent of D–SNP enrollees are in plans with a significant degree of integration.

The low level of integration between D–SNPs and state Medicaid programs has three underlying causes. First, D–SNPs provide little obvious benefit in terms of integrating Medicare and Medicaid coverage for the 27 percent of enrollees who are “partial-benefit” dual eligibles, meaning they have Medicaid coverage that is limited to payment of the Part B premium and, in

some cases, Medicare cost sharing. Second, 41 percent of D–SNP enrollees qualify for full Medicaid benefits but are enrolled in plans that do not have capitated Medicaid contracts for the delivery of long-term services and supports (LTSS), such as nursing home care and community-based care, which account for about 80 percent of Medicaid spending on dual eligibles. Third, 14 percent of D–SNP enrollees qualify for full Medicaid benefits but are not enrolled in a companion Medicaid plan run by the same parent company.

Several policy changes could improve the level of Medicare–Medicaid integration in D–SNPs. Plan sponsors could be prohibited from enrolling partial-benefit dual eligibles in D–SNPs or be required to establish separate D–SNPs for partial-benefit and full-benefit dual eligibles. The other barriers to greater integration could be addressed by using a practice known as aligned enrollment, where plan sponsors could not offer a D–SNP unless they had a companion Medicaid plan, and beneficiaries would not be able to enroll in D–SNPs and Medicaid plans from separate companies.

These policy changes would likely reduce overall enrollment in D–SNPs initially, but the number of beneficiaries enrolled in more highly integrated plans would increase. Since states vary greatly in their use of Medicaid managed care, policymakers could consider applying these changes only in states that have well-developed managed care programs, such as those that make capitated payments for LTSS.

Finally, some plan sponsors might circumvent these requirements by developing “look-alike” plans, which are traditional MA plans targeted at dual eligibles. Since look-alike plans operate as traditional MA plans instead of D–SNPs, they do not have to meet the additional requirements that apply to D–SNPs, such as having a Medicaid contract. The use of these plans has been growing; they are now available in 35 states and have about 220,000 enrollees. CMS may need new authority to prevent sponsors from using look-alike plans to undermine efforts to develop more highly integrated D–SNPs. ■

CHAPTER

1

**Beneficiary enrollment
in Medicare:
Eligibility notification,
enrollment process, and Part B
late-enrollment penalties**

Beneficiary enrollment in Medicare: Eligibility notification, enrollment process, and Part B late-enrollment penalties

Chapter summary

Individuals who apply for or are receiving Social Security payments 4 months before they turn age 65 years are notified and automatically enrolled in Part A and Part B of the Medicare program, effective the month they turn 65. At the same time, individuals the same age who have not contacted Social Security do not get any notification from either the Social Security Administration (SSA) or CMS regarding enrollment in Medicare. Instead, the SSA notifies CMS of an individual's enrollment in Medicare after he or she has applied for Social Security benefits. The current full retirement age for Social Security benefits is gradually increasing from age 65 to age 67 by the year 2027, which will lead to a full retirement age 2 years greater than the age of Medicare entitlement. This incongruity leads to a period of time when some Medicare-eligible individuals are unaware of their eligibility status because of a lack of government notification. These individuals could be at risk for substantial late-enrollment penalties that can be imposed for the entirety of a beneficiary's Medicare coverage.

Each of the four parts of the Medicare program (Part A, Part B, Part C, and Part D) has its own enrollment process, each of which includes penalties for late enrollment. Additionally, some parts of the Medicare program have separate auto-enrollment processes and possible exceptions to the enrollment requirement altogether. The fragmentation of the Medicare program leads

In this chapter

- Background
- Medicare eligibility
- The Medicare enrollment process and late-enrollment penalties
- Where beneficiaries receive information on the enrollment process
- Increased enrollment in Part A only and delayed Part B enrollment
- Potential courses of action

to a lack of uniformity in the enrollment process as a whole, which can result in penalties for beneficiaries who delay or have trouble with the enrollment process.

We are concerned that a significant number of newly eligible Medicare beneficiaries do not know that they might incur late-enrollment penalties added to their Part B premiums if they do not enroll in the program when first eligible. In 2016, we estimate about 800,000 beneficiaries were paying a late-enrollment penalty for Part B. We also estimate that up to about 20 percent of beneficiaries paying Part B late-enrollment penalties may not have known about the penalties when they turned age 65. We do not know how many of these beneficiaries would have enrolled on time had they been aware of the potential for penalties.

Also, there is a growing trend of beneficiaries enrolling in Part A but not Part B. Between 2006 and 2017, the number of beneficiaries enrolled in only Part A increased from about 3 million (about 7 percent of beneficiaries) to about 5 million (about 9 percent of beneficiaries). We do not know how many of those “Part A-only” beneficiaries would also enroll in Part B if there were no late-enrollment penalty.

We were able to get some insight into these issues by following a cohort of beneficiaries who turned age 65 in 2012 and were enrolled in Medicare Part A or Part B sometime between 2012 and 2017. In 2012, 93 percent of the cohort enrolled in Part A and 72 percent enrolled in Part B. Of those who enrolled in Part A but not Part B in 2012, most were still working and receiving health insurance from their employer in 2017. About 1.5 percent of the cohort were paying Part B late-enrollment penalties in 2017. We found that about 20 percent of those paying Part B late-enrollment penalties in 2017 also delayed enrolling in Part A and may not have been notified of the potential penalties when they were 65.

The lack of a notification process ensuring that individuals are aware of their eligibility for and need to enroll in Medicare as they turn 65 should be addressed. Current law does not require that either the SSA or CMS notify individuals who have yet to apply for Social Security payments of their eligibility for Medicare. Improvement in the timeliness of notification to eligible individuals about Medicare enrollment and potential late-enrollment penalties is essential. The Secretary could work with the SSA to ensure that prospective beneficiaries receive adequate and timely notification of their pending Part B eligibility and the consequences of delaying enrollment. CMS could also work with State Health Insurance Assistance Programs (SHIPs) to address the notification issue.

The Secretary could also explore the implications of delaying the late-enrollment penalties until the beneficiary begins receiving Social Security benefits or Part A. The Secretary could also explore granting special enrollment periods to beneficiaries who had been covered by either a Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) or Marketplace (Patient Protection and Affordable Care Act of 2010) plan because they can be unaware that they may be subject to late-enrollment penalties when they enroll in Medicare. These actions could help address the unexpected late-enrollment penalties for unnotified beneficiaries.

More broadly, the Secretary could examine whether the late-enrollment penalties are having the desired effects. Currently it is not known whether, and to what extent, the penalties are causing beneficiaries to further delay enrollment. ■

Background

Individuals who applied for or are receiving Social Security payments 4 months before they turn age 65 are notified and automatically enrolled in Part A and Part B of the Medicare program, effective the month they turn 65. Others the same age do not get any government notification of their eligibility to enroll in Medicare. Instead, the Social Security Administration (SSA) notifies CMS of an individual's enrollment in Medicare after he or she has applied for Social Security benefits. The current full retirement age for Social Security benefits is gradually increasing from age 65 to age 67 by year 2027, which will lead to a full retirement age 2 years after the age of Medicare entitlement. This incongruity leads to a period of time when some Medicare-eligible individuals are unaware that they are eligible because of a lack of government notification. These individuals could be at risk for substantial late-enrollment penalties that can be imposed for the entirety of a beneficiary's Medicare coverage.

In 2016, about 3.7 million beneficiaries enrolled in the Medicare program (in Part A and/or Part B) for the first time, accounting for 6.5 percent of the Medicare population that year (roughly 57 million beneficiaries in the program total). Of those who initially enrolled in 2016, about 2.8 million (about 78 percent) turned 65 during that year. Enrollment in the Medicare program is expected to continue to grow rapidly as members of the baby-boom generation age into the program. Enrollment is expected to grow by nearly 50 percent between 2010 and 2030 (Medicare Payment Advisory Commission 2019). Given the magnitude of this increase, it is important to understand the enrollment process in its entirety.

Under the Medicare program's four parts:

- Part A, known as Hospital Insurance (HI), covers inpatient hospital stays, skilled nursing facility stays, hospice care, and some posthospital home health care.
- Part B, known as Supplementary Medical Insurance (SMI), covers certain physician services, hospital outpatient care, medical supplies, and preventive services, among other items and services.
- Part C, known as Medicare managed care, provides coverage through Medicare Advantage plans, which

are offered by private health insurance companies that contract with Medicare.

- Part D offers prescription drug benefits through private health insurance companies approved by Medicare.

Each of the Medicare program's parts has its own enrollment process, and each includes potential penalties for late enrollment. (Part C does not have its own late-enrollment penalties. Instead, enrollees are still responsible for paying any Part A and Part B penalties owed.) Additionally, some parts have separate auto-enrollment processes and exceptions to the enrollment requirement altogether. Under this fragmentation, there is no uniformity in the enrollment process as a whole. This lack of uniformity can result in penalties for beneficiaries who delay or have trouble with the enrollment process. Although late-enrollment penalties do not affect most Medicare beneficiaries, the notification process can nevertheless be updated to improve the timeliness of enrollment.

Medicare eligibility

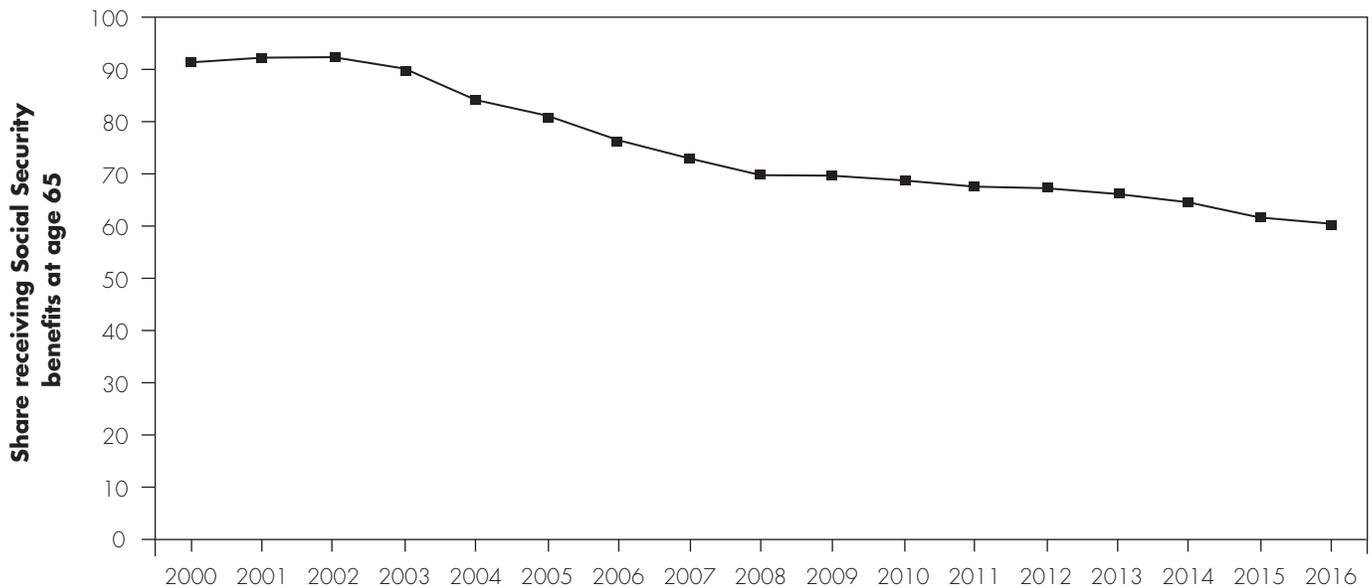
Individuals become eligible to enroll in Medicare by age, disease, or disability.¹ Individuals who are age 65 years or older and have obtained the required work credits or meet certain citizenship and residency requirements are eligible to receive Medicare benefits from each of the 4 program parts. Certain individuals under age 65 are also eligible for Medicare if they have a qualifying disability or disease. Individuals under 65 with a disability who receive benefits from Social Security or certain benefits from the Railroad Retirement Board for 24 months are automatically enrolled in Medicare. Additionally, individuals under 65 with amyotrophic lateral sclerosis who receive disability benefits from Social Security are automatically enrolled in Medicare. Individuals with end-stage renal disease (ESRD) are eligible for coverage.²

Notification of Medicare eligibility and related problems

Historically, individuals became eligible for Medicare at age 65, the same time they would receive full retirement benefits from Social Security. The notification process for Medicare eligibility is tied to eligibility for Social Security, which was not a problem historically because the eligibility age for the two programs aligned. Issues in the notification process have ensued from legislation

**FIGURE
1-1**

There has been a sharp decline in the share of OASDI eligibles receiving Social Security benefits at age 65



Note: OASDI (Old-Age, Survivors, and Disability Insurance).

Source: Social Security Administration, administrative data for the Social Security program (Master Beneficiary Record), 100 percent data.

that has incrementally increased the age of full retirement for Social Security. The Social Security Amendments of 1983 gradually raised the full retirement age for Social Security benefits, also known as the Old-Age, Survivors, and Disability Insurance (OASDI) Program, from 65 to 67. The increase in the full retirement age began in 2003 and will be complete in 2027. The current age for full retirement benefits is 66, although individuals can retire early and collect reduced OASDI benefits at age 62. The increase in the age for full OASDI benefits affects those Medicare-eligible individuals who do not begin taking Social Security benefits until they reach the age for full OASDI benefits and thus do not receive government notification of their eligibility at age 65.

Currently, only individuals who already receive or have applied for Social Security benefits 4 months before turning age 65 are formally notified by the government to enroll in Medicare when they first become eligible. By law, the SSA is responsible for determining the Medicare eligibility of individuals and notifying CMS of their enrollment. If individuals are receiving or have applied for

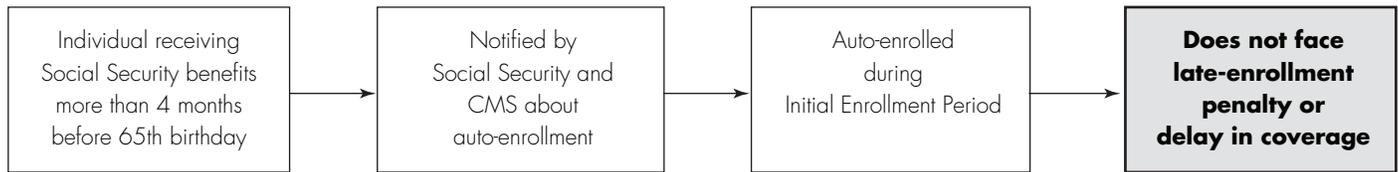
OASDI, the SSA will send their records to CMS 4 months before they turn 65. The SSA notifies these individuals about their entitlement to Part A and automatic enrollment in Part B. CMS then sends the Initial Enrollment Period (IEP) package, which includes the Medicare card/SMI Refusal card, and gives the beneficiary the ability to refuse automatic Part B enrollment. CMS mails the IEP package 3 months before the month the beneficiary turns 65 (Social Security Administration 2014).

The IEP package contains:

- Welcome to Medicare letter;
- Welcome to Medicare booklet that provides an overview of the Medicare program;
- Medicare card/SMI Refusal card, which is the beneficiary's Medicare card showing the effective dates of HI and SMI entitlement (on the front) and the SMI refusal form (on the back); and

**FIGURE
1-2**

Example of Part B enrollment during seven-month Initial Enrollment Period



Note: When individuals are first eligible for Medicare, they have a seven-month Initial Enrollment Period to sign up for Part A and Part B without facing penalties for late enrollment. The 7-month period begins 3 months before the individual turns 65, includes the month he or she turns 65, and ends 3 months after he or she turns 65.

- Return envelope to mail SMI refusal form to the processing center of jurisdiction.³

Until 2003, the full retirement age for receiving Social Security benefits was 65, and individuals typically began receiving Social Security and Medicare benefits at the same time. In 2002, more than 92 percent of 65-year-olds who had been in the workforce for at least 10 years received Social Security benefits. Recently, this share has decreased substantially (from 91 percent in 2000 to about 60 percent in 2016) (Figure 1-1). The sharp decrease just after 2002 was due primarily to the increase in the full retirement age above 65 because beneficiaries would wait to apply for benefits until the few months before they reached full retirement age. After the first few years, the continued decrease could likely have been due to an increase in the share of people who continued to work (and receive health insurance from their employer) past age 65. In 2006 (the first year for which we have applicable data), 14 percent of Part A beneficiaries were still working and receiving health insurance from their employer. By 2017, the share of Part A beneficiaries working and receiving health insurance from their employer rose to 17 percent.

As of 2016, 60 percent of Medicare-eligible 65-year-olds were receiving Social Security benefits (Figure 1-1). This share of individuals either retired early and accepted reduced benefit payments or received benefits as a result of disability or qualifying diseases. Consequently, 40 percent of those who were eligible for Medicare at age 65 were not auto-enrolled in the program and did not receive government notification until after their IEP—past the point in time that an individual always can enroll in Medicare without facing any late-enrollment penalties.

The Medicare enrollment process and late-enrollment penalties

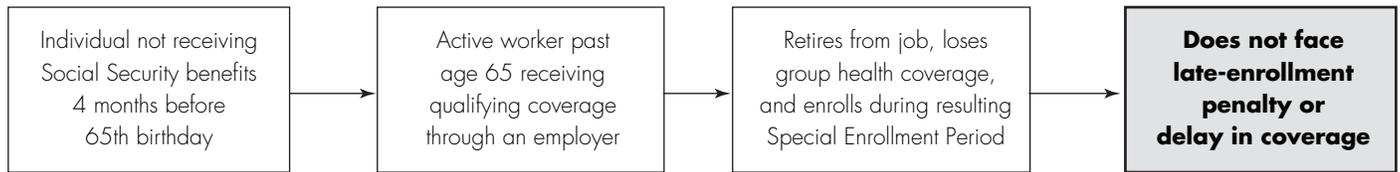
Late-enrollment penalties are different for each of Medicare’s four program parts. We focus on Part B late-enrollment penalties for the majority of the discussion. Part D penalties are similar in structure to those imposed in Part B, and they are more frequently imposed. However, Part D penalties are smaller in amount, and we do not currently have access to data detailing which beneficiaries are paying them. (We do know that a total of about 2 million beneficiaries are paying them.) Our work with focus groups suggests that beneficiaries are more aware of the late-enrollment penalties associated with Part D than with Part B. Similarly, we do not have data on the beneficiaries who pay the penalties for Part A late enrollment. Additionally, a limited number of beneficiaries pays a premium for Part A, and the penalties are of limited duration, so there is less concern regarding the Part A late-enrollment penalties.

Part A and Part B enrollment process

When individuals are first eligible for Medicare, they have a seven-month IEP to sign up for Part A and Part B without facing penalties for late enrollment (Figure 1-2). Those individuals who are eligible for premium-free Part A are not bound to any enrollment periods; they can enroll in Part A any time after they are eligible without penalty. Those who are eligible for Medicare by age can enroll in Medicare during the 7-month period that:

FIGURE 1-3

Example of Part B enrollment during Special Enrollment Period, which ends eight months after loss of employer coverage



Note: Individuals who, when first eligible for Medicare were covered under a group health plan based on their own or a spouse's current employment, can enroll in Part A or Part B of the Medicare program during the Special Enrollment Period. This period ends eight months after they are no longer covered by a group health plan based on that employment.

- begins 3 months before the month they turn 65,
- includes the month they turn 65, and
- ends 3 months after the month they turn 65.

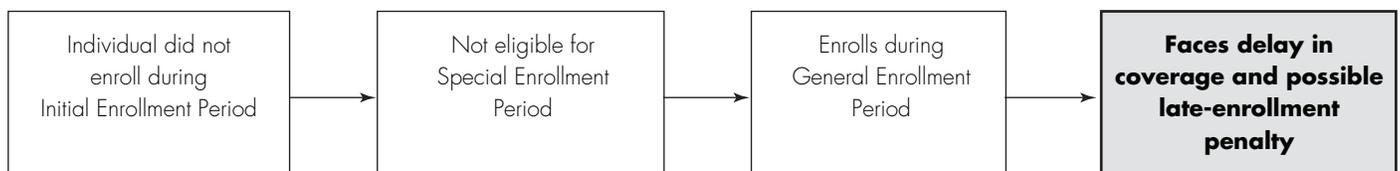
Individuals who do not sign up for either or both Part A and Part B during their IEP and who are not eligible to enroll during a Special Enrollment Period (SEP) (enrollment during the SEP is illustrated in Figure 1-3) can enroll in Medicare between January 1 and March 31 each year (Figure 1-4). This period is known as the General Enrollment Period (GEP). Coverage for these individuals begins July 1 of the year they sign up. These individuals may face late-enrollment penalties for not enrolling when they were first eligible and may experience a gap in their coverage.

During SEPs, individuals are allowed to enroll in Medicare outside of their IEP or GEP due to a loss of coverage from a group health plan through a current employer. Individuals who, when first eligible for Medicare were covered under a group health plan based on their own or a spouse's current employment, can enroll in Part A or Part B of the Medicare program during the SEP. This period ends eight months after they are no longer covered by a group health plan based on that employment (Figure 1-3).

In 2016, about 2.2 million 65-year-olds signed up for Part B during their IEP, another 190,000 signed up for Part B during a SEP in 2017, and about 30,000 signed up for Part B during the 2017 GEP when they could have been subject to late-enrollment penalties.

FIGURE 1-4

Example of Part B enrollment during General Enrollment Period, which is a standard three-month period each year



Note: Individuals who do not sign up for either or both Part A and Part B during their Initial Enrollment Period and who are not eligible to enroll during a Special Enrollment Period can enroll in Medicare between January 1 and March 31 each year. This period is known as the General Enrollment Period. Coverage for these individuals begins July 1 of the year they sign up. These individuals may face late-enrollment penalties for not enrolling when they were first eligible and may experience a gap in their coverage.

**TABLE
1-1**

Summary of Medicare late-enrollment penalty amounts and duration

Part of the Medicare program	Penalty description	Penalty amount per month after delayed enrollment for 12 months	Duration
Part A	10% of Part A premium (premium is up to \$437 per month in 2019)	\$43.70	Twice the number of years the individual could have had Part A but did not sign up
Part B	10% of Part B premium (\$135 per month in 2019) for each full 12-month period of delayed enrollment	\$13.50	As long as the individual retains Part B coverage
Part C	See Part A and Part B*	See Part A and Part B*	See Part A and Part B*
Part D	1% of Part D national base beneficiary premium (\$33 per month in 2019) for each uncovered month	\$3.96	As long as the individual retains Part D coverage

Note: *Beneficiaries enrolled in a Medicare Advantage plan (Part C) continue to pay Part A and Part B premiums and any late-enrollment penalties associated with them.

Source: Information from Title XVIII of the Social Security Act.

Part A penalties

Penalties associated with late enrollment in Part A are not common because the majority of Medicare enrollees are eligible for premium-free Part A and face no late-enrollment penalties. To receive premium-free Part A, an individual must have a specified number of quarters of coverage (QCs) earned through payment of payroll taxes during the person’s working years. Alternatively, a spouse’s working years can count toward an individual’s quarters of coverage to qualify him or her for Medicare.⁴ The exact number of QCs required for premium-free coverage is dependent on whether the individual is enrolling in Part A on the basis of age, disability, or disease (ESRD). Typically, to qualify for premium-free Part A, individuals must have 40 working quarters, equivalent to 10 working years, over the course of their life before enrolling in Medicare.

For individuals who qualify for premium-free Part A coverage due to their QCs, Part A coverage is effective retroactively for the time that the beneficiary was not enrolled in the program. Retroactive coverage is effective to the first day of the individual’s birth month or six months before when an individual enrolled, whichever occurred later. Thus, beneficiaries who meet the QCs have little to worry about if they do not enroll in Part A during their IEP.

Individuals who are not eligible for premium-free Part A and who do not sign up for coverage during the IEP are subject to a late-enrollment penalty. They will have to pay a 10 percent higher monthly premium for twice the number of years they could have had Part A but did not sign up (Table 1-1). For example, those who do not sign up for Medicare Part A in the first two years that they are eligible pay an extra 10 percent in penalty on their premium each month, which they must pay for four years.

Individuals do not have to pay the late-enrollment penalty for Part A if they meet conditions to sign up for Part A during a SEP. The conditions involve loss of coverage through a group health plan through an individual’s (or spouse’s) current employer. An individual can enroll at any time while covered under the group health plan based on current employment or can enroll during the eight-month period that begins the month the employment ends or the group health plan coverage ends, whichever comes first.

Delaying Part B

While Part A is usually premium free for beneficiaries at age 65, and there is generally no reason not to enroll, certain individuals choose to delay enrollment in Part B coverage. One reason is that they have another source of medical insurance. Part B coverage costs \$135.50 per month for most beneficiaries in 2019, which may be more expensive than an individual’s other source of coverage.

(There is a premium surcharge for higher income beneficiaries that can raise the premiums to as high as \$460.50 per month in 2019).⁵ However, only individuals enrolled in specified group health plans qualify to avoid late-enrollment penalties for Part B. Active workers with group coverage through an employer and active duty service members with TRICARE are exempt from late-enrollment penalties if they delay enrolling in Part B.

Retirees with coverage through a former employer, retired uniformed service members, individuals with a Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) or a Marketplace (Patient Protection and Affordable Care Act of 2010) plan, and individuals with ESRD all must enroll in Medicare Part B when first eligible or they will face late-enrollment penalties.⁶ In addition, beneficiaries who do not enroll in Part B during their IEP will not be able to enroll later without a waiting period. These beneficiaries must enroll during a GEP and wait four to six months before their coverage begins.

In 2016, over 1 million beneficiaries forwent Part B coverage, even after they had signed up for Part A coverage when eligible. About two-thirds of those beneficiaries age 65 and older appeared to have a qualifying alternative source of medical insurance and thus probably delayed enrollment in Part B without facing future penalties. If these individuals enrolled in Medicare, their non-Medicare coverage would be viewed as the primary payer. In the case of paying for a Part A or Part B claim, this primary coverage would pay first. If there was remaining liability, Medicare would pay second, hence the term *Medicare Secondary Payer*. These beneficiaries would have Medicare as secondary coverage.

Part B penalties

People without qualifying coverage face penalties associated with forgoing Part B enrollment when first eligible for the program. In most cases, individuals who do not sign up for Part B when first eligible will be required to pay a late-enrollment penalty for as long as they maintain Part B coverage. The late-enrollment penalty is equal to 10 percent of an individual's monthly premium for each full 12-month period for which the individual was eligible to enroll for Part B but did not. If the delay is under 12 months, there is no monetary penalty, but the individual must wait to enroll until the next GEP.

As an example of this penalty, individuals who do not sign up for Medicare Part B in the first two years that they are eligible face a 20 percent penalty on their premium each

month, which they must pay for the remainder of the time that they have Part B coverage. This penalty increases for each additional year that they remain uncovered.

Approximately 800,000 beneficiaries, or 1.5 percent of Part B enrollees, paid the late-enrollment penalty for Part B in 2016. About 40 percent of these beneficiaries paid 10 percent of their monthly premium, which means that they went without Part B coverage for a full 12-month period before enrolling in the program. However, about 5 percent of those who pay penalties paid as much or more in late-enrollment penalties as they paid for the base premium itself. These individuals went at least a decade without enrolling in Part B after turning 65.

The rationale of the Part B late-enrollment penalty

The rationale for Medicare's late-enrollment penalties is based, in principle, on cost savings, but not in practice. That is, the program, as a societal good, wants to encourage individuals to enroll in Medicare when first eligible rather than wait until they are sick and more costly to insure. Early enrollment keeps average per capita spending in the program as low as possible, thus minimizing the average beneficiary premium.

The Medicare program, however, does not operate like a private insurance pool where premiums are set to cover expected medical and administrative costs. In experience-rated insurance products, premiums are set to cover the expected costs of each enrollee (or group of similar enrollees). Medicare is community rated (all enrollees are charged the same premium) and is heavily subsidized by federal taxpayers. The premiums for Part B (and for Part D) are set to cover only one-fourth of the expected spending on Part B services. Under such a system, a late-enrollment penalty does not benefit the program in terms of total spending because even younger and healthier beneficiaries are likely to cost the program more than they would contribute in premiums. The penalties should be high enough to encourage early enrollment, but not so high that they discourage enrollment for beneficiaries who delayed enrollment.

The history of the Part B penalty with respect to why the 10 percent rate was chosen and why the penalty exists for a beneficiary's lifetime suggests a certain degree of arbitrariness. Robert J. Myers, the Chief Actuary of the Social Security Administration at the time the Medicare program was enacted, wrote, "The 10 percent increase factor was not scientifically determined as an exact offset

to the higher costs anticipated for the delayed-enrollment group. Rather it was arbitrarily set as a move in the direction of this factor” (Myers 1970). Thus, it is difficult to estimate what the proper level and duration of the late-enrollment penalty should be.

Part C enrollment

Medicare Advantage (MA) plans, or Medicare’s Part C, provide the Part A and Part B benefits and usually include prescription drug coverage (Part D). All individuals who have Part A and Part B and do not have ESRD are eligible to enroll in an MA plan.⁷ To enroll in an MA plan, an individual signs up for coverage through a private insurer.

Plans are generally open for new enrollment during the fall Open Enrollment Period (OEP), which occurs from October 15 through December 7 of each year. In addition, during the MA OEP, plans are able to accept and process changed elections made by MA enrollees during the first three months of each year or newly MA-eligible individuals during the first three months of their initial coverage election period for MA.

Beneficiaries can enroll in an MA plan at any time after having enrolled in both Part A and Part B at the time of eligibility without incurring a late-enrollment penalty because MA merely replaces traditional Medicare coverage. However, individuals facing a Part A, Part B, or Part D late-enrollment penalty must pay or continue to pay those penalties after enrolling in an MA plan.

Part D enrollment

Part D provides voluntary outpatient prescription drug coverage. Both stand-alone prescription drug plans (PDPs) and Medicare Advantage–Prescription Drug plans (MA–PDs) that also provide drug coverage deliver the benefit. PDPs add drug coverage for beneficiaries in traditional Medicare, while MA–PDs include drug coverage for their enrollees. As a consumer safeguard, individuals who have an MA plan generally cannot enroll in a stand-alone Part D plan (a PDP). That way, beneficiaries do not pay for services that they already receive through their MA plan.

Individuals have multiple opportunities to enroll in Medicare Part D; however, they may face penalties if they do not enroll during their IEP. Individuals’ enrollment opportunities for Part D mirror those for MA plans. Individuals can add or drop Part D coverage during the fall OEP from October 15 to December 7 each year.

Delaying Part D coverage

Individuals who delay Part D coverage are exempt from the Part D late-enrollment penalty if during that time they have creditable prescription drug coverage. Such creditable coverage includes group health plans that are expected to pay on average as much as the standard Medicare prescription drug coverage.

One issue that can arise with delaying Part D coverage occurs with individuals who have a group health plan that does not qualify as creditable prescription drug coverage. For example, if a group health plan provided only catastrophic drug coverage or provided only a drug discount card, then the coverage may not qualify as being creditable. Entities are required to notify their Medicare-eligible policyholders regarding whether their plan is or is not creditable. However, some policyholders might not be aware of the penalty and so do not sign up for Part D. These individuals incur late-enrollment penalties if they choose to sign up for drug coverage later.

Part D penalties

Individuals who decide not to enroll in a Part D plan when first eligible may face a late-enrollment penalty. For every month individuals delay enrollment in Part D, their premium increases by 1 percent of the national base beneficiary premium. Individuals must pay this penalty for as long as they have Medicare drug coverage. For example, individuals who do not sign up for Medicare Part D in the first two years they are eligible face a penalty each month of 24 percent of the national base beneficiary premium, which they must pay for the remainder of the time that they have Part D coverage. This penalty increases for each additional month that they remain uncovered. Late penalties are not imposed on beneficiaries who receive the Part D low-income subsidy (LIS), which pays the costs of Medicare prescription drug coverage. To qualify for the LIS, beneficiaries meet certain income and resource limits. At the end of 2018, about 2 million beneficiaries were paying a Part D late-enrollment penalty (Liu 2018).

A separate nongovernmental notification process occurs for individuals covered by group health plans that do not qualify as creditable coverage for Part D. Those plans must notify their policyholders who are eligible for Medicare coverage that they may face future Part D penalties. Plans must provide a written disclosure notice to all Medicare-eligible policyholders before October

15 each year and at various other times, including when a Medicare-eligible individual first joins the plan.

Individuals who are eligible to enroll in an MA–PD starting January 1 may not be aware that the coverage offered by their current plan is noncreditable coverage. These individuals may be assessed a Part D late-enrollment penalty when they enroll in a Medicare Part D plan. Although this situation seems to be rare in the Medicare enrollment process, there is reason to believe that some individuals face penalties for lack of creditable coverage because they are not properly notified of their plan’s ineligibility.

Where beneficiaries receive information on the enrollment process

Although the government may not officially inform individuals of Medicare eligibility, potential enrollees can and do seek information from Social Security counselors, 1-800-Medicare, the CMS website, and State Health Insurance Assistance Programs (SHIPs). They may also receive information about Medicare enrollment from a variety of nongovernmental sources: private insurance plans, brokers, financial advisors, employers, and beneficiary advocacy organizations such as AARP. However, the Medicare program should not rely on alternative sources to properly inform potential beneficiaries to sign up for Medicare during their IEP. It is hard for Medicare to regulate who is receiving correct and prompt information from these outside sources and when they are receiving such information.

In the beneficiary focus groups the Commission held this summer, 1 of 97 Medicare beneficiaries reported paying a Part B penalty because she forgot to enroll during her IEP when she turned 65. The 1 in 97 ratio approximates the national share of beneficiaries who are paying the Part B late-enrollment penalty, which roughly translated to 800,000 beneficiaries in 2016. Interestingly, about half of the beneficiaries in our focus groups were unaware that penalties existed. Brokers and SHIP counselors in several cities told us that beneficiaries not automatically enrolled in Medicare found the enrollment rules challenging and generally did not know about the penalties before seeking help. All involved thought there should be an official notification just before beneficiaries turn 65.

Increased enrollment in Part A only and delayed Part B enrollment

The share of beneficiaries who are enrolled in Part A but not Part B has been increasing steadily over time (Figure 1-5). Between 2006 and 2017, the share of beneficiaries in only Part A increased from 6.8 percent (about 3 million beneficiaries) to 8.6 percent (about 5 million beneficiaries).

It is likely that an increasing number of beneficiaries are actively choosing to forgo Part B coverage. This trend could be due to the increasing number of individuals who are working past age 65 and thus have an alternative source of coverage (see Figure 1-1, p. 8, and the text box on enrollment patterns, pp. 16–17). Other reasons beneficiaries may choose to enroll only in Part A are detailed below.

Reasons beneficiaries may delay enrollment

Several reasons might explain why beneficiaries may delay enrollment in one or more parts of Medicare when first eligible. Some individuals may have an alternative source of coverage. For others, the cost of Medicare premiums and associated out-of-pocket costs can be a deterrent.

Beneficiaries with alternative sources of coverage

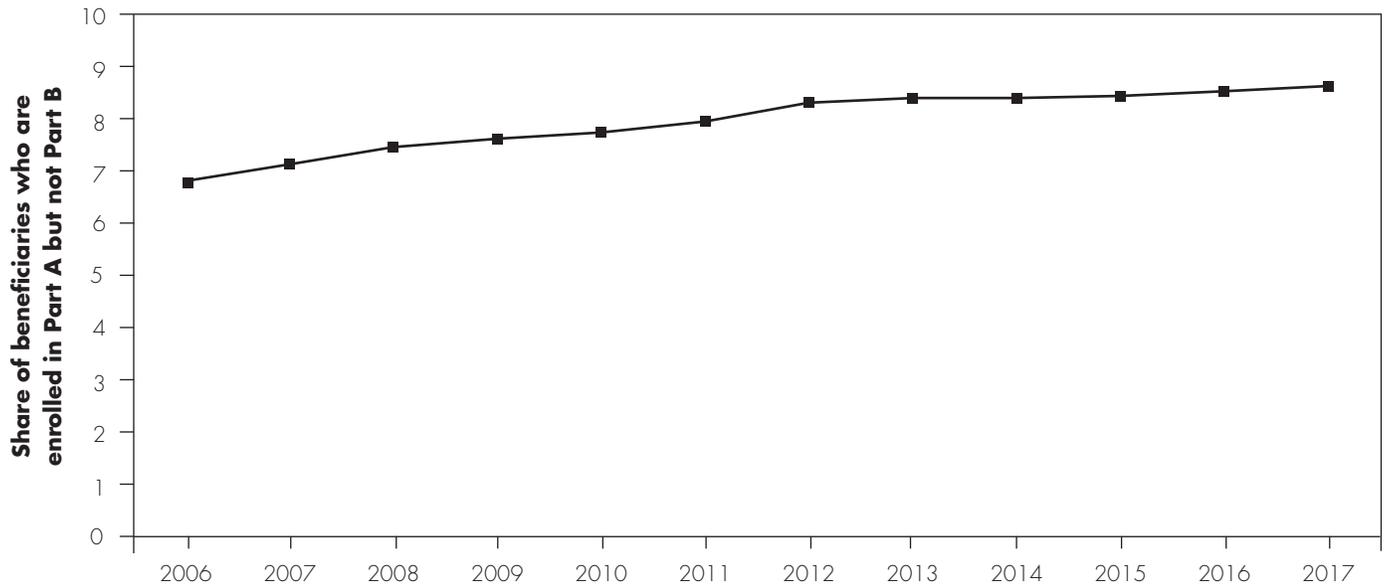
Many beneficiaries who are enrolled in Part A but not in Part B are still working and receiving health insurance from their employer. In this circumstance, the beneficiary can enroll in Part A, but Medicare becomes the secondary payer after the employer-sponsored insurance. In 2016, more than one-third of the Part A–only beneficiaries were active workers receiving health insurance. These beneficiaries would generally receive little additional value for the price of the Part B premium and may not have enrolled in Part B for that reason. These Part A–only beneficiaries will not be subject to a late-enrollment penalty if they enroll in Part B within their SEP after they stop working.

Higher income beneficiaries

Most beneficiaries pay the standard premium amount for their Part B and Part D monthly premiums. However, the Income-Related Monthly Adjustment Amount (IRMAA) exists for beneficiaries with a modified adjusted gross income above a certain amount set in law. There is reason to believe that individuals who are subject to higher monthly Medicare premiums due to the IRMAA may

**FIGURE
1-5**

The share of beneficiaries who are enrolled in Part A but not Part B has been increasing steadily over time



Source: MedPAC analysis of CMS enrollment history files, 2018.

choose to forgo Part B coverage. Beneficiaries whose income requires them to pay the higher premium under IRMAA may not see Part B as a good value because the premium including the IRMAA ranges from about \$190 to \$460 per month in 2019. Since the IRMAA has been affecting more beneficiaries over time, it may be a factor in the trend to opt out of Part B.

Under the IRMAA, individual beneficiaries with incomes greater than \$85,000 and couples with incomes greater than \$170,000 are required to pay higher premiums for Part B and Part D. The Medicare Modernization Act of 2003 established the IRMAA for Part B, which went into effect in 2007. The Patient Protection and Affordable Care Act of 2010 established the IRMAA for Part D, effective in 2011. The premium adjustments have been changed slightly over time (most recently with changes added to the Bipartisan Budget Act of 2018), although the income thresholds have remained constant since 2010. As a result, an increasing number of beneficiaries have been subject to the IRMAA over time. However, beginning in 2020, the income thresholds will be indexed for inflation. This change should result in a similar share of beneficiaries paying the IRMAA moving forward.

Beneficiaries with higher incomes pay a larger share of the Part B per capita costs, depending on their income. The typical beneficiary pays 25 percent of the per capita costs, while the remaining 75 percent is covered by the program. High-income beneficiaries subject to the IRMAA pay 35 percent to 85 percent of the per capita costs, with the exact percentage dependent on their modified adjusted gross income. High-income beneficiaries also pay a higher share of their drug benefit costs. The Part D percentages and corresponding income thresholds mirror those for the Part B premium adjustments. Approximately 3.4 million beneficiaries fell into 1 of the 4 IRMAA tiers in 2016, which is about 6 percent of all Medicare beneficiaries that year.⁸ There is not enough information to determine how many of these beneficiaries delayed enrollment in Part B of the program because of the high-income penalty; beneficiaries are recorded as subject to the IRMAA only if they are enrolled in Part B (or Part D) and paying the IRMAA. Therefore, we are unable to determine whether high-income beneficiaries drop out of Part B or forgo Part B enrollment altogether because of their increased premiums.

Enrollment patterns and penalties for a cohort of beneficiaries who turned age 65 in 2012

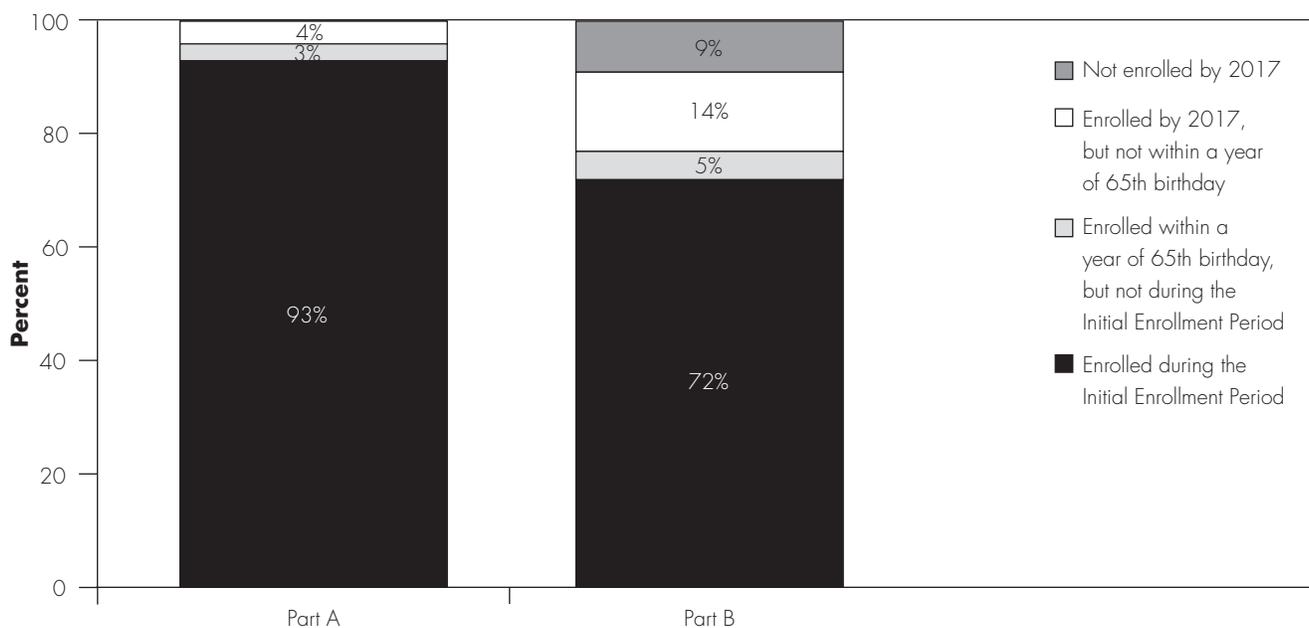
Approximately 2.9 million beneficiaries who turned 65 in 2012 enrolled in Part A only, in Part B only, or in both Part A and Part B of the Medicare program by 2017. Our work analyzes the enrollment patterns and late-enrollment penalties for this 2012 cohort (Figure 1-6). (An additional 700,000 beneficiaries who turned age 65 during 2012 and had previously enrolled in Medicare by reason of disability are excluded from this analysis.)

Roughly 93 percent of these beneficiaries enrolled in Part A during their initial enrollment period (IEP). An additional 3 percent of beneficiaries enrolled in Part A within the 1st year of their 65th birthday (but not during their IEP). The remaining 4 percent of beneficiaries who enrolled in Part A during this five-year time frame did so more than a year after they were first entitled to the benefit. We do not have any information on individuals who may have turned 65 in 2012 but did not enroll in Medicare Part A by 2017.

(continued next page)

FIGURE 1-6

Beneficiaries are more likely to delay enrollment in Part B than in Part A in the 5 years after their 65th birthday



Note: The cohort of beneficiaries were individuals who turned 65 in 2012 and enrolled in Part A of the program by 2017. Individuals who turned 65 in 2012 but were previously enrolled in the program were not included in the cohort. Additionally, less than 1 percent of beneficiaries in the cohort were enrolled in Part B but not Part A. They are not reflected in the figure.

Source: MedPAC analysis of CMS enrollment data.

Lower income beneficiaries

Beneficiaries with low incomes as defined by law receive financial assistance with the premiums and out-of-pocket costs associated with their Medicare coverage.⁹ Such beneficiaries include those who are eligible for both

Medicare and Medicaid (also known as dual eligibles). Roughly half of dual eligibles first qualify for Medicare based on disability (compared with 17 percent of Medicare beneficiaries who are not dual eligibles), and roughly half qualify when they turn 65. Medicaid's eligibility

Enrollment patterns and penalties for a cohort of beneficiaries who turned age 65 in 2012 (cont.)

Of beneficiaries who enrolled in Part A of the program by 2017, about 72 percent of them enrolled in Part B within their IEP. An additional 5 percent of Part A beneficiaries enrolled in Part B within the first year of their 65th birthday (but not during their IEP). Another 14 percent enrolled in Part B more than a year after they were first eligible, but still by the end of 2017. More than 250,000 individuals in this 2012 cohort (or roughly 9 percent) did not sign up for Part B of the Medicare program within 5 years of their 65th birthday.

These beneficiaries who delayed enrolling in Part B may have had an alternative source of coverage. If not, they will face Part B penalties when they decide to enroll. In the 2012 cohort, about 65 percent of those who enrolled in Part A but not Part B in 2013 were still working and had Medicare Secondary Payer (MSP) coverage. The share of those beneficiaries with Part A only who have MSP is declining as the cohort ages, but even in 2017, most (53 percent) were still working and had coverage through their employers.

For the 2012 cohort of beneficiaries, we also tracked who was paying late-enrollment penalties. By 2017, about 40,000 beneficiaries, roughly 1.5 percent of the 2012 cohort, were paying Part B late-enrollment penalties. This share is larger than the share of the cohort paying penalties earlier.

Of those in the 2012 cohort paying late-enrollment penalties in 2017, 22 percent were initially unnotified, 4 percent were low income (receiving the low-income subsidy (LIS), but not dually eligible), and 8 percent

were high-income beneficiaries (subject to the Income-Related Monthly Adjustment Amount (IRMAA)).

This analysis suggests that the growing share of beneficiaries who have Part A but not Part B coverage is attributable to beneficiaries remaining in the workforce rather than to Part B premium costs. Even at age 70, more than half of beneficiaries without Part B are still working and receiving health insurance from their employers. As defined by Medicare–Medicaid dual eligibility and LIS status, low-income beneficiaries are almost always (more than 98 percent) enrolled in Part B, often because state Medicaid programs pay the Part B premiums for Medicaid enrollees. Due to the unavailability of the data, we cannot make conclusions about the effect of IRMAA on high-income beneficiary enrollment decisions. (If a beneficiary decides not to enroll in Part B, there is no information as to whether the beneficiary would have been subject to IRMAA.)

If beneficiaries were delaying enrollment in Part B to avoid the premiums or IRMAA, we would expect that those beneficiaries would eventually pay late-enrollment penalties, but we did not see that low-income or high-income beneficiaries were more likely to pay penalties than the average beneficiary. We did find, however, that about one-fifth of beneficiaries paying penalties might not have been notified about the possibility of penalties beforehand. This information allows us to infer that the vast majority of beneficiaries paying the late-enrollment penalties likely knew they could be subject to the penalties at the time they decided to delay Part B enrollment. ■

rules vary somewhat across states, but most dual eligibles qualify because they receive Supplemental Security Income benefits; need nursing home care or have other high medical expenses; or meet the eligibility criteria for the Medicare Savings Programs, which provide assistance with Medicare premiums (including the waiving of late-enrollment penalties) and cost sharing. In December 2016, about 10.5 million Medicare beneficiaries (18 percent of the total) were dual eligible (Medicare Payment Advisory Commission 2018).

Dual eligibles consist of two broad groups—“full benefit” and “partial benefit”—based on the Medicaid benefits they receive. Full-benefit dual eligibles qualify for coverage of the full range of Medicaid services in their state, which generally includes a broad range of primary and acute care services, nursing home care, and other long-term services and supports. In contrast, partial-benefit dual eligibles receive assistance only with Medicare premiums and, in some cases, assistance with cost sharing. In December 2016, there were 7.5 million full-benefit dual eligibles and 3.0 million partial-benefit dual eligibles.

Beneficiaries can also receive financial assistance with their prescription drug coverage if they meet certain low-income thresholds. Part D includes an LIS that provides assistance with premiums and cost sharing to individuals with low income and assets. Individuals who qualify for this subsidy pay zero or nominal cost sharing set by statute. In 2018, 12.5 million beneficiaries received the LIS.

Of the 12.5 million beneficiaries receiving the LIS for Part D, 10.5 million (full-benefit and partial-benefit dual eligibles) are also receiving help with their Part A and Part B premiums and cost sharing. The remaining roughly 2 million beneficiaries have incomes low enough to qualify for the LIS but not low enough to qualify for complete assistance with their Medicare Part A and Part B premiums and out-of-pocket costs. These individuals may be more likely to forgo Part B coverage out of concern for cost, but we do not have sufficient income data to support this contention. In fact, in July 2016, only 4 percent of beneficiaries coded as receiving LIS payments but not dual eligible were enrolled only in Part A, compared with 9 percent of all beneficiaries.

Beneficiaries who delay enrollment in both Part A and Part B

Some individuals do not enroll in either Part A or Part B when first eligible. Our focus groups suggest that these individuals may be unaware of the penalties they may face when they do enroll in Medicare.¹⁰ When they subsequently enroll in Part A, they are notified about their eligibility and potential late-enrollment penalties for Part B (and Part D). For this chapter's analyses, we classified beneficiaries who enrolled in Part A more than 6 months after their 65th birthday and enrolled in Part B at the same time or shortly thereafter as "unnotified." The unnotified would most likely have benefited from increased educational information about the enrollment process in general. We found that about 4 percent of beneficiaries who turned age 65 in 2012 (and enrolled in either Part A or Part B by the end of 2017) would be classified as unnotified. (See text box on enrollment patterns for the cohort of beneficiaries who turned 65 in 2012, pp. 16–17.)

Characteristics of beneficiaries paying Part B penalties

In 2016, the roughly 800,000 beneficiaries who paid Part B late-enrollment penalties were more likely to be older and have lower income (beneficiaries receiving the LIS who were not Medicare–Medicaid dual eligibles)

compared with beneficiaries who were not paying penalties. We did not find that high-income beneficiaries (those subject to IRMAA) were any more likely to pay the Part B late-enrollment penalty.

In 2016, only about 1 percent of beneficiaries enrolled in both Part A and Part B below age 68 were paying the Part B penalty. About 2 percent of beneficiaries between age 68 and age 81 were paying the penalty, and about 3 percent above age 81 were paying a penalty.

We examined patterns by beneficiaries' county of residence. In 2016, we found that beneficiaries in urban counties were more likely to be in Part A only, be assessed a late-enrollment penalty, and have Medicare Secondary Payer (MSP) coverage, compared with beneficiaries in rural counties. Although states varied significantly in the shares of beneficiaries with Part A only and MSP, states varied little with regard to the share of beneficiaries paying penalties.

About 20 percent of beneficiaries paying late-enrollment penalties in 2016 did not sign up for either Part A or Part B when first eligible, and we classified these as unnotified. The unnotified group made up about 4 percent of the Medicare population, and about 7 percent of the unnotified group were paying a penalty, which means that about 80 percent of those beneficiaries paying the Part B late-enrollment penalty had been notified that they could be subject to late-enrollment penalties when they chose to delay enrolling in Part B.

Potential courses of action

The lack of a notification process ensuring that individuals are aware of their eligibility for and need to enroll in Medicare as they turn 65 should be addressed. Current law does not require that either the SSA or CMS notify individuals who have yet to apply for Social Security payments of their eligibility for Medicare. More than 20 percent of the beneficiaries paying the Part B late-enrollment penalty may have not been aware when they were supposed to enroll to avoid this lifetime penalty. Improvement in the timeliness of notification to eligible individuals about Medicare enrollment and potential late-enrollment penalties is essential.

The current notification process is tied to Part A entitlement under Title II of the Social Security Act and is

administered by the SSA. The Secretary could work with the SSA to ensure that prospective beneficiaries receive adequate and timely notification of their pending Part B eligibility and the consequences of delaying enrollment.

Additional resources might also help State Health Insurance and Assistance Programs (SHIPs) address the notification issue. We have found that some SHIPs have pursued outreach efforts using government and commercially produced lists of people turning age 65. The SHIPs had procured such lists to contact people who were turning 65 and might not have known that they were supposed to enroll in Medicare to avoid the late-enrollment penalties. These efforts require resources that most SHIPs do not have available. Increased support for the SHIPs could help fund such outreach efforts.

Another approach to the problem could focus on addressing the late-enrollment penalties imposed under Title XVIII of the Social Security Act, which is

administered by CMS. The Secretary could explore the implications of delaying the IEP or the late-enrollment penalties until the beneficiary begins receiving Social Security benefits or Part A. The Secretary could also explore granting SEPs to beneficiaries who had been covered by either COBRA or Marketplace plans because they can be unaware that they may be subject to late-enrollment penalties when they enroll in Medicare. These actions could help address the unexpected penalties for unnotified beneficiaries.

More broadly, the Secretary could examine whether the late-enrollment penalties are having the desired effects. The full retirement age is still rising to 67, the share of beneficiaries receiving Social Security benefits at age 65 is declining, and beneficiaries are living longer and paying late-enrollment penalties for a longer time. Currently it is not known whether, and to what extent, the penalties are causing beneficiaries to further delay enrollment. Further study of these issues would be useful. ■

Endnotes

- 1 Beneficiaries are *entitled to* Hospital Insurance (HI), or Part A, and *eligible to enroll in* Supplementary Medical Insurance (SMI), or Part B. The entitlement to Part A is contained in Title II (Federal Old-Age, Survivors, and Disability Insurance Benefits) of the Social Security Act. The Act states that Title II is administered by the SSA. Eligibility for Part B is established in Title XVIII (Health Insurance for the Aged and Disabled), which is administered by CMS. In this chapter, we use the terms *entitled to* and *enrolled in* interchangeably for beneficiaries in Part A.
- 2 The 1972 amendments to the Social Security Act extended Medicare benefits to people with ESRD, including those under age 65. To qualify for the ESRD program, an individual must be fully or currently insured under the Social Security or Railroad Retirement program, entitled to benefits (i.e., meets the required work credits) under the Social Security or Railroad Retirement program, or be the spouse or dependent child of an eligible beneficiary. For individuals entitled to Medicare based on ESRD, Medicare coverage does not begin until the fourth month after the start of dialysis, unless the individual had a kidney transplant or began training for self-care, including dialyzing at home.
- 3 Auto-enrollment into Part B can be refused by returning the SMI Refusal card (opt-out). Residents of Puerto Rico and foreign countries are not automatically enrolled in Part B upon the establishment of Part A entitlement. Instead, they are notified of their entitlement to Part A and their option to enroll in Part B (opt-in). Beneficiaries are also informed that they will face limitations on when they can enroll and late-enrollment premium penalties if they do not enroll during their IEP.
- 4 In addition to qualifying individuals for premium-free Part A, spousal employment can allow individuals to delay Part B coverage. An individual's coverage that he or she receives through a spouse's employer can qualify as an alternative source of medical insurance to delay Part B enrollment. Thus, an individual's work history or work-sponsored coverage must also include that of her spouse.
- 5 See pp. 14–15 for further information about premiums for higher income beneficiaries.
- 6 Under COBRA, workers (and their dependents) who have lost their job can retain their group coverage for 18 months. After the worker reaches age 65, COBRA coverage becomes secondary to Medicare.
- 7 Currently, beneficiaries who have ESRD are not allowed to choose MA unless they were enrolled in a plan before they developed the disease. However, this prohibition has been reversed in legislation (the 21st Century Cures Act); beginning in 2021, beneficiaries with ESRD will be allowed to enroll in MA plans.
- 8 The Congress added a fifth IRMAA tier in the Bipartisan Budget Act of 2018. The lowest tier is for individuals earning above \$85,000 up to \$107,000, and they pay \$189.60 for their monthly Part B premium in 2019. The highest tier includes individuals earning \$500,000 or more, and they pay \$460.50 for their premium.
- 9 Individuals with incomes at or below 135 percent of the federal poverty level have their Part B premiums (and any late-enrollment penalties) paid for by their state's Medicaid program. Individuals with incomes at or below 150 percent of the federal poverty level receive the LIS for their Part D premiums. Thus, more individuals receive the LIS than receive Part B premium assistance.
- 10 About half of the Medicare beneficiaries in our 2018 focus groups were unaware of the potential for late-enrollment penalties.

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CHAPTER

2

**Restructuring Medicare Part D
for the era of specialty drugs**

Restructuring Medicare Part D for the era of specialty drugs

Chapter summary

The distribution of drug spending under Part D has changed dramatically since the start of the program in 2006. Early on, the vast majority of spending was attributable to prescriptions for widely prevalent conditions such as high cholesterol, diabetes, hypertension, asthma, depression, and gastroesophageal reflux. After the 2012 “patent cliff”—one of the biggest waves of patent expirations for small-molecule brand-name drugs—manufacturers turned to producing orphan drugs, biologics, and other self-administered specialty drugs that treat smaller patient populations for conditions such as rheumatoid arthritis, hepatitis C, and cancer. These newer therapies are often launched at very high prices, with annual costs per person sometimes reaching tens of thousands of dollars or more, and spending for specialty drugs and biologics has risen rapidly.

In Part D, sponsors of private plans encourage enrollees to use lower cost generics and preferred brand-name drugs by placing them on formulary tiers that have lower cost sharing. In addition, CMS permits plan sponsors to use a specialty tier with coinsurance of 25 percent to 33 percent for expensive therapies. Above Part D’s out-of-pocket (OOP) threshold, enrollees who do not receive Medicare’s low-income subsidy (LIS) pay 5 percent coinsurance with no OOP maximum. Although many specialty drugs have no rebates, when patients use rebated drugs, they pay effective rates of coinsurance (as a percentage of a drug’s net price) that are even higher than the stated

In this chapter

- The growth of specialty drugs and implications for cost sharing
- Addressing the financial burden of high prices through a narrow focus on beneficiary cost sharing
- Eliminating the coverage-gap discount and restructuring the catastrophic benefit
- Summary

coinsurance amount because manufacturers provide rebates to plans long after patients fill their prescriptions, and plans charge coinsurance on the higher “gross” price at the pharmacy. There is some evidence that high patient cost sharing can pose a financial hurdle to treatment, potentially affecting certain beneficiaries’ decisions to fill their prescriptions. Further, paying coinsurance on gross prices tends to move enrollees more quickly toward Part D’s OOP threshold—the point at which Medicare’s reinsurance pays for 80 percent of benefits.

This chapter introduces a new policy approach that the Commission plans to evaluate further. Modifications to Part D’s defined standard benefit and its catastrophic phase could improve plan sponsors’ financial incentives to manage drug spending and potentially restrain manufacturers’ incentives to increase prices. The approach would retain certain features of the Commission’s 2016 recommendation for Part D, such as requiring plans to bear more risk for catastrophic spending, but the new design would also eliminate the need for some previously recommended measures. The new changes would also create a more consistent defined standard basic benefit that would apply both to enrollees without Part D’s LIS as well as those with the LIS—a departure from current policy.

The new approach would restructure the Part D benefit in several ways. First, it would eliminate the coverage-gap discount that currently applies to non-LIS enrollees, making plan sponsors responsible for a consistent 75 percent of benefits between the deductible and OOP threshold. Second, the new design would require manufacturers of brand-name drugs to provide a discount in the catastrophic phase of the benefit rather than in the gap phase, as they do today. The manufacturer discount would be newly applicable to spending of LIS beneficiaries. Third, the new design would lower enrollee cost sharing or include a hard overall OOP cap to improve the affordability of high-priced drugs and provide more complete financial protection for all enrollees. Plan sponsors would be responsible for a larger share of catastrophic benefits, and Medicare’s reinsurance would be smaller. In general, we expect the approach would provide stronger incentives for plan sponsors to manage enrollees’ spending and potentially restrain manufacturers’ incentives to increase drug prices or launch new products at high prices.

Consistent with the Commission’s 2016 recommendations for Part D, we expect that any policy change that requires plan sponsors to take on more insurance risk would be combined with other changes that would provide sponsors with greater flexibility to use formulary tools. Part D’s risk adjustment system would need to be recalibrated to counterbalance plan incentives for risk selection. Finally, the chapter discusses a key parameter of this policy approach: where to set the OOP threshold.

The approach's financial impact on stakeholders, including Part D beneficiaries and taxpayers who finance the Medicare program, would depend on the specific threshold chosen and behavioral responses to the changes. ■

**TABLE
2-1**

Specialty-tier drugs increasingly drove Part D spending, 2007–2017

	2007	2012	2017	Average annual growth rate	
				2007–2012	2012–2017
All Part D–covered drugs					
Total gross spending (in billions)	\$62.1	\$89.8	\$154.9	7.7%	11.5%
Total prescriptions (in millions)	969.1	1,216.9	1,498.8	4.7	4.3
Spending per prescription	\$64	\$74	\$103	2.9	7.0
Drugs on specialty tiers*					
Total gross spending (in billions)	\$3.4	\$10.1	\$37.1	24.1	29.7
Total prescriptions (in millions)	3.0	4.1	8.3	6.6	15.2
Spending per prescription	\$1,151	\$2,462	\$4,455	16.4	12.6
Specialty-tier drugs as a share of total Part D spending and use					
Gross spending	5.5%	11.2%	24.6%	N/A	N/A
Prescriptions	0.3%	0.3%	0.6%	N/A	N/A
Part D enrollment (in millions)	26.1	33.8	45.2	5.3	6.0

Note: N/A (not applicable). “Gross spending” reflects all payments at the pharmacy (including enrollee cost sharing, covered plan benefits, and manufacturer discounts) before deducting postsale discounts and rebates. The number of prescriptions shown in the table is not adjusted to a standard days’ supply. However, in 2017, only about 5 percent of specialty-tier prescriptions were for a 90-day supply—the typical amount provided by mail-order pharmacies. By comparison, in 2017, more than one-quarter of all Part D prescriptions were dispensed with a 90-day supply. Because specialty-tier prescriptions are more likely to have fewer days’ supply, the numbers shown for specialty-tier prescriptions as a share of total Part D prescriptions would be upper bounds for standardized prescriptions.
*From 2006 to 2016, CMS permitted plan sponsors to place drugs that cost an average of \$600 or more per month on a specialty tier. In 2017, CMS raised the threshold to \$670 per month.

Source: MedPAC analysis of the Part D denominator file and data analyzed by Acumen LLC.

The share of Medicare Part D spending made up of specialty drugs and biologics has risen rapidly, and high patient cost sharing for those therapies can pose a financial hurdle to treatment. This chapter introduces new modifications to Part D’s benefit design that could improve plan sponsors’ financial incentives for managing drug spending, potentially address growth in prices of specialty drugs, and provide better financial protection to all Part D enrollees, including beneficiaries who use high-priced drugs.

The growth of specialty drugs and implications for cost sharing

Part D’s distribution of drug spending has changed dramatically since the start of the program in 2006. Early on, the vast majority of spending was attributable to

prescriptions for widely prevalent conditions such as high cholesterol, diabetes, hypertension, asthma, depression, and gastroesophageal reflux (Medicare Payment Advisory Commission 2010). Most prescription spending was for small-molecule brand-name drugs, and many of the drug classes to treat those conditions included therapies that competed on the basis of clinical effectiveness and price.

Toward the end of the decade, blockbuster treatments began to lose patent protection and Part D enrollees switched to generic versions of their medicines. The generic dispensing rate—defined as the share of Part D prescriptions dispensed that are generic drugs—increased from 61 percent in 2007 to 81 percent by 2012 (a year that saw large losses of brand exclusivity) (Medicare Payment Advisory Commission 2017). Over the same period, Part D gross spending (before postsale rebates and discounts) grew by an average of 7.7 percent annually (Table 2-1). However, that rate was attributable more to growth in

the number of prescriptions filled (4.7 percent per year) commensurate with enrollment growth (an average of 5.3 percent per year) than to increases in prices and spending per prescription (2.9 percent annually). Spending would likely have grown much more rapidly without enrollees' move toward generics.

As revenues for small-molecule brand-name drugs fell, manufacturers turned to developing orphan drugs, biologics, and other specialty drugs that treat smaller patient populations for conditions such as rheumatoid arthritis (RA), hepatitis C, and cancer. Those medicines are often self-injectable, but some are oral tablets or inhalable medicines.¹ Dispensing specialty drugs can sometimes raise challenging logistical issues (such as the need to ship them at a consistent low temperature), and patients may require closer clinical management. Specialty drugs are often launched at very high prices, with annual costs per person sometimes reaching tens of thousands of dollars or more.

Under CMS's current guidance, plan sponsors may place drugs that cost \$670 per month or more on a specialty tier.² Most Part D plans have a specialty tier, but not all plans place every high-cost drug on a specialty tier. Since the start of Part D, spending for drugs on specialty tiers has grown more than 10-fold—from \$3.4 billion in 2007 to \$37.1 billion in 2017 (Table 2-1, p. 29). Between 2007 and 2012, specialty-tier spending grew by an annual average of 24.1 percent, but grew even faster (29.7 percent annually, on average) after the 2012 patent cliff (expirations of patents and periods of exclusivity) of small-molecule brand-name drugs. In 2017, only 0.6 percent of Part D prescriptions were for specialty-tier drugs, but the average price per prescription was \$4,455 at the pharmacy (before postsale rebates from manufacturers and discounts). Spending for specialty-tier prescriptions made up nearly a quarter of gross Part D spending by 2017 (Table 2-1) and was likely an even larger share after taking rebates into account.³ Analysts expect that share to grow further. According to IQVIA, between 2019 and 2023, nearly two-thirds of newly launched medicines will be specialty drugs, and oncology drugs will account for 30 percent (IQVIA Institute for Human Data Science 2019).⁴

Cost-sharing requirements for specialty-tier drugs

In 2017, specialty-tier drugs that accounted for large proportions of Part D spending included treatments for multiple myeloma, hepatitis C, rheumatoid arthritis, multiple sclerosis (MS), breast cancer, lymphoma, prostate

cancer, and HIV (Table 2-2). Among the top 20 drugs often found on specialty tiers with the largest aggregate amounts of gross Part D spending, CMS calculates that the average price at the pharmacy per prescription ranged between \$1,458 (Sensipar[®]) and \$31,208 (Harvoni[®]).⁵ However, other specialty drugs have costs per prescription that are higher. For example, in 2017, Part D gross spending averaged over \$77,000 per prescription for Lemtrada[®], a treatment for relapsing MS in patients who have had inadequate response to other drugs (data not shown) (Centers for Medicare & Medicaid Services 2017a). The numbers of drugs with very high prices has grown to such an extent that in 2017, more than 370,000 enrollees filled a prescription for which a single prescription would have been sufficient to reach Part D's out-of-pocket (OOP) threshold, up from 33,000 in 2010 (Medicare Payment Advisory Commission 2019b).

Enrollees who take specialty-tier drugs and receive Part D's low-income subsidy (LIS) do not face large financial hurdles associated with cost sharing. Most LIS enrollees pay nominal copayments (between \$0 and \$8.50 per prescription) rather than their plan's cost-sharing amounts. However, taxpayers bear much of the costs of treatment through Part D's overall premium subsidy and low-income cost-sharing subsidy. Under the latter, Medicare pays plan sponsors the difference between plans' cost-sharing requirements and copayments set for LIS enrollees by law.

For an individual enrollee who does not receive the LIS and uses a specialty-tier drug, Part D's cost-sharing requirements vary during the year depending on the benefit phase she or he has reached. In the initial coverage phase, plans charge coinsurance of 25 percent to 33 percent for drugs on specialty tiers.⁶ Above the initial coverage limit, enrollees pay 25 percent of prescription costs for brand-name drugs in the coverage gap until they reach the OOP threshold.⁷ Above that threshold, enrollees typically pay 5 percent with no maximum OOP limit. Enrollees may not request a tiering exception for specialty-tier drugs.⁸ Under law, Medigap policies may not cover Part D cost sharing, but they do cover cost sharing for Part B drugs. Medicare beneficiaries are not permitted to use manufacturers' copay coupons for either Part B or Part D drugs, but beneficiaries can apply to bona fide independent charity patient assistance programs (PAPs) for help with cost sharing.⁹

As an example, consider a beneficiary who lives in ZIP code 24901 (Greenbrier County, WV), does not receive the LIS, uses a Humira pen[®] to treat RA, and is enrolled

**TABLE
2-2**

Top 20 drugs often found on specialty tiers, ranked by gross Part D spending, 2017

Brand name	Examples of approved indications	Total gross spending (in billions)	Total prescriptions (in thousands)	Average gross spending per prescription	Part D enrollees with prescriptions
Revlimid®	Multiple myeloma	\$3.3	260	\$12,756	37,459
Harvoni®	Hepatitis C virus	2.6	82	31,208	32,397
Humira pen®	Rheumatoid arthritis, Crohn's disease, plaque psoriasis	2.0	371	5,436	51,835
Copaxone®	Multiple sclerosis	1.5	232	6,464	26,171
Sensipar®*	Secondary hyperparathyroidism in patients with chronic kidney disease on dialysis	1.4	985	1,458	154,448
Ibrance®	Breast cancer	1.4	126	11,141	20,441
Imbruvica®	Lymphoma, chronic lymphocytic leukemia	1.4	131	10,432	18,744
Enbrel Sureclick®	Rheumatoid arthritis, plaque psoriasis	1.2	225	5,153	32,005
Tecfidera®	Multiple sclerosis	1.0	128	7,990	17,055
Epclusa®	Hepatitis C virus	0.9	38	25,011	14,073
Zytiga®	Prostate cancer	0.9	94	9,369	17,303
Xtandi®	Prostate cancer	0.9	86	9,971	15,825
Jakafi®	Myelofibrosis	0.7	63	11,474	7,888
Genvoya®	Human immunodeficiency virus	0.7	238	2,900	28,632
Triumeq®	Human immunodeficiency virus	0.7	240	2,710	27,561
Pomalyst®	Multiple myeloma	0.6	44	14,553	7,704
Letairis®	Pulmonary arterial hypertension	0.6	67	9,411	7,741
Imatinib mesylate®	Chronic myeloid leukemia	0.6	79	7,221	10,720
Humira®	Rheumatoid arthritis, Crohn's disease, plaque psoriasis	0.5	99	5,494	14,967
Ofev®	Idiopathic pulmonary fibrosis	0.5	56	8,798	8,645

Note: Total gross spending equals prescription amounts paid at the pharmacy before postsale rebates and discounts.
*Coverage of Sensipar for patients on dialysis was moved to Part B as of 2018.

Source: Identification of drugs on specialty tiers provided by Acumen LLC. Spending, claims, and numbers of beneficiaries from CMS, 2017 (Centers for Medicare & Medicaid Services 2017a).

in the stand-alone prescription drug plan that has the lowest combination of OOP costs and premiums.¹⁰ The total current price at the pharmacy for her Humira pens is \$5,464 per month based on a full year of use (\$65,571 annually).¹¹ In January, the price of her prescription put her past the initial coverage phase and into the coverage gap, with total cost sharing of \$1,672 for that month. Her February prescription took her completely through the coverage gap, into the catastrophic phase, and she paid a total of \$781. In March, she paid \$273 (5 percent coinsurance), and she will continue to do so each of the remaining months of 2019, for annual total cost sharing of

about \$5,183 (averaging about 8 percent of total spending for her Humira treatment). That amount does not include premiums or cost sharing for other medications. About half of this patient's cost sharing for Humira pens will occur in the catastrophic phase of the Part D benefit.

In 2019, enrollees can expect to pay less in cost sharing in the coverage gap than they did a few years earlier. However, because of price increases for specialty drugs, beneficiaries often pay more in the catastrophic phase. Before 2019, cost sharing for brand-name drugs in the coverage-gap phase was higher than 25 percent, and

OOP costs varied more from month to month than they do currently. Between 2016 and 2019, under the coverage-gap phase's scheduled phase-out, cost sharing for brand-name drugs decreased from 45 percent to 25 percent. However, even though the coinsurance rate is lower in the catastrophic phase than in the coverage gap, prices for specialty drugs have increased and beneficiary cost sharing is open ended. One recent study found that, between 2016 and 2019, for non-LIS enrollees who used selected specialty drugs (including Humira, Copaxone[®], Revlimid[®], and others), OOP costs rose even as the coverage gap was closing (Cubanski et al. 2019).¹²

Evidence on cost-related nonadherence for specialty drugs

To get a sense of how cost sharing may affect beneficiary adherence to specialty medications, we surveyed some of the literature on cost-related nonadherence in Part D. Few studies look specifically at adherence to specialty drugs, and even fewer of those focus on the Medicare population. The evidence suggests an association between higher cost sharing and patients not initiating therapy or abandoning prescriptions at the pharmacy. Yet factors beyond cost sharing also affect adherence behavior.

Most research on the effects of cost sharing has evaluated changes in behavior after the introduction of Part D coverage or as beneficiaries reach the coverage gap. Researchers who examined the start of Part D generally found that, as beneficiaries gained coverage, most reported lower OOP spending, modestly higher prescription use, and less cost-related nonadherence (Diebold 2018, Madden et al. 2009, Safran et al. 2010, Schneeweiss et al. 2009). A published literature review found that Part D's implementation was associated with greater use of both underused essential medicines and overused or inappropriate drugs (Polinski et al. 2011).

Subsequent studies examined the effects of the coverage gap on enrollees' medication adherence, focusing on patients with prevalent conditions such as chronic obstructive pulmonary disease, diabetes, heart failure, and hypertension (Fung et al. 2010, Yu et al. 2016, Zhang et al. 2013). That research often compared enrollees who had no cost-sharing subsidies with enrollees who had more generous benefits (e.g., LIS enrollees or enrollees in employer group plans).¹³ Most of the research found that higher cost sharing in the gap decreased rates of medication adherence, primarily for brand-name drugs. Still, researchers also found that some LIS enrollees

remained nonadherent despite low cost sharing and lack of a coverage gap (Wei et al. 2013). This finding suggests that factors in addition to cost affect adherence.

After 2010, changes in law led to a phase-out of the coverage gap by (1) requiring manufacturers of brand-name drugs to provide a 50 percent price discount in the gap (increased to 70 percent as of 2019); (2) gradually lowering cost sharing to 25 percent in the gap (consistent with the initial coverage phase); and (3) restraining annual increases in the OOP threshold. Those changes reduced average OOP costs from \$4,465 in 2010 to \$3,004 in 2011 among non-LIS enrollees with spending high enough to reach the catastrophic phase (Cubanski et al. 2017).

One study focused on the behavioral effects of reductions in gap-phase cost sharing. That research examined elderly enrollees in stand-alone drug plans and used a difference-in-difference approach to compare non-LIS and LIS cancer patients (Jung et al. 2017). Over the 2009 to 2013 period, the authors found that implementation of the manufacturer discount reduced average OOP costs for specialty cancer drugs by 19 percent for non-LIS patients, but did not increase either their likelihood of using the drugs or the number of prescriptions filled. The authors noted that cancer patients may simply not be responsive to cost sharing, or the discount may not have affected their use because the discounts took place after enrollees had already committed to treatment (as evidenced by their reaching the coverage-gap phase of the benefit).

In a 2017 study funded by Pharmaceutical Research and Manufacturers of America, researchers suggested that high and variable OOP costs in Part D put patients who use specialty drugs at risk of poor clinical outcomes due to lower likelihood of initiating treatment and higher risk of gaps in therapy or discontinuation (Doshi et al. 2017).¹⁴ While that hypothesis is plausible, only a limited number of studies have examined how cost sharing affects Medicare beneficiaries' adherence to specialty drugs.

A literature review published in 2016 reviewed 19 studies of cost sharing for patients with cancer, RA, or MS (Doshi et al. 2016c). Most of the studies were from 2009 or earlier, and only two included Part D enrollees. Of those two, one study found that Part D enrollees with cancer paid significantly more OOP than privately insured patients, and individuals with higher cost sharing were more likely to abandon prescriptions that were for oral cancer drugs. Nevertheless, the variable indicating Medicare coverage was not a significant predictor of

abandonment (Streeter et al. 2011). The same study estimated that patients with OOP costs of \$500 or more per prescription had four times the odds of abandoning their prescription at the pharmacy, compared with patients whose cost sharing was \$100 or less. The second study looked at elderly non-LIS Part D enrollees in 2008. Among patients taking higher priced oncology agents, researchers found higher odds of delaying or discontinuing treatment associated with higher OOP costs. However, a puzzling result was that among patients taking lower priced oral cancer drugs, the odds of discontinuation or delay decreased as OOP costs increased (Kaisaeng et al. 2014).

Among all the studies surveyed, Doshi and colleagues' 2016 literature review found wide variation in the estimated effects of cost sharing for specialty drugs and treatment initiation (Doshi et al. 2016c). Initiation of cancer treatment was reported to be largely insensitive to cost sharing. Evidence on the relationship between adherence and cost sharing was mixed and was sensitive to condition, type of adherence measure, and cost-sharing amount. Six of seven studies found a statistically significant relationship between cost sharing and discontinuation of treatment, but only studies of RA patients had consistent results, and the magnitude of effects was small. Authors of the literature review concluded that there was a stronger association between higher cost sharing and not initiating specialty drugs or abandoning a prescription at the pharmacy but less association with or no relationship to patients' adherence.

In subsequent years, three other observational studies found associations between high cost sharing and lower use of specialty drugs. One compared RA patients with and without the LIS who had used a Part D biologic treatment in the year before the study year (Doshi et al. 2016a). Non-LIS enrollees paid an average of nearly \$500 for a 30-day supply, compared with \$5 for LIS enrollees. The authors found that non-LIS enrollees were less likely to use a biologic in the study year, were more likely to fill a prescription for a Part B biologic for RA, and, when they used a Part D agent, had higher odds of a gap in treatment. In a study of Part D enrollees newly diagnosed with chronic myeloid leukemia in the 2011 to 2013 period, authors found that non-LIS enrollees faced average cost sharing of \$2,600 for an initial prescription of a tyrosine kinase inhibitor (TKI) (Doshi et al. 2016b). Compared with LIS enrollees, non-LIS patients were significantly less likely to initiate TKI therapy and, when they did so, took twice as long to fill their first

prescription.¹⁵ A third study using data from 2014 and 2015 included both Medicare and commercially insured cancer patients (Doshi et al. 2018a). It found higher rates of abandonment or delay of an initial oral cancer drug associated with higher OOP costs, but those rates were higher for commercially insured patients than for Medicare beneficiaries.

Cost sharing and the “gross-to-net bubble”

Since the start of Part D, prices at the pharmacy for brand-name drugs have grown rapidly, but postsale rebates and fees paid to plan sponsors and their pharmacy benefit managers (PBMs) by drug manufacturers have grown even faster. Between 2007 and 2017, gross spending for brand-name drugs grew by an annual average of 10 percent, while postsale rebates and fees grew by 19 percent annually. Consequently, the gap between brand prices charged at the point of sale (POS) and prices net of rebates and fees has widened. This expansion has been called the “gross-to-net bubble” (Fein 2019).

With such high prices for specialty drugs, paying 25 percent to 33 percent coinsurance can pose a financial hurdle for treatment. In addition, because patients pay coinsurance on pre-rebate prices, enrollees who fill prescriptions for rebated drugs pay more (and potentially far more) than 25 percent of their Part D plan's net price for certain classes of specialty drugs.

Plan sponsors do not receive manufacturer rebates for all brand-name drugs. Their ability to negotiate for rebates depends on whether a drug has competing therapies, as well as how well the sponsor can deliver a market-share goal to the manufacturer through its formulary and number of enrollees. One recent Milliman analysis of 2016 data provided by a group of Part D plan sponsors found that only 36 percent of brand-name drugs had more than nominal manufacturer rebates (i.e., greater than 1 percent of POS prices) (Johnson et al. 2018). As a share of POS prices, average rebates were largest in drug classes in which brand-name drugs competed directly with one another (39 percent) or when the brand faced competition from three or more manufacturers of a generic substitute (34 percent).

Because there is variation in the degree of competition that specialty drugs face, there is also variation in the proportionate size of their rebates. According to the Milliman study, the group of plan sponsors that provided data negotiated rebates that averaged about 27 percent for

specialty drugs. However, in 2016, hepatitis C drugs—which began to face significant price competition after the entry of new agents—may have significantly influenced that average. The Congressional Budget Office estimates that in 2015, manufacturers’ rebates for specialty drugs averaged 10.5 percent across all plan sponsors compared with 28.4 percent for nonspecialty brand-name drugs (Anderson-Cook et al. 2019). Rebates are less easily obtained and smaller, on average, for brand-name drugs in protected classes such as oncology and antiretroviral agents.¹⁶ In the Milliman study, out of 124 brand-name drugs in protected classes, only 16 received rebates, and among those drugs, rebates averaged 14 percent of POS prices (Johnson et al. 2018).

Addressing the financial burden of high prices through a narrow focus on beneficiary cost sharing

Part D plan sponsors use formularies with tiered cost sharing to give enrollees incentive to use lower cost generics and preferred brand-name drugs. This tiered cost sharing has been key to plans’ success at reaching high rates of generic dispensing. However, Part D enrollees who use specialty-tier drugs sometimes do not have lower cost alternatives that are as effective.

Certain approaches to benefit design for high-priced drugs focus narrowly on beneficiary cost sharing. For example, federal policymakers are considering options that would require Part D plan sponsors to pass manufacturer rebates through to the price of enrollees’ prescriptions at the pharmacy. Similarly, some employers place a dollar limit on what their employees must pay for each prescription. Both of those approaches reduce financial hurdles that cost sharing can pose to certain patients, but neither would necessarily address growth in drug prices. Also, in the context of Medicare Part D, the two approaches may have additional effects that run counter to other policy goals for the program.

Applying manufacturer rebates at the point of sale

Most Part D plan sponsors use manufacturer rebates to lower plan premiums, in part because beneficiaries evaluate premiums closely when comparing plan options, and premiums are the basis on which plans qualify as LIS

benchmark plans. There may also be practical reasons for doing so. For example, most manufacturer rebates and discounts are determined retroactively, and the exact amounts are not known at the time of sale.

Using rebates to reduce plan premiums lowers Medicare program spending because Medicare subsidies pay for a large portion of plan premiums for all enrollees. However, because POS prices are not discounted, coinsurance amounts paid by beneficiaries who use drugs with rebates are effectively higher. As a result, a larger proportion of enrollees reaches Part D’s OOP threshold—the point at which Medicare’s reinsurance pays for 80 percent of benefits. The approach also increases costs for Medicare through higher low-income cost-sharing subsidies. Medicare pays for most of the cost sharing on behalf of LIS enrollees. When plans set cost sharing as a percentage of POS prices, Medicare’s low-income cost-sharing subsidy is higher than it would be on a net-of-rebate basis.

In recent years, plan sponsors have negotiated additional “price-protection” provisions. Under these agreements, if a drug’s list price increases above a specified threshold, the manufacturer rebates any incremental increase above the threshold to the plan sponsor. Sponsors negotiate ceiling prices because manufacturers’ midyear price increases may result in benefit costs that are higher than they expected. While price-protection rebates give more predictability to plan sponsors, enrollees who pay coinsurance are not protected from price increases. Similarly, to the extent that Medicare pays coinsurance on behalf of LIS enrollees, Part D’s low-income cost-sharing subsidy does not benefit from price-protection rebates.

A policy that requires plan sponsors to share at least a portion of manufacturer rebates with enrollees who use drugs with rebates could help lower costs for those beneficiaries. However, a sizable proportion of specialty drugs have few or no direct competitors in their therapeutic class, and thus their manufacturers do not provide rebates (Johnson et al. 2018). While the Food and Drug Administration (FDA) has recently approved larger numbers of biosimilar products, a number of competitive tactics have postponed their market entry. Those tactics include patent litigation, extensions of exclusivity periods through approvals of new orphan indications for originator biologics, PBM agreements with manufacturers of originator biologics in which rebates are conditional on excluding biosimilars from the formulary, and pay-for-delay agreements (Mattina 2019). Patients who fill prescriptions for drugs whose

manufacturers do not offer rebates would not find cost-sharing relief from POS rebates.

Plan sponsors and their PBMs would need to resolve logistical issues before operationalizing POS rebates. For example, the amount of rebate payment may be determined retroactively based on market shares achieved or the magnitude of price increases. However, plan sponsors are already required to use estimated rebates and discounts in the Part D bids they submit to CMS. Plan sponsors would likely need to rely on chargebacks or similar arrangements to ensure the rebate amount is reflected in the beneficiary's cost sharing amount at the pharmacy.¹⁷ Plan sponsors (and their PBMs) and manufacturers may be concerned about the risk of revealing rebate amounts to competitors. Nevertheless, it may be possible to share postsale rebates and discounts with beneficiaries at the POS without disclosing the exact amounts negotiated for individual products by using, for example, average amounts across rebated drugs or by therapeutic class.

Logistical issues are not likely to be the primary obstacle for Part D sponsors; some commercial insurers (that also sponsor Part D plans) today offer plans that use manufacturer rebates to lower members' cost sharing at the POS (Business Wire 2018, Japsen 2018, Tracer 2018). However, Part D is structured differently from most commercial plans. Unlike employer-sponsored coverage provided by a single plan sponsor, Part D enrollees have the opportunity to switch plans annually. As a result, beneficiaries who use high-cost, high-rebate drugs could seek out plans that negotiate the best discounts. Thus, applying discounts to POS prices and having those prices visible on Medicare's Plan Finder may result in adverse selection for the plan, and plan sponsors may not have strong incentives to drive a hard bargain with manufacturers for individualized discounts.

In the past, the Commission has described how Part D's benefit structure, including its coverage gap and cost-based reinsurance subsidies, combined with its focus on premium competition can affect plan sponsors' formulary incentives (Medicare Payment Advisory Commission 2017). A policy of requiring rebates to be passed through at the POS could give plan sponsors better incentives to put products with lower net prices on their formularies. Additionally, POS rebates could limit plan sponsors' ability to financially benefit from rebates on prescriptions filled by LIS enrollees in the coverage gap. Currently,

plans may use those rebates to offset the benefit spending of all plan enrollees. Under a POS rebate approach, Medicare's low-income cost-sharing subsidies would instead be lower.

Nevertheless, requiring POS rebates raises several concerns. A policy that applies rebates to lower prices at the POS would decrease cost-sharing liability for some enrollees (i.e., those who use medications with rebates or discounts). However, the policy would not help beneficiaries who take expensive drugs with no postsale rebates or discounts.

By requiring rebates to be used to lower POS prices, the policy would increase overall Medicare program spending. Because plans' benefit costs and premiums would be higher, Medicare's payments to plans that subsidize all Part D enrollees (the direct subsidy) and LIS enrollees (the low-income premium subsidy) would increase. It is likely that only a minority of beneficiaries would have reductions in cost sharing that exceed their premium increase.

At the same time, however, fewer enrollees would reach the catastrophic phase, thereby reducing Part D's reinsurance payments. Lower POS prices would also reduce Medicare's low-income cost-sharing subsidy payments. On net, however, in the absence of restructuring of the Part D benefit, Medicare program spending would likely increase even if plan sponsors and their PBMs were able to obtain the same level of rebates as under current law. Another concern may be that participants in the drug supply chain would move away from negotiating rebates to negotiating fees or other price concessions that would be exempt from a POS rebate policy.

Applying an OOP limit to each specialty-tier prescription

A second approach to addressing high-cost drugs would require that cost sharing for specialty-tier drugs not exceed a per prescription maximum amount. In a recent survey of employers who offer prescription drug benefits, 18 percent charged their employees coinsurance up to a capped dollar amount, with an average of \$164 as the maximum per prescription (Pharmacy Benefit Management Institute 2019). States such as Delaware, Louisiana, and Maryland also enacted laws that cap specialty-drug cost sharing at \$150 for a 30-day supply (McCarty and Cusano 2014).

Policymakers could establish a maximum dollar limit per prescription within Medicare Part D. For example, the

amount of cost sharing for a drug placed on a specialty tier that requires 33 percent coinsurance would be the lower of the maximum dollar limit or 33 percent of the drug's price at the pharmacy. The maximum dollar amount could be indexed in the same way that other Part D benefit parameters are indexed (i.e., to the annual change in average drug expenses under Part D) or use a different index (e.g., the consumer price index), and it could be adjusted for the prescription's days supplied (e.g., 3 times the limit for a 90-day supply through mail order or specialty pharmacy).

In 2017, 0.4 million non-LIS enrollees (1.4 percent of all non-LIS enrollees) filled one or more prescriptions for drugs on their plans' specialty tiers, and the cost of those prescriptions (at POS prices) was \$23.6 billion.¹⁸ The amount of associated cost sharing totaled about \$1.6 billion, an average coinsurance rate of 7 percent. Because specialty drugs have very high prices, over two-thirds of non-LIS enrollees' specialty-tier drug spending occurred after they had already reached the catastrophic phase of the benefit. In a simplified example based on 2017 Part D claims, capping non-LIS enrollees' cost sharing at \$200 per specialty-tier prescription would have reduced their average effective coinsurance rate from 7 percent to about 2 percent. Under current law, Part D benefit costs are paid with a combination of Medicare subsidies and enrollee premiums. Because a cap on cost sharing would have increased benefit costs, Medicare would have subsidized nearly three-quarters of the higher amount, with the remainder paid by all Part D enrollees through higher premiums. As an alternative to increasing premiums, CMS could require plan sponsors to adjust their cost sharing—for example, through higher deductibles, copayments, and coinsurance rates on nonspecialty tiers—in ways that achieve actuarial equivalence to the defined standard benefit value. Both approaches would result in enrollees who do not use specialty-tier drugs paying for more of their Part D benefit than they do today.

Capping the amount of cost sharing per prescription would smooth beneficiary cost sharing during the year, provide more generous coverage, and improve the affordability of specialty-tier drugs for patients whose conditions require specialty products. For conditions for which the only lower cost alternative therapies are less effective, coinsurance of 25 percent to 33 percent may pose financial hurdles to appropriate treatment. A per prescription cap might encourage more initiation of therapy or fewer instances of abandoning a prescription. The policy would also protect

specialty-drug users from the cost-sharing implications of price increases.

While lower cost sharing may encourage use of appropriate treatments, it may also encourage greater use of drugs that may not be clinically appropriate or effective. The Commission has noted that polypharmacy (the use of multiple drugs simultaneously) is already a concern for the Medicare population (Medicare Payment Advisory Commission 2015). Manufacturers increasingly emphasize specialty drugs in their development pipelines, and as those medicines enter the market, we can expect greater use of them. Higher demand for specialty medications would increase premiums for all enrollees and Medicare program costs.

A limit on per prescription cost sharing may also have implications for manufacturers' pricing behavior. With the patients' cost sharing capped, manufacturers might have greater ability to increase list prices because patients would be insulated from such increases and price increases would be less visible. Unlike employers and other payers of commercial health plans, Part D plan sponsors do not bear insurance risk for large portions of the benefit, particularly in the coverage gap and catastrophic phase. These gaps in benefit liability may reduce plans' incentives to negotiate for rebates as hard as they might otherwise. Moreover, when two or more competing specialty drugs are available within a drug class, a per prescription cap could limit plans' ability to encourage one preferred therapy over another, which would reduce their leverage in negotiating rebates. In turn, drug manufacturers might be able to raise prices of specialty drugs further or to launch new specialty drugs at even higher prices.

The need for a broader approach

The Commission has previously examined the potential use of POS rebates in Part D. We noted that while we share concern for enrollees who pay coinsurance on high-priced specialty drugs, shifting rebates to the POS would increase enrollee premiums and Medicare program spending. Further, the policy would not help beneficiaries who take expensive drugs that have no rebates (Medicare Payment Advisory Commission 2018). Under proposed revisions to the federal anti-kickback statute, we noted that limiting how Part D plan sponsors may use rebates could lead to uncertain and potentially undesirable outcomes, and thus the Commission has substantial concerns about those proposed changes (Medicare Payment Advisory Commission 2019a). Likewise, at our public meetings

in April 2019, the Commission examined using a dollar limit on cost sharing for each specialty-tier prescription in Medicare Part D, but decided not to pursue that approach. Instead, the Commission’s position is that the Medicare program and Part D enrollees would be better served by broad structural change to the Part D benefit.

Eliminating the coverage-gap discount and restructuring the catastrophic benefit

Rather than focus narrowly on specialty-tier cost sharing, the Commission plans to further evaluate a broader structural reform that would, as was the case in our 2016 recommendations, improve financial protection for all Part D enrollees. It would also address inflationary incentives in Part D’s benefit structure by eliminating the coverage-gap discount and restructuring the catastrophic benefit.¹⁹ In general, we expect the policy would provide stronger incentives for plan sponsors to manage enrollees’ spending and potentially restrain manufacturers’ incentives to increase drug prices or launch new products at high prices. However, the ultimate financial impact on beneficiaries and the Medicare program would depend on the specific policy parameters chosen as well as behavioral responses to the changes.

Past changes to Part D’s coverage gap

The original design of the Part D benefit was intended to provide both basic coverage for most enrollees who have relatively low drug spending as well as some catastrophic protection for enrollees with high drug costs. The defined standard basic benefit initially covers 75 percent of drug spending above the deductible and all but 5 percent coinsurance once an enrollee reaches the OOP threshold. That threshold is known as “true OOP” because it excludes cost sharing paid on behalf of a beneficiary by most sources of supplemental coverage, such as employer-sponsored policies and enhanced alternative plans. Before 2011, enrollees with spending that exceeded the initial coverage limit were responsible for paying a prescription’s full price (i.e., 100 percent cost sharing) at the pharmacy up to the OOP threshold.

The Patient Protection and Affordable Care Act of 2010 (PPACA) called for gradually lowering cost sharing in the coverage gap from 100 percent to 25 percent by 2020 and for constraining annual increases in the OOP threshold.

To finance much of this expansion of benefits without directly raising enrollee premiums and program spending, PPACA required manufacturers of brand-name drugs, as a condition of the drug’s Part D coverage, to provide non-LIS enrollees with a 50 percent discount on prescriptions filled during the coverage gap. As a result, in 2011, cost sharing in the coverage gap for brand prescriptions fell from 100 percent to 50 percent.

The law also required that the manufacturers’ discount be counted as though it were the enrollee’s own OOP spending for calculating the “true OOP” amount. That change lowered OOP costs for some beneficiaries but also increased the number of non-LIS enrollees who reached the OOP threshold above which Medicare pays 80 percent of spending through reinsurance.

The Bipartisan Budget Act of 2018 changed Part D to phase out the coverage gap more quickly by increasing the manufacturers’ discount from 50 percent to 70 percent. In 2019, enrollees who reach the coverage gap pay 25 percent cost sharing for brand-name drugs until they reach the OOP threshold (Figure 2-1, p. 39). (Cost sharing for generic drugs in the coverage gap is 37 percent.) Counting the 70 percent discount as though it were the enrollee’s own spending lowers the OOP costs non-LIS enrollees must incur to reach Part D’s catastrophic phase, which in turn means that more enrollees are likely to reach the catastrophic phase.

Over time, plans’ liability for benefit spending on brand-name drugs in the coverage gap rose from 0 percent in 2011 to 15 percent in 2018. In 2019 and thereafter, plan sponsors cover just 5 percent of spending for brand prescriptions filled in the gap phase, while they continue to obtain postsale rebates and discounts. CMS’s Office of the Actuary projects that, in 2019, plan sponsors will obtain postsale rebates and discounts worth about 26 percent of the plans’ total drug costs (Boards of Trustees 2018). In its 2019 call letter to plan sponsors, CMS raised significant concerns about the effects of the higher coverage-gap discount and low plan liability on Part D drug costs in 2019 and in future years (Centers for Medicare & Medicaid Services 2018).

Part D’s benefit design contributes to the inflationary trend

In the Commission’s March 2017 report, we highlighted how Part D’s unique benefit design, Medicare’s cost-based reinsurance payments, and plan sponsors’ focus on premium competition can affect incentives regarding

which drugs a plan covers on its formulary (Medicare Payment Advisory Commission 2017). Because plan sponsors are not liable for much benefit spending in the coverage gap, Part D's benefit design can create incentives for plan sponsors to include certain high-cost, high-rebate drugs on their formulary over others, which can increase beneficiary cost sharing and Medicare spending for reinsurance.

Manufacturers of brand-name drugs and biologics are not required to pay any discount for LIS enrollees who have spending high enough to reach the coverage gap. In the gap phase, plan sponsors face weaker financial incentives to manage spending for LIS enrollees than for non-LIS enrollees because they have no benefit liability; Medicare's low-income cost-sharing subsidy pays for all of the drug costs other than the nominal LIS copayments. Nevertheless, plan sponsors obtain rebates on brand-name prescriptions filled by LIS enrollees in the gap. Because rebates are often calculated as a percentage of a drug's list price and they increase with market share (i.e., volume), plan sponsors and their PBMs may be less resistant when manufacturers raise prices and LIS enrollees fill prescriptions for drugs with high list prices.

LIS beneficiaries continue to account for the majority of beneficiaries who reach the catastrophic phase of the benefit. In the catastrophic phase, plan sponsors' incentives to manage the benefits of LIS enrollees are similar to those for non-LIS enrollees: Plans are responsible only for 15 percent of catastrophic benefit spending. In addition, because nearly all of LIS enrollees' cost sharing is paid by Medicare's low-income cost-sharing subsidy, some sponsors may not bargain hard with manufacturers over the price of medications more likely to be used by LIS enrollees, particularly when there are rebates to offset some or all of the plan's benefit liability.

At the same time, manufacturers may find that, for some products, higher prices allow them to offer larger rebates than their competitors and gain more market share through favorable formulary placement. In this sense, Part D's benefit design may contribute to the inflationary trend in pharmaceutical pricing.

The Commission's 2016 recommendations would affect drug pricing incentives indirectly

In 2016, the Commission recommended an integrated set of changes to Part D that would phase in a reduction

of Medicare's reinsurance from 80 percent to 20 percent while simultaneously increasing capitated payments to plans, among other changes (Medicare Payment Advisory Commission 2016). Those recommendations could better align plan sponsors' financial incentives to include lower priced drugs on their formularies. Beneficiaries would also benefit from lower cost sharing if they selected those lower priced drugs.

However, the Commission's 2016 recommendations only indirectly address pharmaceutical manufacturers' pricing incentives. Because plan sponsors would be responsible for a greater share of insurance risk in the catastrophic phase, the recommendations would reduce the financial benefits of including high-price, high-rebate products on their formularies (Barnhart and Gomberg 2016). To the extent that plan sponsors move away from preferring those products, there may be an indirect effect on manufacturers' pricing strategies. Those indirect effects may be limited and would likely vary depending on the availability of therapeutic competition and the size of the Part D market relative to total U.S. sales of the relevant products.

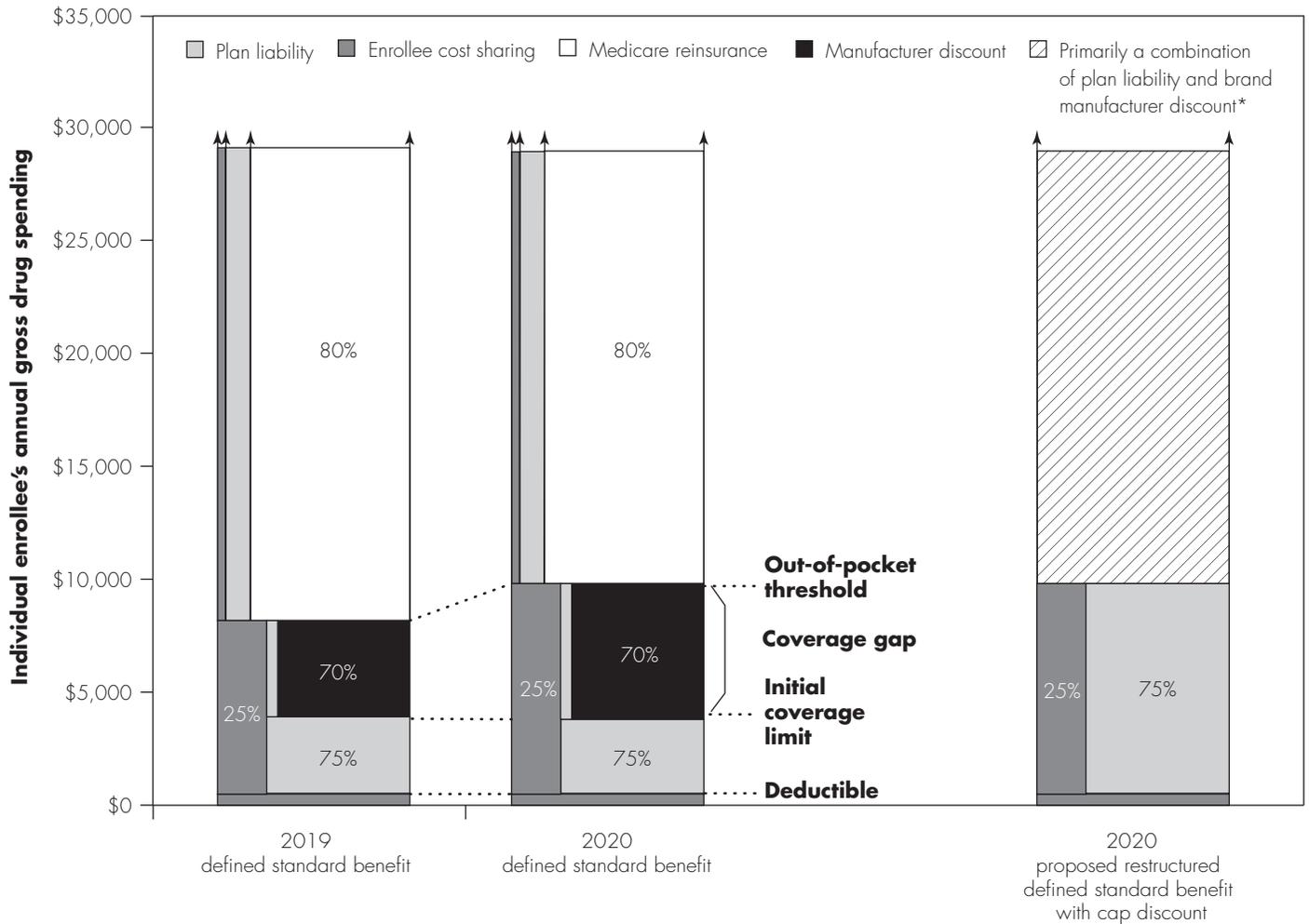
While Medicare's influence on drug pricing is indirect, the program accounts for a large share (about one-third) of U.S. retail pharmaceutical sales (Martin et al. 2019). As a result, Medicare's payment policies can have a significant financial effect on drug manufacturers. For example, policymakers' decisions about the amount manufacturers must pay in coverage-gap discounts may factor into manufacturers' decisions about price increases or launch prices, especially for drugs that have relatively lower POS prices because gap discounts make up a higher proportion of the manufacturers' revenues.

Converting the coverage-gap discount to a cap discount

A potential policy approach that would offer better pricing incentives would be to require manufacturers to provide discounts in Part D's catastrophic phase ("cap discount") rather than in the coverage gap (see right side of Figure 2-1). This change may deter manufacturers of high-priced drugs from increasing prices as rapidly as they have in recent years. The policy would provide better formulary incentives and simplify the benefit structure with a 25 percent cost sharing (or actuarially equivalent cost-sharing amounts) and 75 percent plan liability across all drug and biologic products between the deductible and the OOP threshold. Manufacturers of brand-name drugs and biologics (including biosimilar products) would be

FIGURE 2-1

A proposed restructured defined standard benefit that would apply a brand manufacturers' discount to the catastrophic phase instead of the coverage gap



Note: The cross-hatched area would be paid primarily through a combination of brand manufacturers' discounts and plan liability, but could also include Medicare reinsurance and/or enrollee cost sharing. "Gross drug spending" refers to amounts paid at the pharmacy before rebates and discounts. "Cap discount" refers to applying a manufacturers' discount to brand-name drugs above Part D's out-of-pocket threshold (i.e., in the catastrophic phase of the benefit) instead of during the coverage gap. The coverage gap (between the initial coverage limit and the out-of-pocket threshold) is depicted as it would apply to brand-name drugs for an enrollee who does not receive Part D's low-income subsidy (LIS). Although not shown in the figure, non-LIS enrollees' cost sharing for generic drugs in the coverage gap is 37 percent in 2019 and will be 25 percent in 2020. Under current law, Part D's out-of-pocket threshold is expected to increase by nearly 25 percent in 2020. *The Commission is continuing to evaluate the percentages that would be paid by each stakeholder (Part D plans, brand manufacturers, the Medicare program, and enrollees) under a restructured benefit.

Source: MedPAC depiction of current and proposed Part D benefit structure.

required to pay a cap discount on prescriptions filled in the catastrophic phase of the benefit.

This cap-discount program would be combined with other changes to the catastrophic phase: a lower rate of Medicare reinsurance, an increase in plan liability, and better insurance protection for beneficiaries. Medicare's capitated payments would increase so that the overall

subsidy rate would remain unchanged at 74.5 percent of basic benefits.

Policymakers would need to decide the shares of benefits to be paid by the four current sources of financing Part D benefits: enrollees, Medicare (through reinsurance payments to plans), plan sponsors, and pharmaceutical manufacturers (depicted as the cross-hatched region in

Figure 2-1 (p. 39). (Note that for generic drugs, because there would be no manufacturer discount, plan sponsors would cover a larger share of spending so that Medicare and enrollee shares would be the same for both brand and generic drugs.)

- **Enrollees:** Currently, enrollees pay 5 percent cost sharing (based on POS prices) in the catastrophic phase of the benefit with no maximum OOP limit. The Commission's standing recommendation from 2016 would eliminate all enrollee cost sharing above Part D's OOP threshold. Under a new option with a redesigned benefit, policymakers could eliminate cost sharing as the Commission recommended, use a coinsurance rate lower than 5 percent, or select a dollar copay amount.
- **Medicare:** Currently, Medicare provides 80 percent reinsurance for spending (net of postsale rebates and discounts) in the catastrophic phase of the benefit. The Commission's 2016 recommendation would reduce Medicare's reinsurance from 80 percent to 20 percent of catastrophic spending while simultaneously increasing capitated payments to plans so that Medicare's overall subsidy would remain at 74.5 percent. Under a new option to restructure the defined standard benefit, Medicare's reinsurance would be lowered to 20 percent or less or would be eliminated altogether. Medicare's risk corridors would remain in place and would limit plan sponsors' risk of unforeseen losses.²⁰
- **Plan sponsors:** Currently, plan sponsors are liable for 15 percent of spending (net of rebates and discounts) in the catastrophic phase of the benefit. The Commission's 2016 recommendation would increase plan sponsors' liability from 15 percent to 80 percent of catastrophic spending, while simultaneously increasing capitated payments to plans so that the overall subsidy remained at 74.5 percent. Under the new option to restructure Part D, plan liability in the catastrophic phase would be higher than the current 15 percent to ensure that plan sponsors have a stronger incentive to manage spending.
- **Manufacturers:** Currently, Medicare requires manufacturers of brand-name drugs and biologics to provide a 70 percent discount on prescriptions filled by non-LIS beneficiaries in the coverage-gap phase. The law also counts the manufacturer discount as though it were the enrollees' own spending for purposes of determining the OOP

threshold. The Commission's 2016 recommendation would discontinue counting the brand discount in this manner. (This recommendation would lead some beneficiaries to incur higher OOP costs than under current law. However, the recommendation also introduced a hard cap on beneficiaries' OOP spending.) Under a new option to restructure the defined standard benefit, Part D's gap discount would be replaced with a cap discount. This cap discount would help finance benefit spending and might deter price growth. (Also, by eliminating the gap discount, only the beneficiaries' own spending would be relevant for determining whether she or he reached the OOP threshold.) To ensure that both Medicare program spending for Part D and enrollee premiums remain affordable, policymakers would need to decide on a manufacturer discount rate that most effectively counterbalances the inflationary incentives in pharmaceutical pricing.

We expect that by requiring plan sponsors to bear insurance risk on a larger share of spending, they would have greater incentives to negotiate rebates with manufacturers and design formularies in ways that encourage the use of lower cost therapies. As a result, pharmaceutical manufacturers may face stronger resistance to price increases and higher launch prices.

Rationale for eliminating the coverage-gap discount

Currently, the coverage-gap discount both lowers the price of brand-name drugs relative to generic drugs and quickens the pace at which an enrollee reaches the OOP threshold. As of 2019, plan sponsors are responsible for just 5 percent of benefit liability for brand-name drugs in the coverage gap. By comparison, plans are responsible for 63 percent of the cost of generics in 2019, and will be responsible for 75 percent of generic prescription costs in 2020, when the coverage gap is fully phased out. Among beneficiaries with similar dollar amounts of drug spending, those who use more generics are penalized under the current gap-discount policy because they incur higher OOP costs than beneficiaries who use more brand-name drugs and, as a result, reach the OOP threshold more quickly. From the perspectives of both plan sponsors and beneficiaries, eliminating the coverage-gap discount would equalize treatment of brand-name and generic drugs in the coverage gap. Beneficiaries and plan sponsors would face stronger incentives to use lower cost products and improve plans' formulary incentives.

Rationale for restructuring the catastrophic benefit and adding a cap discount

Insurance risk provides plan sponsors with incentives to offer attractive benefits while managing their enrollees' drug spending through formularies and other tools. Medicare's reinsurance subsidy reduces sponsors' insurance risk and, instead, provides cost-based reimbursement. In turn, reinsurance diminishes financial incentives for plan sponsors to manage spending of enrollees who incur spending high enough to reach the catastrophic phase of the benefit.

Between 2007 and 2017, Medicare's payments for reinsurance increased at an average annual rate of nearly 17 percent, compared with a decrease of about 2 percent per year for the capitated direct subsidy payments (Medicare Payment Advisory Commission 2019b). As a result, the portion of basic benefit costs for which plans are at risk (direct subsidy payments plus enrollee premiums) accounted for only 46 percent in 2017, down from 75 percent in 2007. This trend is contrary to the original intent of Part D, in which private plans would be at risk for their enrollees' benefit spending; to attract enrollees, plan sponsors would need to provide access to beneficiaries' medications while managing spending so that premiums remain competitive.

Part D's individual reinsurance is part of a system of subsidies and regulations that was designed to encourage broad participation of private plan sponsors in a new program. Given plans' more than 13 years of experience delivering Part D benefits, it is appropriate to consider whether plan sponsors still need the reinsurance subsidy and, if so, what the right level of reinsurance protection is.²¹

A restructured design would move Part D closer to a benefit structure more typical of the commercial sector. Under a restructured Part D benefit, plan sponsors would ultimately be at risk for a much larger share of spending above the OOP threshold than the 15 percent they face today. Because more of Medicare's overall subsidy would be paid through capitated payments, plan sponsors would bear more insurance risk for their enrollees' spending and would have stronger incentives to manage benefit spending while retaining the protection afforded them through risk corridors. As a result, the restructured benefit would also address misaligned incentives that provide a financial advantage to plan sponsors that bid in certain ways while increasing taxpayer costs (Medicare Payment Advisory Commission 2016, Walker and Weaver 2019)

(see text box, p. 43, on patterns of Medicare payments and bidding incentives).

In addition, replacing the gap discount with a cap discount would improve the affordability of high-priced specialty drugs and biologics by addressing high prices directly. Many therapies recently approved by the FDA have few or no lower cost alternatives. For those therapies, plan sponsors and their PBMs have limited ability to negotiate price concessions.

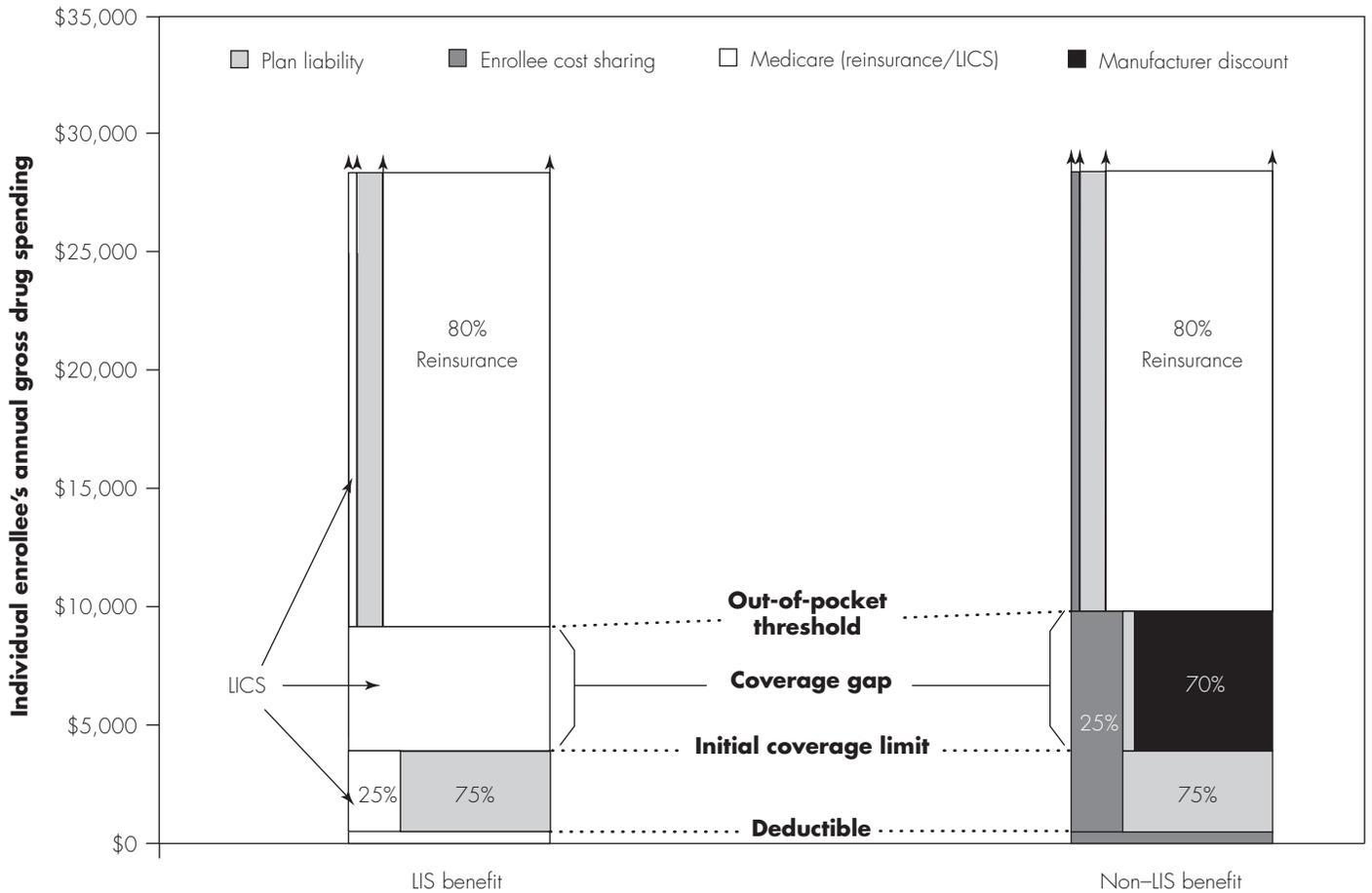
In 2017, drugs and biologics placed on specialty tiers accounted for more than half of all Part D gross spending above the OOP threshold, while they accounted for less than 10 percent of spending below the OOP threshold. As currently structured, the coverage-gap discount affects only a small share of spending for specialty-tier drugs and biologics. A cap discount, on the other hand, would be more likely to apply to drugs and biologics that command high prices. Because the size of the discount would increase in proportion to the price, manufacturers of drugs and biologics with high prices would be subject to a greater financial liability than those with lower priced products. As a result, such an approach may make high prices or price increases less attractive to manufacturers than they are under the current coverage-gap policy. At the same time, because manufacturers would be able to estimate the effects of cap discounts on their net prices under Part D, they might increase their prices to compensate for the cap-discount liability. However, their ability to do so may be held in check by the size of the cap discount and the effect of such price increases on other payers (both public and private).

A consistent benefit for LIS and non-LIS beneficiaries

Past changes that phased out the coverage gap applied only to non-LIS beneficiaries (p. 37). As a result, today, LIS enrollees have a different benefit structure from non-LIS enrollees. LIS beneficiaries reach the catastrophic phase of the benefit at a lower level of spending because 100 percent of costs in the coverage gap (mostly paid by Medicare's low-income cost-sharing subsidy) are counted toward the OOP threshold (Figure 2-2, p. 42). In 2020, an LIS beneficiary would reach the OOP threshold at about \$9,039 in gross drug spending, nearly \$700 lower than the amount for a non-LIS beneficiary (Centers for Medicare & Medicaid Services 2019). This discrepancy is one reason LIS enrollees account for a higher share of individuals who reach the catastrophic phase.²²

FIGURE 2-2

Part D's basic benefit is different for LIS and non-LIS beneficiaries, 2020



Note: LIS (low-income subsidy), LICS (low-income cost-sharing subsidy). LICS pays for most or all cost-sharing liabilities for LIS enrollees. LIS enrollees pay nominal copayments (set in law) until they reach the out-of-pocket (OOP) threshold. The coverage-gap phase (between the initial coverage limit and the OOP threshold for the non-LIS benefit) is depicted as it would apply to brand-name drugs for an enrollee who does not receive Part D's LIS. Although not shown in the figure, non-LIS enrollees' cost sharing for generic drugs in the coverage gap is 37 percent in 2019 and will be 25 percent in 2020. "Gross drug spending" refers to amounts paid at the pharmacy before rebates and discounts.

Source: MedPAC depiction of Part D benefit structure as set by law.

Part D's LIS was designed to ensure that beneficiaries with low incomes and assets have access to appropriate medications. At the same time, the structure of the LIS subsidy may encourage plan and beneficiary behaviors that increase program costs. Plan sponsors do not bear liability for LIS enrollees' spending in the coverage gap. As a result, certain plan sponsors may give preferred formulary placement to brand-name drugs with high rebates rather than generic alternatives, while Medicare's low-income cost-sharing subsidy pays the higher cost of brand-name drugs. This subsidy structure may be one

of several reasons that explains why LIS enrollees use more brand-name drugs even when generic alternatives are available (Medicare Payment Advisory Commission 2016). In addition, our examination of 2015 claims showed that plans with a higher proportion of LIS enrollees tended to cover a lower share of their enrollees' spending and charged a higher percentage in average cost sharing (Medicare Payment Advisory Commission 2019b).

Restructuring the catastrophic benefit would provide stronger incentives for plan sponsors to manage LIS

Patterns of Medicare payments and bidding incentives

In the Commission's June 2015 report to the Congress, we noted regular patterns in spending that may suggest a bidding strategy that provides a financial advantage to plan sponsors (Medicare Payment Advisory Commission 2015). First, many plan sponsors bid too low on the amount of benefit spending they expect above Part D's out-of-pocket threshold relative to their enrollees' actual catastrophic spending. Second, plan sponsors bid too high on benefit spending other than catastrophic benefits.

When plans underestimate catastrophic spending in their bids, they are able to charge lower premiums to enrollees and then later get reimbursed by Medicare for 80 percent of actual catastrophic claims (net of postsale rebates and discounts) through additional reinsurance at

reconciliation. Because premiums are lower than they would have been had they reflected actual catastrophic prescription costs, in nearly every year since 2007, Medicare's overall Part D subsidy has been higher than the 74.5 percent specified in law.

At the same time, when plan sponsors bid too high on benefit spending, other than catastrophic benefits, the structure of Part D's risk corridors allows plan sponsors to keep most of the difference as profits (Centers for Medicare & Medicaid Services 2017b). Between 2009 and 2017, the majority of plan sponsors returned a portion of their prospective payments to Medicare through risk corridors, meaning that they had profits above and beyond those assumed in their bids. ■

enrollees' spending. However, in many cases, patterns of prescription therapy are established long before beneficiaries reach the OOP threshold. In 2017, nearly 60 percent of LIS enrollees who reached the coverage gap also reached the catastrophic phase of the benefit. That figure is about one in four for non-LIS beneficiaries.

If benefits in the coverage gap were changed so that plan sponsors were at risk for LIS enrollees' spending, that would likely affect how plan sponsors manage benefits. Under an equalized benefit, plans would be liable for 75 percent of LIS enrollees' spending for all drugs and biologics in what is now the coverage gap, just as plans would be for non-LIS beneficiaries. Medicare's low-income cost-sharing subsidy would pay 25 percent cost sharing minus LIS enrollees' nominal copayments.

With a consistent benefit structure, LIS and non-LIS beneficiaries would reach the OOP threshold at the same level of spending. A consistent benefit structure may also simplify bid calculations for plan sponsors. The change would, however, result in higher benefit costs and enrollee premiums because much of what is currently covered by Medicare's low-income cost-sharing subsidy would become part of Part D's basic benefit. For example, in 2017, low-income cost-sharing subsidies for LIS enrollees'

prescriptions filled during the coverage gap totaled more than \$12 billion. If the basic benefit covered 75 percent of LIS enrollees' spending in the coverage gap, the average premium for all Part D enrollees would have been at least 10 percent higher, assuming no behavioral change by plan sponsors or LIS enrollees. From Medicare's perspective, that would result in higher direct subsidy payments and low-income premium subsidies, offset by lower spending on low-income cost-sharing subsidies.

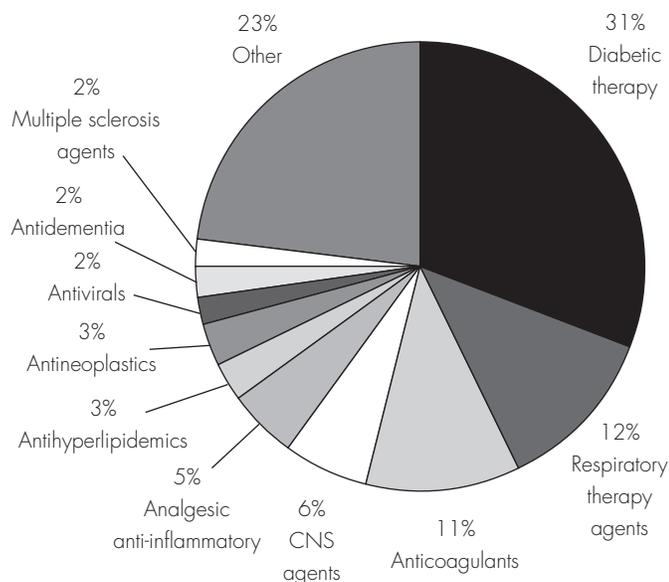
A cap discount would change the incidence of discounts across manufacturers

In 2017, coverage-gap discounts paid by manufacturers totaled \$5.8 billion. Four drug classes—diabetic therapies, respiratory therapy agents, anticoagulants, and central nervous system (CNS) agents—accounted for 60 percent of that amount (Figure 2-3, p. 44). Examples of medications in these classes include Januvia[®] (diabetic therapy), Lantus Solostar[®] (insulin), Eliquis[®] (anticoagulant), Advair Diskus[®] (respiratory therapy agent), and Lyrica[®] (CNS agent), with average prices ranging from about \$485 to \$576 per prescription.

Some of the therapeutic classes that tend to have higher priced products and account for large shares of Part D

FIGURE 2-3

Most coverage-gap discounts apply to non-specialty tier drugs, 2017



Note: CNS (central nervous system). Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

spending had relatively small shares of manufacturer discounts. For example, antineoplastics and antivirals accounted for nearly 10 percent and 7 percent, respectively, of total gross Part D spending in 2017. Because of their high prices, even a single prescription for many of the drugs in those classes would be sufficient to meet the OOP threshold. For example, in 2017, the price for one of the most frequently used hepatitis C treatments (an antiviral) averaged about \$31,000 per prescription, and many cancer therapies had prices that ranged from around \$10,000 to over \$14,000 per prescription (see Table 2-2, p. 31). As a result, most of the costs of these therapies fell in the catastrophic phase of the benefit, and coverage-gap discounts made up a relatively small share of their costs. In 2017, antineoplastics and antivirals accounted for 3 percent and 2 percent, respectively, of total coverage-gap discounts paid by manufacturers (Figure 2-3).

A cap discount rate would need to be set at 11 percent or greater, applied to prescriptions filled by all (LIS and non-LIS) beneficiaries to ensure that the aggregate amount paid by manufacturers was at least as large as the amount currently paid through the gap-discount policy. If the cap discount applied only to prescriptions filled by non-LIS beneficiaries—the approach used today for the gap-discount policy—the minimum rate of cap discount required to maintain parity with current gap-discount amounts would be higher than 11 percent.²³

Under a cap-discount policy that applied to all beneficiaries, the incidence of manufacturer discounts would shift toward drugs and biologics that are more frequently placed on plans' specialty tiers. For example, antineoplastics and antivirals would account for 20 percent and 15 percent, respectively, of the manufacturer discounts compared with 3 percent or less in 2017 under the gap-discount policy (Figure 2-3 and Figure 2-4). Manufacturers of anti-inflammatory drugs (e.g., the Humira[®] pen used for RA and other inflammatory conditions) and MS agents would also pay more under a cap discount than under the gap discount. These four classes combined would account for 52 percent of manufacturer discounts, an increase from 12 percent under current policy. Diabetic therapies, on the other hand, would account for a much smaller share under the cap discount than under the gap discount (11 percent compared with 31 percent).

The design of a cap-discount policy would affect the incidence of discounts paid across manufacturers, reflecting differences in the drug classes used by affected beneficiaries. Because non-LIS beneficiaries who reach the catastrophic phase are often patients using drugs to treat cancer, MS, and RA, a cap discount that applied only to non-LIS enrollees would be more concentrated among those therapeutic classes than under a policy that applied the cap discount to all beneficiaries (Medicare Payment Advisory Commission 2019b).

Issues to consider in restructuring Part D's catastrophic benefit

Requiring plan sponsors to shoulder more insurance risk may provide plan sponsors with stronger incentives to manage benefit spending, but it also raises the question of whether plans could or would be more effective at managing their enrollees' spending than they are today. The Commission expects that any policy change that requires plan sponsors to bear more insurance risk would be combined with other changes that would provide sponsors with greater flexibility to use formulary tools.²⁴

Because Part D’s nominal cost-sharing amounts provide little financial incentives for LIS enrollees to use lower cost products, we also recommended changes in law to allow the Secretary of Health and Human Services to modify some LIS copayments. Finally, CMS would need to recalibrate Part D’s risk adjustment system to counterbalance plan incentives for selection.

The effects of the restructured Part D benefit on various stakeholders—including beneficiaries and taxpayers who finance the Medicare program—would depend on the specific parameters chosen. In this section, we discuss a key parameter: the OOP threshold amount.

Tradeoffs between a lower OOP threshold and Part D’s benefit and premium costs would depend on policy parameters

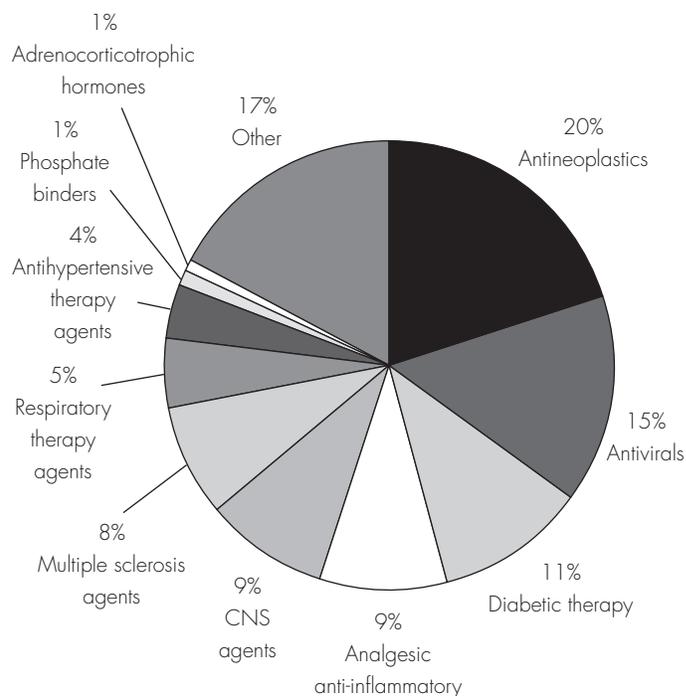
As part of PPACA, one mechanism for closing Part D’s coverage gap was to restrain annual increases in the OOP threshold. However, under law, the OOP threshold will revert back to a level that it would have reached otherwise, increasing from \$5,100 in 2019 to approximately \$6,350 in 2020.²⁵ Under the current coverage-gap discount, in 2020 we would expect enrollees who use brand-name drugs or biologics to pay about \$2,750 in cost sharing to reach that threshold. (Brand manufacturer discounts would pay the remainder. Beneficiaries who use generic drugs would need to spend a larger amount to reach the OOP threshold.) If the coverage-gap discount were eliminated, all non-LIS beneficiaries, regardless of their mix of brand-name and generic drugs, would pay the full amount of the OOP threshold (\$6,350 in 2020) in cost sharing to reach the OOP cap.

Without manufacturer discounts counting toward the OOP threshold, most individuals likely would not reach Part D’s catastrophic phase as quickly, and some would not reach it at all. In 2017, slightly over 1 million non-LIS enrollees reached the OOP threshold by paying an average of about \$2,200 in cost sharing. That amount is less than the \$4,950 threshold amount for 2017 because manufacturer discounts averaging nearly \$2,500 were counted as though they were the enrollees’ own spending. Without the coverage-gap discount, potentially more than half of the 1 million enrollees would not have reached the catastrophic threshold in 2017.

In typical commercial insurance, the tradeoff for a lower OOP cap is higher premiums. However, under a restructured Part D benefit, the tradeoff would depend on the benefit parameters chosen. With a manufacturer’s

FIGURE 2-4

Under a cap-discount policy that applied to all beneficiaries, specialty-tier drugs would have been responsible for larger shares of a cap discount, 2017



Note: CNS (central nervous system). Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

discount applied to catastrophic spending rather than coverage-gap spending, plan sponsors would be responsible for 75 percent of spending in what is now the coverage-gap phase, but potentially less than 75 percent of covered catastrophic benefits. As a result, lowering the OOP threshold could actually reduce benefit costs and premiums. However, a lower OOP threshold would expand the catastrophic phase. Because plan sponsors would be liable for less benefit spending, they would also have weaker incentives to manage those benefits. These behavioral responses would tend to put upward pressure on benefit costs and enrollee premiums and offset, at least partially, the reductions in benefit costs resulting from lower overall benefit liability.

A lower OOP threshold would enhance financial protection for all enrollees, and more beneficiaries would reach the catastrophic phase of the benefit. Because a

restructured Part D benefit would lower or eliminate cost sharing in the catastrophic phase, such a change would likely increase both necessary and unnecessary use of high-priced and other therapies.

The effects of a lower OOP threshold would be different for LIS beneficiaries. Because plan sponsors currently have no benefit liability for LIS enrollees in the coverage gap, lowering the OOP threshold would result in higher benefit liability (for plan sponsors and for Medicare in reinsurance spending) regardless of whether the cap discount applied to LIS beneficiaries. Medicare would pay less in low-income cost-sharing subsidies.

Summary

The Commission has a long-standing interest in improving the financial sustainability of the Part D program. Previously we have raised concerns about misaligned

incentives that increase financial burdens on beneficiaries and the taxpayers who pay for the program. Meanwhile, prices and spending for specialty drugs have grown, and the Commission recognizes that, for patients, paying coinsurance on high-priced specialty drugs could affect their decisions to fill their prescriptions. Nevertheless, policy approaches that attempt to address high prices by focusing narrowly on cost sharing would only shift costs from patients who use specialty-tier drugs to other Part D enrollees and taxpayers without fundamentally changing the misaligned incentives.

We believe, consistent with positions the Commission took in our 2016 and 2018 recommendations, that the Medicare program and Part D enrollees would be better served by broad structural change to the Part D benefit. For this reason, we plan to continue our examination of ways to restructure Part D beyond those included in our previous recommendations. ■

Endnotes

- 1 Specialty drugs that are administered by health care providers in offices, clinics, and hospital outpatient departments are covered under Medicare Part B. In this chapter, we refer to self-administered specialty drugs that are dispensed by community, mail-order, and specialty pharmacies and covered under Medicare Part D.
- 2 CMS's specialty-tier threshold was \$600 per month until 2017, when the agency increased it to \$670 per month.
- 3 A recent report by the Congressional Budget Office (CBO) examined Part D spending for specialty drugs net of manufacturers' rebates and discounts. Using a somewhat different definition from what is described in this chapter (i.e., specialty drugs versus specialty-tier drugs), CBO found that in 2015, specialty drugs accounted for 30 percent of Part D spending on a net-of-rebate basis (Congressional Budget Office 2019).
- 4 This prediction reflects the combination of drugs that fall under both outpatient pharmacy and medical benefits.
- 5 In 2018, coverage of Sensipar for patients on dialysis was moved to Medicare Part B.
- 6 CMS set the lower bound of coinsurance for specialty-tier drugs at 25 percent because it is the same percentage as in the initial coverage phase of Part D's defined standard benefit. Plan sponsors may charge up to 33 percent coinsurance for specialty-tier drugs if the plan has no deductible or a decreased deductible under an actuarially equivalent alternative benefit design.
- 7 In 2019, enrollees pay 37 percent of the cost of generic prescriptions in the coverage gap. In 2020, cost sharing for both generic and brand-name drugs will be 25 percent in the coverage gap.
- 8 A tiering exception is a request to obtain a drug at the lower cost-sharing amount charged for a preferred drug that is prescribed for the same condition.
- 9 Pharmaceutical manufacturers can provide cash donations to independent charity PAPs without invoking anti-kickback concerns if the charity is structured in accord with Department of Health and Human Services Office of Inspector General (OIG) guidelines. Guidance from OIG states that independent charity PAPs must provide assistance to broad rather than narrow disease groups, manufacturers must not exert direct or indirect control over the charity, and the PAP must not limit assistance to a subset of available products (Office of Inspector General 2014). The Internal Revenue Service is investigating the relationship between certain patient assistance charities and several major pharmaceutical manufacturers (Sagonowsky 2017). OIG has rescinded its advisory opinion for at least one major PAP on the grounds that the PAP did not fully disclose all relevant facts in OIG's investigation (Office of Inspector General 2018).
- 10 This example is based on information from the Medicare Plan Finder as of March 12, 2019.
- 11 Note, however, that according to CMS's Part D drug data dashboard, in 2017, average spending per beneficiary for the Humira pen was \$38,888, suggesting that, on average, beneficiaries filled about 7 prescriptions per year rather than 12 prescriptions. Humira is used to treat other conditions in addition to RA.
- 12 OOP cost sharing fell for 2 of the 10 drugs analyzed in the Cubanski study: Harvoni and Sovaldi[®], treatments for hepatitis C that have been subject to price competition from other therapies.
- 13 Many of the studies used claims data to measure the proportion of days covered or medication possession ratios, while others used survey data to examine self-reported behavior such as skipping doses, pill cutting, or not filling a prescription because of cost. A medication possession ratio is the sum of the days' supply for all prescription fills of a given drug during a particular period of time, divided by the number of days in the time period.
- 14 The same study and a subsequent blog post (Doshi et al. 2018b) criticized part of the Commission's 2016 package of Part D recommendations: specifically, our recommendation that Medicare should no longer count brand manufacturers' discounts as enrollees' own spending for purposes of reaching Part D's OOP threshold. In our 2016 report, the Commission acknowledged that under the recommendation, some beneficiaries would remain in the coverage gap longer and pay more out of pocket before reaching the OOP threshold. However, the package of recommendations also provided a hard OOP cap for beneficiaries with the highest spending. The Commission also noted that the brand discount and the policy of counting that discount toward the OOP threshold artificially lowers the price of brand-name drugs relative to generics much in the same way as manufacturers' copay coupons.
- 15 Those results are consistent with a separate study, using commercial claims data, of TKI use among nonelderly chronic myeloid leukemia patients (Dusetzina et al. 2014).

- 16 There are six protected classes: anticonvulsants, antidepressants, antineoplastics, antipsychotics, antiretrovirals, and immunosuppressants for the treatment of transplant rejection. In Part D price indexes developed for the Commission by Acumen LLC, POS prices for antineoplastics and antiretrovirals have increased by a factor of nearly two between 2007 and 2017, while indexes for the other four classes have fallen because of generic substitution.
- 17 Pharmacies purchase their stock of drugs from wholesalers and pay the wholesaler a single negotiated purchase price for each drug (identified by its national drug code). However, when a pharmacy dispenses the exact same drug to different patients, the negotiated prices that PBMs (representing the patients' plans) pay the pharmacy differ from one another. Sometime after the drug is dispensed, the PBMs receive rebates from the drug's manufacturer which, under Part D, the PBM must pass through to the plan. Under an alternative system of POS rebates, the pharmacy would still buy the drug from the wholesaler at a single price. However, the pharmacy would need to reflect any discounts at the POS that the plan's PBM negotiated with the manufacturer, which would lower the dollar amount of a patient's coinsurance. A "chargeback" system would ensure that the pharmacy would be credited for the difference between its purchase price and the PBM's negotiated price.
- 18 In addition, nearly 0.6 million LIS enrollees filled specialty-tier prescriptions. However, because LIS enrollees pay only nominal copayments, we focus here on non-LIS enrollees.
- 19 One version of this approach was first proposed by American Action Forum (Hayes 2018). Aetna commissioned Milliman to estimate the same proposal's effects (Sheldon 2018).
- 20 Risk corridors limit each plan's overall losses or profits if actual spending is much higher or lower than anticipated. Corridors provide a cushion for plans in the event of large, unforeseen aggregate drug spending.
- 21 Medicare's individual reinsurance captures about 8 percent of enrollees and 50 percent or more of Part D's basic benefit costs. In comparison, a typical private reinsurance policy for a commercial health plan would be expected to capture less than 1 percent of beneficiaries and about 10 percent of benefit costs (Johnson 2015).
- 22 Multiple factors likely contribute to higher average drug spending among LIS enrollees. One contributing factor is that plan sponsors have more limited tools to manage their drug benefits because LIS enrollees pay nominal copays set in law rather than the cost-sharing amounts set by plan sponsors.
- 23 To estimate the equivalent cap-discount rate, defined as the discount rate needed to keep manufacturer payments for discounts unchanged from the amounts they pay under the current gap-discount program, we used 2017 claims data and applied the current coverage-gap discount rate of 70 percent instead of the 50 percent rate that was in place in 2017.
- 24 The Commission's June 2016 recommendations included removing protected status from two of the six drug classes for which plan sponsors must now cover all drugs on their formularies (antidepressants and immunosuppressants for transplant rejection), streamlining the process for formulary changes, requiring prescribers to provide supporting justifications with more clinical rigor when applying for exceptions, and permitting plan sponsors to use selected tools to manage specialty-drug costs while maintaining access to needed medications. In 2018, CMS finalized a number of regulatory changes in Part D and proposed other steps to allow plan sponsors to use tools already available for managing pharmacy benefit in commercial populations. Some of those policies are consistent with the Commission's 2016 recommendations.
- 25 PPACA requires that in 2020, the OOP threshold revert to what it would have been had it grown at the same rate as other Part D benefit parameters.

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CHAPTER

3

**Medicare payment strategies
to improve price competition
and value for Part B drugs**

Medicare payment strategies to improve price competition and value for Part B drugs

Chapter summary

Medicare Part B covers drugs and biologics that are administered by infusion or injection in physician offices and hospital outpatient departments (HOPDs). Medicare Part B also covers certain other drugs provided by pharmacies and suppliers (e.g., inhalation drugs; certain oral anticancer, oral antiemetic, and immunosuppressive drugs; and certain home infusion drugs). Medicare pays for most Part B drugs and biologics at a rate of 106 percent of the average sales price (ASP + 6 percent). In 2017, the Medicare program and beneficiaries together paid about \$32 billion dollars for Part B–covered drugs and biologics. (Hereafter, we use the term *drugs* to refer to drugs and biologics unless otherwise noted.)

Medicare Part B drug spending has grown rapidly, increasing at an average rate of 9.6 percent per year between 2009 and 2017. Nearly two-thirds of the growth in Part B drug spending between 2009 and 2016 was accounted for by price growth, which reflects increased prices for existing products and shifts in the mix of drugs, including the launch of new high-cost drugs. In 2017, the Commission recommended several improvements to payment for Part B drugs, including an ASP inflation rebate that would address price growth in the years after products launch, consolidated billing codes for biosimilars and originator biologics that would spur price competition among these products, and a voluntary alternative to the ASP payment system that would use vendors to negotiate lower prices and share savings with providers and beneficiaries.

In this chapter

- Background on Medicare Part B coverage of drugs
- Spurring price competition with reference pricing
- Addressing high launch prices with binding arbitration
- Conclusion

The policies in the June 2017 recommendation—which aim to spur competition, address price growth, and lower prices—would be important steps forward; nonetheless, several additional issues remain that increase spending for both the Medicare program and beneficiaries. Under the ASP + 6 percent payment system, a new drug receives its own payment rate based on its own ASP. The payment system is not designed to spur price competition among single-source drugs with similar health effects. Also, a drug’s payment rate may not have any relationship to its clinical effectiveness. Fee-for-service (FFS) Medicare acts as a price taker and lacks tools to arrive at payment rates for new drugs that balance an appropriate reward for innovation with value and affordability for beneficiaries and taxpayers. In addition, concern exists about provider incentives under the ASP payment system. The 6 percent add-on to ASP may create incentives for some providers to select higher priced products, although studies examining this issue are limited.

Building on our June 2017 recommendation, this chapter examines two strategies that were elements of that recommendation—reference pricing and binding arbitration. We explore the potential to apply these two approaches more broadly in an effort to improve price competition and value for Part B drugs. Both of these strategies would require that the Congress change the statute to give CMS the authority to implement them.

Reference pricing

In 2017, the Commission concluded that the structure of the ASP payment system, with an originator biologic assigned to one billing code and its biosimilars assigned to different codes, does not spur price competition among these products. Consequently, the Commission recommended that the Congress give the Secretary the authority to use consolidated billing codes under which an originator biologic and its biosimilars would be assigned the same billing code and paid the same rate.

We have also found that the structure of the ASP payment system does not promote price competition among some groups of drugs with similar health effects, such as leukocyte growth factors and erythropoiesis-stimulating agents. Building on the Commission’s 2017 consolidated billing code recommendation, we discuss Medicare’s use of internal reference pricing, a policy that aims to spur price competition among single-source products with similar health effects and reduce drug prices. Applying this policy to Part B drugs, Medicare would establish a reference payment amount for groups of drugs with similar health effects currently assigned to separate billing codes. The reference payment amount could be set at the median, average, minimum, or other point along the range of prices within the drug group. Because there is typically a limit on what physicians or outpatient departments would receive in payment and because there can be large differences

in cost sharing, internal reference pricing gives the provider and patient strong incentives to consider lower cost therapeutic substitutes within each group. Between 1995 and 2010, Medicare implemented internal reference pricing strategies that set payment rates for groups of drugs with similar health effects based on the least costly product in each group. Since 2010, due to judiciary rulings and statutory changes, Medicare Part B no longer uses such policies for Part B drugs and pays for each single-source drug according to its own ASP payment rate.

Binding arbitration

For costly new drugs that face limited competition, such as the first drug in a class or a product that offers added clinical benefit over existing treatments, manufacturers have significant market power to set prices and payers currently have very limited ability to influence those prices. The Commission's June 2017 recommendation called for the development of a voluntary alternative to the ASP payment system (referred to as the Drug Value Program (DVP)), in which private vendors would obtain lower prices for Part B drugs through the use of tools, including binding arbitration for high-cost products with limited competition. Arbitration is a process by which two parties agree to accept the decision of a neutral third party in a dispute, such as a dispute over the price of a drug.

Although the Commission has recommended the inclusion of binding arbitration within the DVP, there may be benefits to expanding binding arbitration beyond the DVP. Since the DVP would be voluntary for providers, some Part B drug spending would remain under the traditional ASP system unaffected by the DVP. Thus, expanding binding arbitration beyond the DVP would increase its potential impact on Part B drug spending. Because Part A providers such as inpatient hospitals also face challenges with negotiating prices for drugs with few alternatives, there also could be benefits to extending prices achieved through binding arbitration to Part A providers.

In this chapter, we explore a potential policy that would permit the Secretary to enter into binding, baseball-style (i.e., final-offer) arbitration with drug manufacturers for Part B drugs with limited competition under certain circumstances. We describe how such an approach could work and discuss some of the key design elements and policy choices that would be involved. Under the potential policy, the Congress could specify criteria for when a Part B drug is eligible for arbitration based on its cost (e.g., exceeding specified thresholds) and whether it faces limited competition. If a product met the criteria, the Secretary could request that the manufacturer enter into binding arbitration. A system could be in place to select a neutral arbitrator or arbitration panel. The Secretary and

manufacturer could each submit an offer price to the arbitrator and the arbitrator could choose one of those two prices after considering supporting information submitted by the two parties and criteria specified by the Congress. The new arbitration price could become the basis of Medicare payment for the Part B drug, which could be operationalized by adjusting the Medicare payment rate and requiring that the manufacturer honor that price for Medicare patients or by instituting a manufacturer rebate paid to Medicare.

Binding arbitration is one of the few potential tools available to affect the price of drugs with limited competition. Binding arbitration has the potential to incorporate value, affordability, and an appropriate reward for innovation into the determination of Medicare's payment for Part B drugs. Whether arbitration is an effective process for arriving at a value-based payment would depend on how the arbitration process is designed. The Congress would need to specify a number of design elements for the binding arbitration process. The success of a binding arbitration process would also hinge on the ability to involve neutral arbitrators.

Both strategies—reference pricing and binding arbitration—would be somewhat complex to implement, but have the potential to yield substantial savings. Each strategy is a distinct policy and could be adopted on its own. However, packaging both strategies together, along with the Commission's June 2017 recommendation policies, could provide added benefits since the various policies would complement each other by addressing different factors driving Medicare Part B drug spending growth. Some stakeholders raise concerns that policies aimed at reducing Medicare spending for Part B drugs would reduce incentives for innovation. However, others argue that the current prices for some products adversely affect affordability and access and exceed what is necessary to provide appropriate incentives for innovation. Each strategy would be expected to lower beneficiary cost sharing and could be structured to promote beneficiary access. Finally, both reference pricing and binding arbitration could also be applied to pay for Part D drugs, although how each could be applied would differ from their use in Part B. ■

**TABLE
3-1**

Price growth accounted for nearly two-thirds of spending growth for separately payable Part B drugs between 2009 and 2016

	2009	2016	Average annual change 2009-2016
Total payments for separately payable Part B drugs excluding vaccines (in billions)	\$12.8	\$26.1	10.7%
Number of beneficiaries receiving Part B drug	2,840,166	3,750,634	4.1
Average payment per user	\$4,524	\$6,962	6.4
Average number of drugs per user	1.41	1.36	-0.5
Average annual payment per drug per user	\$3,206	\$5,119	6.9

Note: This analysis includes all Part B drugs paid the average sales price plus 6 percent as well as the small group of Part B drugs that are paid based on the wholesale acquisition cost, average wholesale price, or reasonable cost or those that are contractor priced. "Vaccines" refers to the three Part B-covered preventive vaccines: influenza, pneumococcal, and hepatitis B. Data include Part B drugs furnished by physicians, hospitals paid under the outpatient prospective payment system, and suppliers. Excluded from the analysis were any Part B drugs that were bundled or packaged in 2009 and/or 2016 (i.e., drugs that were packaged under the outpatient prospective payment system, regardless of the setting where they were furnished, and drugs furnished by dialysis facilities), drugs billed under not-otherwise-classified billing codes, blood and blood products (other than clotting factor), and data for critical access hospitals and Maryland hospitals. The average annual growth rates displayed in the table may differ slightly from the average annual growth rates calculated using the 2009 and 2016 values displayed in the table due to rounding. Total payments reflect Medicare program payments and beneficiary cost sharing.

Source: MedPAC analysis of Medicare claims data for physicians, hospital outpatient departments, and suppliers.

Background on Medicare Part B coverage of drugs

Medicare Part B covers drugs and biologics that are administered by infusion or injection in physician offices and hospital outpatient departments (HOPDs). Medicare Part B also covers certain other drugs provided by pharmacies and suppliers (e.g., inhalation drugs; certain oral anticancer, oral antiemetic, and immunosuppressive drugs; and certain home infusion drugs). Medicare pays for most separately payable Part B drugs and biologics at a rate of 106 percent of the average sales price (ASP + 6 percent). In 2017, fee-for-service (FFS) Medicare and beneficiaries together paid about \$32 billion dollars for Part B-covered drugs and biologics. (Hereafter, we use the term *drugs* to refer to drugs and biologics unless otherwise noted.)

Medicare program and beneficiary spending on Part B drugs has grown rapidly

Medicare Part B drug spending has grown rapidly, increasing by an average annual rate of 9.6 percent between 2009 and 2017. Drugs furnished in physician

offices account for the majority of Part B drug spending, but spending on drugs furnished in HOPDs has grown rapidly in recent years. Of total Part B spending in 2017 (including beneficiary coinsurance), about \$18.0 billion was for drugs administered in physician offices, about \$12.3 billion for drugs administered in HOPDs, and \$1.8 billion for drugs furnished by suppliers.¹ Between 2009 and 2017, Part B drug spending increased at an average annual rate of 17 percent in HOPDs and 7 percent in physician offices (data not shown). The faster spending growth in HOPDs partly reflects a shift in site of service from physician offices to HOPDs, particularly for oncology drugs.

Price growth is the largest driver of Medicare Part B spending growth. Nearly two-thirds of the growth in Part B drug spending between 2009 and 2016 was accounted for by price growth, which reflects increased prices for existing products and shifts in the mix of drugs, including the launch of new high-cost drugs. As shown in Table 3-1, focusing on drugs that were separately payable and excluding vaccines, Medicare Part B drug spending grew at an average annual rate of 10.7 percent between 2009 and 2016, with 6.9 percentage points of the growth due to

**TABLE
3-2**

Medicare expenditures and ASP growth for the top 10 Part B drugs as of 2017

	2017		Part B spending (billions)		Change in spending 2009-2017		Cumulative change in ASP	
	Number of users	Average spending per user	2009	2017	Dollars (billions)	Percent	2009-2017	2017-2019
Eylea	229,600	\$10,700	—*	\$2.5	\$2.5	N/A*	0%*	-2%
Rituxan	70,800	24,900	\$1.2	1.8	0.6	50%	53	17
Opdivo	29,000	51,000	—*	1.5	1.5	N/A*	3*	6
Neulasta	91,800	15,300	0.8	1.4	0.6	85	89	14
Remicade	56,800	23,700	0.8	1.3	0.5	61	44	-7
Prolia/Xgeva	467,700	2,700	—*	1.2	1.2	N/A*	14*	13
Avastin	218,300	4,900	1.1	1.1	0.0	0	28	10
Lucentis	105,300	9,900	0.9	1.0	0.1	16	-6	-4
Keytruda	21,600	48,100	—*	1.0	1.0	N/A*	2*	5
Herceptin	20,800	37,800	0.3	0.8	0.5	138	53	13

Note: ASP (average sales price), N/A (not applicable). Change in ASP was calculated based on ASP in effect for payment purposes as of the first quarter of each year. Data include Part B-covered drugs furnished by physicians, suppliers, and hospital outpatient departments, but exclude those furnished by critical access hospitals, Maryland hospitals, and dialysis facilities. "Part B spending" includes Medicare program payments and beneficiary cost sharing. *Product was not on the market in 2009. For these products, we calculate the percent change in ASP from 2009 to 2017 from the earliest January for which an ASP payment rate was available to January 2017 (2013 for Eylea, 2016 for Opdivo, 2012 for Prolia/Xgeva, and 2016 for Keytruda).

Source: MedPAC and Acumen LLC analysis of Medicare claims data and MedPAC analysis of average sales price files from CMS.

an increase in price (as measured by the average annual payment per drug per user).² This 6.9 percent increase reflects a combination of factors—increased prices for existing products, the launch of new higher priced products, and other changes in the mix of drugs used.

Looking at all Part B-covered drugs, a price index constructed by our contractor Acumen LLC isolates price growth that occurs at the individual product level. This measure reflects only a product's own price growth over time, not changes in price due to the introduction of new products or the changes in the mix of products used. Our price index finds that across Part B drugs, the price of individual products (as measured by the average sales price) grew an average of 1.9 percent per year between 2009 and 2016. Underlying this overall trend in the price index are different patterns by type of product. On average, the price index for Part B-covered biologics increased by 3.8 percent per year while the price index for nonbiologics declined by 1.4 percent per year over this period. The nonbiologic group includes single-source drugs and drugs with generic competition. The downward

price trend for nonbiologics in part reflects patent expiration and generic entry for some of these products.

Part B drug spending is concentrated in a small number of expensive products. In 2017, Medicare spending (including beneficiary cost sharing) for the top 10 drugs paid under the ASP system totaled about \$13.6 billion, about 43 percent of all Part B drug spending that year (Table 3-2). Notably, all 10 of these products are biologics. Many of these products are used to treat cancer or its side effects, while some treat macular degeneration, rheumatoid arthritis, and other inflammatory conditions.

The patterns of spending growth within the top 10 products illustrate two factors driving spending growth: new products with high launch prices and existing products with price inflation. For example, two products—Opdivo and Keytruda—are recent market entrants (approved in late 2014) and belong to a new class of immuno-oncology biologics. Spending on these products in 2017 reached \$1.5 billion and \$1 billion, respectively, reflecting the products' substantial launch prices. Average 2017 Medicare annual spending per user for these products was about \$51,000 and \$48,000, respectively.³

Price growth among biologics that have been on the market longer has also driven spending growth. For example, between 2009 and 2017, ASPs increased 44 percent for Remicade, 53 percent for Rituxan and Herceptin, and 89 percent for Neulasta. Although we lack data on Medicare expenditures beyond 2017, we do have ASP + 6 percent payment rates through the first quarter of 2019. Between January 2017 and January 2019, the ASPs for 5 of the top 10 products increased by 10 percent or more.

Price declines have occurred among a few of the top 10 products; however, these declines have been modest given the existence of competing products and the magnitude of spending on these products. For example, Eylea and Lucentis are competing products used to treat macular degeneration and related eye conditions that accounted for \$3.5 billion in 2017 Part B drug spending. Eylea's ASP declined 2 percent since its launch, and Lucentis's ASP declined 11 percent between 2009 and 2019 (the difference in this number and the numbers in Table 3-2 reflects rounding). Remicade is an originator biologic for rheumatoid arthritis and certain other inflammatory conditions. It faced entry by two biosimilars in late 2016 and mid-2017. Remicade's ASP declined 7 percent between 2017 and 2019; however, that decrease followed a 55 percent increase in Remicade's ASP between 2005 and 2017 (data not shown). Remicade's ASP + 6 percent payment rate in the first quarter of 2019 remains 24 percent to 34 percent higher than the biosimilars' payment rates.

How Medicare pays for Part B drugs

Medicare pays physicians and outpatient hospitals for the Part B-covered drugs they furnish to beneficiaries. By statute, Medicare pays physicians for most Part B drugs at a rate of ASP + 6 percent.⁴ By regulation, Medicare also pays ASP + 6 percent for separately payable Part B drugs furnished in hospital outpatient departments. ASP reflects the average price realized by the manufacturer for sales to all purchasers net of rebates, discounts, and price concessions, with certain exceptions. Thus, Medicare acts as a price taker, with payment based on a market-based price. Medicare pays providers 106 percent of the ASP for the drug regardless of the actual price a given provider pays for it. In addition to paying ASP + 6 percent for the drug, Medicare makes a separate payment to providers for the act of administering the drug to the patient (e.g., for infusing or injecting the product) at a rate determined under the physician fee schedule or hospital outpatient prospective payment system (OPPS).

Using the data submitted by manufacturers to CMS, the agency updates the Medicare Part B drug payment rates for each product with available ASP data on a quarterly basis; these payment rates are publicly available on CMS's website. There is a two-quarter lag in the data used to set ASP + 6 percent payment rates. This lag is necessary to permit time for manufacturers to submit ASP data and for CMS to calculate and implement the new payment rates.⁵

If a drug lacks ASP data, Medicare has alternative methods for paying for the product. For new single-source drugs that initially lack ASP data, Medicare pays a rate of wholesale acquisition cost (WAC) plus 3 percent for the first two to three quarters the product is on the market, consistent with a recent Commission recommendation that the payment rate for drugs paid based on WAC be lowered from WAC plus 6 percent to WAC plus 3 percent. For drugs that lack ASP data for reasons other than being new, such as the manufacturer not reporting ASP data or the manufacturer has no sales in a particular reporting quarter, the payment method varies and may be 106 percent of WAC, 95 percent of average wholesale price, or invoice priced.

Payments for single-source drugs and originator biologics, multiple-source drugs, and biosimilars are set differently. Each single-source drug and originator biologic is paid under its own billing code at 106 percent of its own ASP; brand and generic versions of a multiple-source drug are assigned to the same billing code and paid the same rate equal to 106 percent of the volume-weighted average ASP; and each biosimilar is paid under its own billing code at a rate of 100 percent of its own ASP plus 6 percent of the originator biologic's ASP.⁶

There is no consensus on the original intent of the 6 percent add-on to ASP. One hypothesis is that the 6 percent was intended to address price variation across purchasers and maintain access for purchasers who may pay above-average prices. Another thought is that the percentage add-on was intended to provide protection for providers when price increases occur and the payment rate has not yet caught up. Some stakeholders have also offered a variety of other rationales, suggesting that the 6 percent add-on was intended to help pay for drug storage and handling costs, the financing costs associated with maintaining drug inventory, or financial counseling services that some providers offer patients.

The Secretary does not routinely collect providers' acquisition costs for Part B drugs. However, on a few occasions, the Office of Inspector General (OIG)

2017 Commission recommendation on Part B drugs

In 2017, the Commission recommended a set of policies that seeks to improve the current average sales price (ASP) payment system in the short term while developing, for the longer term, a voluntary, market-based alternative to the ASP payment system. Specifically, the recommended short-term actions would:

- **Improve ASP data reporting.** Currently most, but not all, Part B drug manufacturers are required to report ASP data to CMS. The Commission recommended requiring all manufacturers to report ASP data, with civil monetary penalties for failure to report.
- **Reduce payment rates for drugs that lack ASP data.** The Commission recommended reducing the payment rate from 106 percent to 103 percent of wholesale acquisition cost for new single-source Part B drugs that initially lack ASP data and for existing drugs that lack ASP data. (CMS has adopted this policy for new drugs effective January 2019, but has not adopted it for other drugs that lack ASP data and may need additional statutory authority to do so).
- **Establish an ASP inflation rebate.** This policy would require a manufacturer to pay a rebate if the ASP for its drug grew at a rate in excess of an inflation benchmark.

- **Establish consolidated billing codes.** This policy would group an originator biologic and its biosimilars into the same billing code to maximize price competition.

Over the longer term, the Commission recommended that Medicare develop the Drug Value Program (DVP) as a voluntary, market-based alternative to the ASP payment system for physicians and outpatient hospitals. The DVP would seek to lower prices for Part B drugs by permitting private vendors to use tools (such as a formulary and, in certain circumstances, binding arbitration) to negotiate prices with manufacturers and by improving incentives for provider efficiency through shared savings opportunities. Under the program, a small number of DVP vendors would negotiate prices for Part B drugs, but vendors would not ship products to providers. Providers that chose to enroll in the DVP would continue to buy drugs in the marketplace but at the DVP-negotiated price, and Medicare would reimburse those providers at the same negotiated price. To encourage enrollment in the DVP, providers would have shared savings opportunities through the DVP, while the ASP add-on would be reduced gradually in the ASP system. Savings achieved through the DVP would also be shared with beneficiaries (through lower cost sharing) and with DVP vendors and Medicare. ■

compared the acquisition costs of selected drugs among a sample of providers with Medicare's payment rates under ASP. In the first quarter of 2010, OIG estimated that physician acquisition costs for Lucentis were on average 5 percent below the Medicare payment rate (Office of Inspector General 2012b). In the first quarter of 2009, acquisition costs for end-stage renal disease drugs among independent dialysis facilities averaged 10 percent below Medicare payment rates (Office of Inspector General 2010).

To get a sense of how physicians' drug acquisition costs compared with Medicare's payment rate, in our June

2016 report to the Congress, we analyzed proprietary invoice price data for 34 high-expenditure Part B drugs from IMS Health Incorporated for the clinic channel of purchasers (e.g., physicians and HOPDs). That analysis found that for two-thirds of the 34 drugs, at least 75 percent of the volume was sold to clinics at an invoice price below 102 percent of ASP.⁷ In addition, the analysis found evidence suggesting that some manufacturers responded to the sequester by changing their pricing patterns in a way that mitigated the effect of the sequester for some providers.⁸ Beginning April 2013, the sequester effectively reduced Medicare's payment rate for Part

B drugs from 106 percent of ASP to 104.3 percent of ASP. Analysis of the IMS data found that across the 34 drugs, the median of the 75th percentile invoice price as a percent of ASP fell when the sequester was implemented (from around 103 percent of ASP before the sequester to 101.5 percent of ASP in the second quarter 2013). This decrease suggests that providers' ability to purchase Part B drugs was generally maintained after the implementation of the sequester because manufacturers appear to have adjusted their prices to take into account the lower Medicare payment amount.

The Commission's June 2017 recommendation and next steps

In 2017, the Commission recommended several improvements to payment for Part B drugs. The recommendation included an ASP inflation rebate that would address price growth in the years after products launch, consolidated billing codes for biosimilars and originator biologics that would spur price competition among these products, and a voluntary alternative to the ASP payment system that would use vendors to negotiate lower prices and share savings with providers and beneficiaries (see text box for a summary of the recommendation). In addition, the recommendation included policies to require all manufacturers to report ASP data and to reduce payment for drugs that lack ASP data from WAC plus 6 percent to WAC plus 3 percent (see text box, pp. 64–65, for a discussion of overpayments for drugs lacking an ASP reporting requirement).

The policies in the June 2017 recommendation that aim to spur competition, address price growth, and lower prices would be important steps forward; nonetheless, several additional issues remain that increase spending for both the Medicare program and beneficiaries. Under the ASP + 6 percent payment system, a new drug receives its own payment rate based on its own ASP. The payment system is not designed to spur price competition among single-source drugs that have similar health effects. A drug's payment rate may not have any relationship to its clinical effectiveness. FFS Medicare currently lacks tools to arrive at payment rates for new drugs that balance an appropriate reward for innovation with value and affordability for beneficiaries and taxpayers. In addition, concern exists about provider incentives under the ASP payment system. The 6 percent add-on to ASP may create incentives for some providers to select higher priced products, although studies examining this issue are limited.

Building on our June 2017 recommendation, this chapter examines the potential of more broadly applying two strategies that were elements of that recommendation—reference pricing and binding arbitration—in an effort to improve price competition and value for Part B drugs. Both of these strategies would require that the Congress change the statute to give CMS the authority to implement them.

- **Reference pricing.** This policy would apply reference pricing to Part B single-source drugs with similar health effects in order to spur price competition among products and reduce prices.
- **Binding arbitration.** This policy would permit the Secretary to enter into binding, baseball-style (i.e., final-offer) arbitration with a drug manufacturer for a high-cost Part B drug with limited competition under certain circumstances. This policy would provide a way to incorporate value, affordability, and an appropriate reward for innovation in Medicare payment rates.

The Commission's June 2017 recommendation as well as the strategies discussed in this chapter would be expected to reduce Medicare payment rates for some Part B drugs and yield savings for beneficiaries and taxpayers.

Some stakeholders raise concerns that policies aimed at reducing Medicare spending for Part B drugs would reduce incentives for innovation. While arguments can be made that any effort to reduce drug prices lessens incentives for innovation, there is an inherent need to strike a balance between incentives for innovation and affordability and access. A presumption of arguments against reducing drug prices is that current prices strike the appropriate balance. But others argue that the current level of prices for some products adversely affects affordability and access and exceeds what is necessary to provide appropriate incentives for innovation. Kapczynski and Kesselheim contend that policies that lower drug prices for some products would improve patient access to care and that the net gains to population health would dwarf possible risks to pharmaceutical innovation (Kapczynski and Kesselheim 2016). Frank and Ginsburg point to the economic principle of diminishing returns and note that “at some point, perhaps already reached, the yield from additional resources going into R&D [research and development] no longer justifies what society is paying in the form of higher prices to support this” (Frank and Ginsburg 2017). In addition, Nichols acknowledges

Overpayments for drugs that lack an ASP reporting requirement

Manufacturers of Part B drugs that do not have a Medicaid rebate agreement are not required to report average sales price (ASP) data. In June 2017, the Commission recommended that all manufacturers of Part B drugs be required to report ASP data. In the physician office, products that lack ASP data and that are not new are paid according to the statute using generally higher pricing metrics such as wholesale acquisition cost plus 6 percent (WAC + 6 percent) or other methods that were in effect on November 1, 2003 (i.e., 95 percent of the average wholesale price (AWP) or invoice pricing). Under the outpatient prospective payment system, products that lack ASP data are also paid based on WAC or AWP.

Sodium hyaluronate products (which are injected into the knee to treat pain resulting from osteoarthritis) are regulated as devices and may not be subject to Medicaid Rebate Agreements. Over time, we have

observed fewer of these products being listed in Medicare's ASP payment rate files posted on the CMS website. In the second quarter of 2018, there were 10 products with billing codes, and 7 of those products had payment rates listed in CMS's ASP payment rate files on its website. By the second quarter of 2019, there were 11 products with billing codes but only 3 products had payment rates listed in CMS's ASP payment rate files on its website.

For the four products that appeared in CMS's ASP payment files in the past but no longer do so, we can compare the product's last payment rate listed in the CMS ASP payment rate files with the current WAC + 6 for the product. This comparison indicates that WAC + 6 percent is substantially higher than the last ASP + 6 payment for these four products: 15 percent, 91 percent, 97 percent, and 245 percent higher. Since these four products are not currently

(continued next page)

the importance of striking the right balance between encouraging innovation—by granting temporary monopoly pricing power—and ensuring affordability by encouraging postmonopoly competition (Nichols 2015). This researcher goes on to contend that “the [drug] cost problem is sufficiently serious and escalating that it is impossible to believe that we are being well served by the current configuration of innovation encouraging policies and actual pricing choices that specialty drug manufacturers are making” (Nichols 2015). Sachs and Frakt also suggest that some drug payment policy changes including internal reference pricing could have the potential to shift the mix of innovation toward drugs that provide more value (Sachs and Frakt 2016). It is also notable that the government already contributes to innovation indirectly through its substantial funding of basic science research and directly for some products through its funding of specific drug development research (Galkina Cleary et al. 2018, Sampat and Lichtenberg 2011).

Spurring price competition with reference pricing

The current ASP payment system maximizes price competition among generic drugs and their associated brand products by assigning these products to a single billing code, which we call a consolidated billing code.⁹ By contrast, products that are assigned to their own billing code and paid according to their ASP do not all face the same incentive to compete based on price and quality and generate the best price for beneficiaries (who are liable for 20 percent cost sharing) and taxpayers. In addition, the 6 percent add-on to ASP creates incentives for some providers to choose higher priced products over lower priced products. Thus, the current system does not spur price competition among:

- Therapeutically similar single-source drugs and biologics. There are examples of therapeutically similar products that are among the Part B 20 highest

Overpayments for drugs that lack an ASP reporting requirement (cont.)

listed in CMS's ASP payment files, we are not able to observe the current rates being paid for these products in the physician office setting. However, the payment rates for these products in the outpatient hospital setting continue to be published. These outpatient prospective payment system (OPPS) rates for the four products increased by the large percentages mentioned previously and appear to be set at WAC + 6 percent in the period when they are not listed in CMS's ASP payment files posted on its website. OPPS payments for two additional products that have never been listed in CMS's ASP payment files also appear to be based on WAC + 6 percent. (The OPPS payment rate for a new product that was first marketed in 2019 appears to be WAC + 3 percent, as would be expected in the first two to three quarters a new product is on the market).

WAC-based payment for sodium hyaluronate products has the potential to lead to substantial overpayments for this class of drugs. In total, the class of sodium

hyaluronate products accounted for over \$460 million of Part B drug spending in 2017. About \$170 million of that spending in 2017 was on the four products that have experienced substantial increases in the OPPS payment rates in 2018 or 2019, coinciding with the products no longer being listed in CMS's ASP payment rate files. An additional \$20 million of that spending in 2017 was on products that have never been listed in the ASP payment rate files. Although we cannot be certain why these products are not being listed in CMS's files, a possible explanation may be that manufacturers are choosing not to report because they are not required to do so, and by not reporting, providers could receive higher WAC-based payments for these products. The Commission's recommendation to require all manufacturers to report ASP data would be an important step to ensure against overpayments as a result of manufacturers choosing not to report ASP data. ■

expenditure products, whose ASPs have either remained the same or increased since 2010.¹⁰

- An originator biologic and its biosimilars. We have observed little decline in the ASPs of the originator biologics, but lower and declining ASPs for the biosimilars. As described in the text box (pp. 66–67): (1) the ASP for the originator product Neupogen has remained roughly the same between the first quarter of 2016 and the first quarter of 2019, while the ASP for its biosimilar Zarxio has declined by 34 percent, and (2) the ASP for the originator product Remicade has declined by 7 percent between the first quarter of 2017 and the first quarter of 2019, while the ASP for its biosimilar Inflectra has declined by 43 percent. Use of the more costly originator products Remicade and Neupogen accounted for 91 percent and 32 percent, respectively, of the market in the third quarter of 2018 (the most recent calendar quarter for which utilization data are available). To spur competition between the

originator biologic and its biosimilars, in 2017, the Commission recommended that the Congress require the Secretary to use a common billing code policy to pay for an originator biologic and its biosimilars. Such a policy would also address the incentive that the 6 percent add-on creates for some clinicians to select the more costly product.

Background on reference pricing

Research suggests that in many therapeutic classes, the approval of a new brand-name drug or biologic leads to higher list prices not just for the new product but also for the existing products. For example, according to researchers, competition between two or more brand-name products in the same class does not usually result in substantial price reductions (Kesselheim et al. 2016). Other researchers reported that the prices of first-generation disease-modifying therapies for the treatment of multiple sclerosis increased many times higher than

Under separate payment codes, price competition between an originator biologic and its biosimilar is not maximized

There has been little decline in the average sales prices (ASPs) of the originator biologics (Neupogen and Remicade), but lower and declining ASPs for their biosimilars. Applying either consolidated billing code or reference pricing policies would generate more price competition than under the current policy of assigning each product to its own billing code.

As of February 2019, two Part B originator biologics—Neupogen and Remicade—face biosimilar competition.

Neupogen was the first Part B product to experience biosimilar entry, with the biosimilar Zarxio entering in late 2015 and another product, Granix, that is similar to Neupogen, entering earlier.¹¹ Medicare payment rates for Zarxio and Granix are roughly 40 percent lower than the payment rate for the originator, Neupogen (Table 3-3). Utilization has shifted away from Neupogen, with Zarxio and Granix accounting for 67 percent of utilization as of third quarter 2018 (this number differs from figures in Table 3-3 due to rounding).

(continued next page)

**TABLE
3-3**

Medicare payment rates and utilization for originator Neupogen and biosimilars

	Medicare payment rate			Payment rate per unit for product as share of originator Neupogen's rate		Share of total units billed accounted for by:	
	Neupogen (originator)	Zarxio (biosimilar)	Granix*	Zarxio (biosimilar)	Granix*	Zarxio (biosimilar)	Granix*
2016 Q1	\$1.01	\$0.97	\$0.77	96%	76%	9%	16%
2016 Q3	1.00	0.87	0.77	87	76	28	18
2017 Q1	1.00	0.78	0.71	78	71	34	17
2017 Q3	1.01	0.73	0.64	72	64	38	19
2018 Q1	1.00	0.69	0.61	69	61	44	19
2018 Q3	1.02	0.65	0.59	64	58	50	18
2019 Q1	1.00	0.64	0.58	63	58	N/A	N/A

Note: Q (quarter), N/A (not available).

*Although Granix is not a biosimilar in the U.S. (because it was approved under the standard Food and Drug Administration approval process for new biologics), we include it here because it was approved as a biosimilar to Neupogen in Europe and it functions as a competitor to Neupogen and Zarxio in the U.S. market.

Source: MedPAC and Acumen LLC analysis of Medicare claims data and MedPAC analysis of average sales price files from CMS.

prescription drug inflation between 1993 and 2013, and they concluded that the price increases may have been a response to the introduction of competing treatments with higher prices (Hartung et al. 2015).

Reference pricing is a tool that some payers use to spur price competition among therapeutically similar drugs and other medical services and to lower the average price

paid. Under reference pricing, a payer establishes the price (reimbursement rate) that it is willing to pay for a given drug or procedure—the reference price. Payers use two approaches to reference pricing—internal reference pricing and international reference pricing.

Under internal reference pricing, a payer establishes the reference price for groups of drugs with similar health

Under separate payment codes, price competition between an originator biologic and its biosimilar is not maximized (cont.)

Remicade’s experience with biosimilar entry has been different. The payment rates for Remicade’s two biosimilars (Inflectra and Renflexis) are lower than Remicade’s (roughly 20 percent to 25 percent lower as of the first quarter of 2019), but the biosimilars account for only a small share of the market (9 percent of utilization as of the third quarter of 2018) (Table

3-4). The originator Remicade’s ASP declined 7 percent between 2017 and 2019 (Table 3-2, p. 60). However, Remicade’s ASP remains high from a historical perspective since its ASP grew substantially from 2009 to 2017 (at a cumulative growth rate of 44 percent). ■

**TABLE
3-4**

Medicare payment rates for originator Remicade and biosimilars

	Medicare payment rate			Payment rate per unit for biosimilars as share of originator Remicade’s rate	Share of total units billed accounted for by biosimilars
	Remicade (originator)	Inflectra (biosimilar)	Renflexis (biosimilar)		
2017 Q1	\$82	\$100	N/A	122%	0%
2017 Q3	86	80	N/A	94	4
2018 Q1	86	76	\$76	88	6
2018 Q3	84	65	69	77–83	9
2019 Q1	77	57	62	75–81	N/A

Note: Q (quarter), N/A (not available).

Source: MedPAC and Acumen LLC analysis of Medicare claims data and MedPAC analysis of average sales price files from CMS.

effects, a price that is typically based on the payer’s own prices. It is a concept that could be used for both medical benefits under Part B and outpatient drugs under Part D, but the recipients of the reference price would differ. In Part B, Medicare would pay medical providers the reference price, while under Part D, plans would pay the reference price to pharmacies. In either situation, if the provider and patient select a therapy priced higher than the reference price, the patient typically pays any difference as additional cost sharing. Compared with other drug management strategies (e.g., formularies), internal reference pricing does not restrict the selection of drugs within a given therapeutic class.

Under international reference pricing, a payer uses the prices that other countries pay for a drug in order to derive

a reference price or to negotiate with the manufacturer the price of that product. An example of international reference pricing is the potential model that CMS is considering testing through the Center for Medicare & Medicaid Innovation—the international pricing index (IPI) model—that would determine a payment rate for Part B drugs based on a target price that is linked to international prices from 14 countries. (See text box (p. 69) for a description of the IPI and text box (p. 70) for a summary of the study by the Assistant Secretary for Planning and Evaluation (ASPE) that informed the IPI on differences between Medicare and international prices for Part B drugs.)

As shown in Table 3-5 (p. 68), some of the design elements that payers consider when establishing both pricing strategies are similar, such as the frequency of

**TABLE
3-5**

Design elements of internal and international reference pricing

Design element	Internal reference pricing	International reference pricing
Scope of policy	Can include broad groups of products with similar health effects (e.g., single-source products) or narrower groups of products with the same active ingredients.	Applied on a drug-by-drug basis, not necessary to define groups of clinically similar products.
Source of reference price	Typically payer's own pricing data are used, but can use pricing data of other domestic purchasers.	Uses other countries' pricing data that can be obtained from secondary data sources, manufacturers, or websites of the reference countries.
Countries included in the reference basket	Does not use other countries' pricing data.	Reference countries are typically selected based on economic characteristics and geographic proximity. Countries included in the basket may vary depending on availability of new drugs.
Setting the reference price	Reference price for a group of clinically similar products typically based on the distribution of a payer's prices for the products in the group (e.g., reference price set at the median, weighted average, or least costly product).	Reference price for drugs under question is based on distribution of other countries' prices (e.g., reference price cannot be lower than the lowest price observed in countries included in reference basket).
Frequency of updating the reference price	Both internal and international reference pricing consider frequency of updating the reference price, which can include quarterly and annually.	Both internal and international reference pricing consider frequency of updating the reference price, which can include quarterly and annually.

Source: MedPAC analysis of published literature on internal and external reference pricing.

updating the reference price and the calculation of the reference price. The two approaches differ with respect to their source of pricing data and application. Internal reference pricing, which uses a payer's own pricing data, aims to spur price competition among products with similar health effects by incentivizing the selection of lower priced products, which, in turn, spurs price competition and lowers drug prices. By contrast, under international reference pricing, (ostensibly lower) drug prices from other countries are used to set the price of drugs under question.

Currently, Medicare does not use either type of reference pricing policy to pay for Part B drugs, though it has in the past:

- Between 1995 and 2010, Medicare Part B implemented two internal reference pricing policies—referred to as the least costly alternative (LCA) and functional equivalence policies—to pay for groups of drugs (prostate cancer drugs and anti-anemia biologics)

with similar health effects. Since 2010, because of court rulings and statutory changes, Medicare Part B no longer uses either reference pricing policy and pays for each drug according to its own ASP. Because the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 requires that biologics and single-source drugs (without generic competition) be paid based on their ASP and not averaged with other products' ASP, a change in the statute would be necessary for the Secretary to use internal reference pricing to pay for Part B drugs.

- In 2008, at least three national Part D sponsors (Health Net, Silver Script, and Sterling) used internal reference pricing for certain drugs—generally brand-name drugs with a generic equivalent. However, CMS prohibited the use of reference pricing in 2009 after beneficiary advocates argued that plan enrollees could not accurately calculate their out-of-pocket costs because Medicare's Plan Finder tool did not provide the incremental cost-sharing amounts. The Secretary

The international pricing index model for Part B drugs

In an advance notice published in 2018, CMS described a potential model the agency is considering testing through the Center for Medicare & Medicaid Innovation. CMS indicates the model, referred to as the international pricing index (IPI) model, would shift from paying physician and outpatient hospitals for Part B drugs to paying private vendors for these products. The prices Medicare pays these vendors for Part B drugs would be reduced over a five-year period to levels closer to international prices.

Under the IPI model, the government would determine a payment rate for a Medicare fee-for-service (FFS) Part B drug based on a target price linked to international prices. According to estimates by the Assistant Secretary for Planning and Evaluation (ASPE), in the first quarter of 2018, acquisition costs for certain Part B drugs in the U.S. were, on average, about 1.8 times higher than in other countries (Office of the Assistant Secretary for Planning and Evaluation 2018). Over a five-year period, the IPI model would phase in a target price for Part B drugs, which the agency states would result in about a 30 percent reduction in spending. The target price would be calculated by multiplying the IPI—the ratio of Medicare spending under average sales price (ASP) to international prices (holding volume and the mix of drugs constant)—and a factor that would phase in a spending reduction of about 30 percent over time.¹² The percentage reduction between the target price and ASP would vary for each drug. If a product's ASP

was lower than the target price, CMS would set the payment amount to the ASP for that drug.

The IPI target prices would apply to certain Part B drugs furnished in selected geographic areas. CMS indicates that it intends to select geographic areas that account for about 50 percent of Part B drug spending. In those areas, the model would be mandatory for physicians and outpatient hospitals, which would be required to acquire Part B drugs that they furnish to Medicare FFS beneficiaries through IPI vendors. CMS indicates it would phase in the group of products included in the model over time, focusing first on single-source drugs and biologics. The agency states that it could begin by including most of the products that appeared in the ASPE report, which accounted for over 50 percent of Part B drug charges in 2017 (Office of the Assistant Secretary for Planning and Evaluation 2018).

Under the IPI model, Medicare would pay the vendor for Part B drugs at the payment rate established based on the international target price. Vendors would negotiate with manufacturers over their own acquisition costs for drugs, but those negotiations would not affect Medicare payment rates. The vendor's negotiated price would determine whether the vendor made a profit or loss given the Medicare payment rate established by CMS. The advance notice mentions the potential for IPI model vendors to pursue indication-specific pricing or outcome-based arrangements, but does not mention pharmacy management tools such as a formulary, step therapy, or prior authorization.¹³ ■

has the authority to let Part D plans use internal reference pricing.

- Medicare has never used international reference pricing to pay for covered drugs, and a change in the statute would be necessary for the Secretary to use this approach.

Building on the Commission's 2017 recommendation that would group an originator biologic and its biosimilars

in the same billing code to maximize price competition, the remainder of this section focuses on Medicare's use of internal reference pricing for single-source drugs with similar health effects.

Applying internal reference pricing to spur price competition in Medicare

Internal reference pricing is a tool that some payers and purchasers use to spur price competition among therapeutically similar drugs and other medical services.

Assistant Secretary for Planning and Evaluation study found the average sales prices for certain Part B drugs were, on average, 1.8 times higher than in other countries

In 2018, the Assistant Secretary for Planning and Evaluation (ASPE) published a study that compared the prices that Medicare paid for selected Part B drugs with the prices paid in other countries. Key design elements of this study include the following:

- The analysis used international pricing data from IQVIA that provided ex-manufacturer prices (i.e., the price a manufacturer is paid for its product).
- The drugs included in the analysis were compiled from the top 20 drugs in terms of 2016 Medicare spending to physician offices, hospital outpatient departments, or overall. The final list of 27 drugs included only sole-source drugs (excluded products include vaccines, blood products, and contrast agents; products not physician administered; and products that lacked IQVIA data).
- The analysis compared Medicare average sales prices (ASPs) in the third quarter of 2018 with prices paid internationally in the first quarter of 2018.
- The analysis included 16 countries in the reference basket: Austria, Belgium, Canada, Czech Republic, Finland, France, Germany, Greece, Ireland, Italy, Japan, Portugal, Slovakia, Spain, Sweden, and the U.K. ASPE defined the reference basket based on all countries (except the U.S.) included in the so-called Group of

Seven (Canada, France, Germany, Italy, Japan, and the U.K.) and all countries in Germany's basket (15 countries), but excluded 2 of the countries (Denmark and the Netherlands) because IQVIA data were not available.¹⁴

Key findings of this analysis include the following:

- Only 11 of the 27 drugs in the analysis were sold in all 16 comparator countries.
- Medicare Part B ASPs were 1.8 times that of the average international ex-manufacturer price. Medicare and its beneficiaries spent an additional \$8.1 billion (47 percent more) for the studied products than they would have if payments based on ASP were scaled by the international price ratios that ASPE calculated.
- U.S. prices are lower for Gammagard, and prices are similar for six products. For the remaining 20 products, U.S. prices exceed the average international price by more than 20 percent. Moreover, for 14 of the 20 products, U.S. prices are at least double (i.e., more than 100 percent above) the average international price.
- Germany and Canada had the highest prices for six drugs and Japan for five drugs. No other country had the highest price for more than three drugs. However, France and the U.K. had the lowest price for four products, and Japan, Sweden, and Slovakia had the lowest prices for three drugs. ■

For drugs covered under medical benefits, payers establish a reference price for a group of drugs with similar health effects assigned to separate payment codes. For example, the reference price can be based on the average, median, or volume-weighted average of the payments of all the products in the reference group. When the reference price is based on the least costly product of all the products in the group, the reference pricing policy is referred to as the LCA policy.

If a therapy is prescribed that is priced higher than the reference price, the patient typically pays any difference as cost sharing. Because there is a reference price on what clinicians or outpatient departments would receive in payment and there are potentially large differences in cost sharing, reference pricing gives all parties strong incentives to consider lower cost therapeutic alternatives. If beneficiaries are aware of their potential cost-sharing obligations, reference pricing in this context also provides strong incentives for beneficiaries to ask their prescriber about lower cost therapies.

Under Part B, reference pricing policies could also take the form of assigning products that result in similar health effects to the same billing code—a consolidated billing code—or paying a single reference price for products with similar health effects that are assigned to their own billing codes.¹⁵ The reference pricing and consolidated billing policies are strategies in which a payer sets a single payment rate for therapeutic groups of products that result in similar health effects.

Internal reference pricing is a concept that can also be used to pay for Part D drugs. When applying internal reference pricing to Part D drugs, a plan and pharmacy benefit manager (PBM) design their formulary to include a maximum amount they will pay to pharmacies for a therapeutic category. Rather than exclude certain drugs, the formulary may allow an enrollee access to a broader range of therapies, but the enrollee must pay more in cost sharing for higher priced drugs. The plan’s pharmacy and therapeutics committee would provide input on which therapies could substitute for one another, on which agent is preferred for the class (the basis for the maximum payment amount), and on preferred cost-sharing amounts.

The Commission has held that Medicare should pay similar rates for similar care. With respect to groups of products with similar health effects, this principle might warrant that Medicare use a reference pricing or consolidated billing code policy when paying for these products under Part B. Table 3-6 (p. 72) presents examples of groups of competing products, with each product paid under a separate billing code based on its separate ASP. We derived these groups from reference pricing policies implemented by Medicare and commercial payer policies or policies suggested by the Congressional Budget Office (CBO) and OIG. The pricing behavior exhibited by some manufacturers—the ASPs for all of the products have not substantially declined between 2009 and 2019—suggests that applying a reference policy could spur price competition among these products. In 2017, Medicare spending for all the products in the eight therapeutic groups included in Table 3-6 totaled nearly \$12 billion.¹⁶ In addition to these products, there are other examples of groups to consider under a broader consolidated billing code policy.

Applying reference pricing policies to Part B drugs would be expected to generate more price competition among products than paying for each product based on its own ASP. Drug manufacturers would have an incentive to

lower their price relative to their competitors’ to make their product more attractive to providers and garner market share. Both CBO and the Department of Health and Human Services OIG have said that use of LCA policies would result in savings for beneficiaries and taxpayers. OIG estimated savings of \$275 million for beneficiaries and \$1.1 billion for the program by using an LCA policy (in 2008 and 2009) to pay drugs that treat wet age-related macular degeneration (Office of Inspector General 2011). CBO estimated savings of almost \$500 million between 2010 and 2019 if an LCA policy had been used for drugs that treat osteoarthritis of the knee (Congressional Budget Office 2008).

Researchers have also found savings from applying reference pricing policies to drugs (Robinson et al. 2017). For example, a 2014 literature review (published by the Cochrane Library) of 17 studies of internal reference pricing policies used in 7 countries (including the U.S.) concluded that the policy generally reduced payers’ total spending in the short term (through 2 years) by shifting use from more costly drugs that required higher cost sharing to drugs paid at the reference price (Acosta et al. 2014). In a 2012 literature review, Lee and colleagues reviewed 16 studies of internal reference pricing policies used in 6 countries and concluded that the policies reduced the average price of drugs included in the reference groups by 7 percent to 24 percent (Lee et al. 2012).

Between 1995 and 2010, Medicare used LCA policies to pay for selected Part B drugs

The medical directors associated with the Medicare administrative contractors (MACs) established LCA policies between 1995 and 2010 to set the payment rate for certain Part B drug classes, including luteinizing hormone-releasing hormone agonists for prostate cancer. Under the LCA policy, the MACs used the prevailing Medicare payment policy to determine Medicare’s payment rate (i.e., ASP-based payment) for each product and then set the payment rate for all the products with similar health effects based on the least costly product.¹⁷

The contractors’ medical directors generally based LCA determinations on the premise that “if two services are clinically comparable, then Medicare does not cover the additional expense of the more costly service, when this additional expense is not attributable to that part of an item or service that is medically reasonable and necessary” (National Government Services 2009). LCA policies were implemented in local coverage decisions in which the

**TABLE
3-6**

Between 2009 and 2019, ASPs of single-source products with similar health effects have not substantially declined

	Average annual ASP growth from January to January of each year (2009-2019)	First year of pricing data (if not 2009)
Erythropoiesis-stimulating agents: <i>Biologics that stimulate production of red blood cells</i>		
Aranesp (darbepoetin alfa)	2.3%	
Epogen (epoetin alfa)	2.6	
Antivascular endothelial growth factors: <i>Biologics that treat wet age-related macular degeneration and other conditions</i>		
Eylea (aflibercept)	-0.3	2013
Lucentis (ranibizumab)	-1.1	
Targeted immune modulators: <i>Biologics that treat selected immunologic diseases</i>		
Remicade (infliximab originator biologic)	3.0	
Orencia (abatacept)	10.4	
Rituxan (rituximab)	5.9	
Leukocyte growth factors: <i>Biologics that stimulate proliferation and differentiation of normal white blood cells</i>		
Neupogen (filgrastim originator biologic)	4.1	
Neulasta (pegfilgrastim)	8.0	
Granix (tbo-filgrastim)	-7.2	2015
Immune globulins: <i>Products that treat primary humoral immunodeficiency and other selected conditions</i>		
Gamunex-C/gammaked	1.2	
Gammagard liquid injection	1.8	
Privigen	1.7	
Luteinizing hormone-releasing hormone agonists for prostate cancer: <i>Products that treat prostate cancer</i>		
Trelstar (triptorelin pamoate)	3.8	
Zoladex (goserelin acetate implant)	10.6	
Lupron (leuprolide acetate suspension)	1.2	
Botulinum toxins: <i>Products that treat various focal muscle spastic disorders and excessive muscle contractions</i>		
Botox (onabotulinumtoxinA)	1.2	
Myobloc (rimabotulinumtoxinB)	2.8	
Xeomin (incobotulinumtoxinA)	-1.2	2012
Viscosupplements using hyaluronate for osteoarthritis of the knee		
Orthovisc	-1.9	
Hyaluronan, Hyalgan, or Supartz	-2.0	
Synvisc or Synvisc-One	0.4	

Note: ASP (average sales price). For each group, table includes only up to the three leading products as measured by 2017 Part B spending. We include Granix in this table because, in the U.S., it was approved under the standard Food and Drug Administration approval process for new biologics. However, the product was approved as a biosimilar to Neupogen in Europe, and it functions as a competitor to Neupogen and Zarxio (Neupogen's biosimilar) in the U.S. market.

Source: MedPAC analysis of data from CMS's average sales price quarterly pricing files, 2009-2019.

medical director decided to cover a particular product in its geographic jurisdiction. LCA policies were established based on the Secretary's authority from Section 1862(a) (1)(A) of the statute that states that "no payment may be made under Part A or Part B for any expenses incurred

for items or services which . . . are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member." Simply put, LCA policies were applied under the premise that Medicare should not pay for the

additional cost of a more expensive product if a clinically comparable product costs less. Although the statutory platform for making LCA determinations was based on Medicare's reasonable and necessary (coverage) authority, the policy affected the payment rate of a product. The MACs' medical directors established LCA policies in the local coverage determination process within their geographic jurisdiction.

In applying LCA policies to Part B drugs, the MACs' medical directors generally followed these steps: (1) determined that the product was a Medicare-covered benefit; (2) determined that the product was "reasonable and necessary" for the treatment of an illness or injury; (3) reviewed clinical evidence (from the Food and Drug Administration (FDA) and other sources) to determine whether the product is clinically similar to other Medicare-covered products; and (4) established the payment rate for each drug covered under the LCA policy under the prevailing Medicare payment policy and set the payment rate for all the products based on the product with the lowest ASP.

In some instances, the MACs' medical directors would pay the higher rate for the more costly product when the physician could document that the more costly product was medically necessary. In addition, there was an opportunity for the beneficiary to choose the more costly product. Specifically, if the physician informed the beneficiary in advance and in writing that Medicare was likely to deny payment for the more costly product and if the beneficiary signed an advance beneficiary notice for the product, then the beneficiary could pay an additional sum if he or she and the physician chose a more costly service or product. Under these circumstances, the beneficiary's liability would include the 20 percent coinsurance and the difference in the Medicare payment between the more costly and least costly product.

In 2008, a beneficiary challenged the proposed application of an LCA policy for an inhalation drug, arguing that the statute requires that if the drug is reasonable and necessary, Medicare must pay the statutorily defined payment rate for the drug—ASP + 6 percent. The government argued that the reasonable and necessary statutory provision confers great discretion on the Secretary and that the LCA policy is permissible because the provision explicitly addresses payment and expenses.

Two federal courts agreed with the beneficiary and ruled that Medicare cannot use LCA policies to pay for Part B

inhalation drugs, asserting that the statute's provision that sets the payment rate for Part B drugs based on its ASP precludes Medicare from applying LCA policies. These rulings apply to instances in which CMS has set a drug's payment based on the ASP of the least costly alternative. Effective April 2010, the MAC's medical directors rescinded the LCA policies applied to Part B drugs, and since then, Medicare's payment rate for products previously paid for under an LCA policy (e.g., prostate cancer drugs) is 106 percent of the product's ASP.

According to federal agencies, applying reference pricing policies to Part B drug payment could reduce Medicare spending for beneficiaries and taxpayers. OIG has twice recommended that the Secretary apply LCA policies to prostate cancer drugs. In 2004, OIG reported that not all carriers included one of the prostate cancer drugs (leuprolide acetate) in their LCA policy and recommended that CMS encourage all Medicare contractors to include this product when applying LCA policies to this drug group. OIG estimated that if such a policy had been implemented, Medicare and beneficiaries would have saved \$40 million per year (Office of Inspector General 2004). In 2012, OIG reported that after LCA policies were removed for a group of drugs that treat prostate cancer, utilization patterns shifted dramatically in favor of costlier products, and the agency concluded that spending for these products was higher in the absence of LCA policies.¹⁸ OIG estimated one-year savings of nearly \$7 million for beneficiaries and nearly \$27 million for Medicare if an LCA policy was used to pay for these prostate cancer drugs (Office of Inspector General 2012a). Neither study addressed the effect of the LCA policies on beneficiaries' use of other medical services.

Between 2003 and 2005, Medicare used the functional equivalence standard in the hospital OPPS

The "functional equivalence standard" is another name for a reference pricing policy under which payment for products with similar health effects assigned to separate payment codes is based on the least costly item. In 2003, in the rule-making process for the hospital OPPS, CMS set the payment rate nationally for a new biologic (darbepoetin alfa) at the rate of an existing, less costly product (epoetin alfa) after concluding that both anti-anemia products were clinically comparable because they used the same biological mechanism to produce the same clinical result—stimulation of the bone marrow to produce red blood cells. CMS did not initially set the payment rate of the new product by using the functional equivalence

standard. Rather, in the 2003 proposed hospital OPPS rule, CMS said that it would continue the new biologic’s transitional (higher) pass-through payments. In response, a product developer argued that because both the old and the new biologics are substitutes, they should be paid at the same rate. In the final rule, CMS reviewed the clinical evidence, concluded that the biologics were functionally equivalent, and set the payment rate of the new biologic at the same rate as the older one (Centers for Medicare & Medicaid Services 2002). The agency implemented this payment policy on its authority to make adjustments necessary to ensure equitable payments to the transitional pass-through payments of the hospital OPPS.¹⁹

This policy withstood a lawsuit from the product developer of the new biologic. An appeals court dismissed the case, concluding that CMS’s statutory rationale for the decision was not subject to judicial review (U.S. Court of Appeals 2004). Subsequently, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) limited use of the functional equivalence standard. The Congress prohibited use of this standard for drugs and biologics in the hospital outpatient setting unless the standard was in place before the law’s enactment.

Medicare continued to use the functional equivalence standard in 2004 and 2005. In response to passage of the MMA, the payment rate for each biologic was set based on its ASP beginning in 2006.

Examples of reference pricing implemented by employers and other payers

Reference pricing for drugs is an emerging structure of benefit design for commercial payers and employers (Robinson 2018). For example, a self-insured employer-based purchaser (the Reta Trust, a national association of 55 Catholic organizations that purchase insurance for their employees) implemented reference pricing for about 1,300 pharmacy benefit drugs in 2013 in part to address the diminishing effectiveness of the formulary to account for price variation and price increases within its formulary’s drug tiers.²⁰ The program included the following key elements:

- The reference price was based on the least costly drug in each therapeutic category.
- The reference pricing program focused on drug classes with extensive price variation among therapeutically equivalent products.
- Therapeutic classes were defined according to the criteria of the American Hospital Formulary Service

Pharmacologic–Therapeutic Classification, which is used to classify drugs for Medicaid and Medicare Part D formularies.

- A payment exception process (reviewed by clinical staff at the PBM) paid for a higher priced product if a clinician provided medical justification.
- Absent a clinical exception, patients who used a higher priced drug paid the price difference themselves.

To assess the effect of this reference pricing strategy, researchers compared the drug use and spending of Reta Trust members with a control group using multivariable difference-in-difference regressions and found that this policy:

- increased the probability by 7 percentage points that Reta Trust members selected the lowest priced product compared with the control group;
- decreased the average purchase price paid by nearly 14 percent (equivalent to a decrease of \$9.24 per monthly prescription); and
- increased Reta Trust members’ out-of-pocket spending by about 5 percent compared with the control group (equivalent to an \$0.84 increase in copayments per prescription) (Robinson et al. 2017).²¹

The authors did not assess the effects of reference drug pricing on the use of medical services because they lacked data on patients’ use of these services.

A state employee health plan (for Arkansas state and public school employees and retirees) also uses a reference pricing policy “when evidence shows one product in a class of drugs is not any more effective than the other drugs within the same therapeutic class” (ARBenefits 2019). This state employee health plan uses a design similar to the design of the Reta Trust policy, including basing the reference price on the lower cost product and requiring that the patient pay the difference between the higher and lower cost product (in the form of a higher copayment) if a higher priced product is preferred. Researchers compared costs before and after implementation of this reference pricing policy for one therapeutic group (proton pump inhibitors) and found reductions in members’ copayments (by 6.7 percent) and in the net cost per member per month (49.5 percent) (Johnson et al. 2011).

There is no exhaustive research on the use of reference pricing policies by commercial payers. We did not find any publicly available information that major commercial payers were using internal reference pricing for single-source products with similar health effects. However, for certain drug groups, a major commercial payer applies a strategy that is similar to an LCA policy. For example, the payer concluded that there is a lack of reliable evidence that any one brand of targeted immune modulators is better than other brands for medically necessary indications and that the least costly brands are as likely to produce equivalent therapeutic results as the more costly brands. Consequently, the payer considers a higher cost product to be necessary only if the member has a contraindication, intolerance, or ineffective response to one of the least costly brand products (Aetna 2019). Several payers and purchasers have applied internal reference pricing for surgical and diagnostic procedures, which has resulted in spending reductions of 20 percent for joint replacement, 18 percent for cataract removal, 21 percent for colonoscopy, 17 percent for arthroscopy, 12 percent for computed tomography, and 32 percent for laboratory assays (Robinson et al. 2017).

In recent years, commercial payers have relied on tiered formularies with differing levels of patient coinsurance and copayments as a tool to moderate drug spending. Formularies and reference pricing are similar in that both strategies identify drugs with similar health effects. With a tiered formulary, not all drugs may be included on the formulary, whereas with reference pricing, all drugs in the therapeutic group are available.

Examples of reference pricing implemented by other countries

Both internal and international reference pricing approaches are more frequently used by other countries (in Australia, Canada, Japan, and many European countries) than in the U.S. For example, researchers conducted a review of the drug pricing policies used in 20 countries and reported that 16 European countries used internal reference pricing in 2011.²² Of these 16 countries, 8 defined reference groups based on the active substance while another 8 had a broader classification system that defined groups of drugs based on therapeutic classes (Pew Charitable Trusts 2017).

International reference pricing is commonly applied in Europe. For example, a review of 31 countries (as of 2013) found that international reference pricing was used by Iceland, Norway, Switzerland, and all 28 European Union members, with the exception of Sweden and the

U.K. (Rémuzat et al. 2015).²³ According to Rémuzat and colleagues, there is some variation in the application of international reference pricing among these countries:

- Most (23) countries used international reference pricing as the main criterion for price setting or negotiations with manufacturers, while 6 countries (Belgium, Finland, Germany, Italy, Poland, and Spain) reported that international prices were one factor among many in the decision-making/negotiation process.
- The drugs that the policy may affect varies across countries. In some countries, the policy is used for specific categories of drugs, such as new, innovative products (e.g., France, Germany, and Spain), while in other countries the policy is used more broadly, applying to all outpatient drugs (brand and generics) and high-cost and orphan drugs used in the inpatient setting (e.g., the Netherlands).
- The number of reference countries included in a country's basket varied from 1 (in Luxembourg) to 31 (in Hungary and Poland). The most referenced countries were France, the U.K., and Germany.
- The reference price calculation methods differed across countries. The three main calculation methods were average price, lowest price, and average of the three or four lowest prices of all countries in the basket.
- Most countries used ex-manufacturer (i.e., the price a manufacturer is paid for its product) prices to calculate the reference price, followed by the pharmacy purchasing price.
- When different dosages and package sizes were approved at different prices in the reference countries, the same or closest package size or dosage was generally used as a reference.
- The time frame that prices were reevaluated varied from every three months to every five years (Rémuzat et al. 2015).
- Some countries use both internal and international reference pricing.

Case studies of two countries' application of reference pricing: Australia and Germany

Australia and Germany are similar in their drug pricing: Both countries apply internal reference pricing to therapeutic groups of drugs with similar health effects,

and both countries engage in price negotiation with manufacturers for new innovative products (e.g., first drug in a class). For a new, innovative drug, Australia considers information about its comparative clinical effectiveness and cost-effectiveness while Germany considers information about its comparative clinical effectiveness.

Australia—For a product to be paid for by the Australian Government Department of Health and Ageing (DHA), manufacturers submit an application to the Pharmaceutical Benefits Advisory Committee (PBAC), an independent statutory committee. The PBAC assesses whether the product is both clinically effective and (for products that are not yet covered) cost-effective compared with other treatments.²⁴ The Australian Minister for Health decides whether the drug will be included in the Pharmaceutical Benefits Scheme (PBS) based on the recommendation of the PBAC.

Reference pricing is applied to drugs considered to be of similar safety and efficacy for pricing purposes. The lowest priced product sets a benchmark price for either the other brands of that drug or the other drugs within the same subgroup of therapeutically related drugs. Patients pay any difference between the price of the drug purchased and the reference price. If a patient cannot take a product in the therapeutic group due to clinical reasons certified by the clinician, the government pays the contribution on the patient's behalf.

For innovative products that have been approved by the PBAC, the government enters into a negotiation with the manufacturer to set the price at which the product will be paid for on the PBS. The pricing of innovative products is informed by the cost-plus method, which grants a gross margin based on the costs of manufacturing (see <http://www.pbs.gov.au/industry/useful-resources/pbs-forms/pb11b.pdf> for cost information reported by the manufacturer). A margin on costs of around 30 percent is usually considered reasonable for new drug listings, but higher margins may be recommended for low-volume products, and lower ones may be recommended for high-volume products. If a product has more than one indication and a cost-effectiveness that varies across indications, a weighted average price is set according to expected volumes of use across the indications. The price of each covered drug is reviewed annually. A manufacturer is required to submit cost and other data if it wants the price of a given product to change.

Germany—Before 2011, Germany was one of the few European Union countries where pharmaceutical

manufacturers were largely free to set the prices for their new drugs. To address increasing drug spending and rising drug prices, in November 2010, the German parliament passed the Act to Reorganize the Pharmaceuticals' Market in the Statutory Health Insurance System (AMNOG). Consequently, since 2011, products with new active ingredients (or a new combination of active ingredients) are subject to a comparative clinical benefit assessment under the AMNOG:²⁵

- At the time of a drug's market launch, manufacturers are required to submit a dossier to the Federal Joint Committee (a group consisting of clinicians, providers, and health insurance funds that is responsible for coverage decisions) that demonstrates a new drug's added clinical benefit relative to a comparator therapy. (The Federal Joint Committee can also assess the benefit of products that were on the market before January 1, 2011, but remain under patent.)
- For most new drugs, the Federal Joint Committee commissions the Institute for Quality and Efficiency in Health Care (IQWiG) (an independent scientific body that conducts evidence-based assessments of health services and products) to evaluate the new product's added clinical benefit. Specifically, the assessment compares the clinical benefit (as measured by patients' improvement in health status, reductions in the duration of the disease, survival gains, reduction of side effects, and improvements in quality of life) of the new product relative to a comparative therapy.²⁶ Within three months after the product's market launch, this evaluation is completed and published on the internet.
- Within six months after the product's launch, the Federal Joint Committee, after considering IQWiG's assessment and comments from the manufacturer and other stakeholders, publishes a detailed decision document concerning the added value of the new drug. There are six classifications concerning the extent of the additional benefit: (1) major additional benefit, (2) considerable additional benefit, (3) minor additional benefit, (4) nonquantifiable additional benefit, (5) no additional benefit, and (6) less benefit. Based on this classification, one of two courses of action concerning the price setting of a pharmaceutical will follow:
 - If the Federal Joint Committee decides the product has no added clinical benefit, then the product is paid using internal reference pricing. The

Federal Joint Committee establishes the reference price, which is set near the 30th percentile in the distribution of prices within each therapeutic class, high enough to ensure that patients have more than one choice but low enough to ensure that the payer does not have to pay the highest prices within the class. There must be at least three products in a reference pricing group. If there is not a reference price group, the National Association of Statutory Health Insurance Funds negotiates with the pharmaceutical company a rebate to the ex-manufacturer price such that the payment does not lead to higher annual therapy costs than a comparator product (Spitzenverband 2019).²⁷ If negotiations fail to arrive at a price within six months, an arbitration committee sets the reimbursement amount within three months.

- For products with added therapeutic benefit: The National Association of Statutory Health Insurance Funds and the manufacturer negotiate the ex-manufacturer price. The negotiation process considers the evaluation of the IQWiG (including the proven additional benefit of the product relative to its comparator) as well as pricing from 15 European Union countries; the final price can reflect discounts and rebates to the ex-manufacturer price as well as price-volume agreements. If negotiations fail to arrive at a price within six months, an arbitration committee sets the reimbursement within three months.

Until this evaluation process is completed—the first 12 months after a drug’s launch—the price set by the manufacturer applies to the product. The payment rates derived from this process apply to persons with both statutory and private insurance and to self-paying patients.

Issues in implementing internal reference pricing in Medicare

For Medicare to apply reference pricing strategies, the program would need a clear legal foundation to apply them. Specifically, the Congress would need to restore the Secretary’s authority to apply reference pricing approaches. At present, the Secretary’s lack of flexibility to apply this approach stems from the MMA, which requires that biologics and single-source drugs (without generic competition) be paid based on their own ASP and not averaged with other products. Consequently, these products receive their own payment code.

In addition, the statute constrains Medicare’s use of comparative clinical effectiveness evidence (the foundation of reference pricing strategies) to pay for drugs. Medicare cannot use comparative clinical effectiveness evidence that the Agency for Healthcare Research and Quality produces to withhold coverage of prescription drugs. Since 2010, the Patient Protection and Affordable Care Act of 2010 constrains Medicare’s use of comparative clinical effectiveness research conducted by the Patient-Centered Outcomes Research Institute when making coverage decisions and setting payment rates.

Developing a clear and predictable decision-making framework; ensuring transparency and opportunities for public input

Reference pricing could be applied to existing groups of clinically similar products shown in Table 3-6 (p. 72). The Congress, when clarifying Medicare’s authority to apply reference pricing policies under Part B, could require that the Secretary establish a clear, public, predictable, transparent, and timely process and obtain public comment from a wide range of stakeholders, including beneficiaries, providers, and product developers. Some of the design elements that would be involved in establishing reference pricing policies include:

- how Medicare would define groups of products that are clinically similar;
- how Medicare would set a single payment (i.e., the reference price) for the products in a given group;
- how frequently the reference price would be updated;
- ensuring exceptions to reference pricing policies when a beneficiary’s clinical circumstances support the medical necessity for the more expensive service or product;²⁸
- providing pricing information to beneficiaries and clinicians (to make them sensitive to the difference in out-of-pocket spending);
- permitting a beneficiary to gain access to a more costly product by paying the difference (in the cost between the more costly product and the reference price) if that is his/her preference; and
- whether Medigap policies could cover beneficiary cost sharing that is greater than the reference price.²⁹

For a drug newly approved by the FDA, the Secretary would need a clear, transparent, and timely process for

evaluating its comparative clinical effectiveness compared with existing drugs that are the standard of care and for determining whether the drug should be included in an existing reference product group. The Secretary already has experience under the inpatient and outpatient hospital payment systems in developing the process and assessing whether new services represent clinical improvements compared with existing treatments. While a new drug's comparative clinical effectiveness is being considered, its payment rate could be based on prevailing Medicare payment policies (i.e., ASP + 6 percent), which would obviate delays in beneficiaries' access. Determining the overall length of time for the Secretary to implement this process would also need to be addressed.

To establish the payment rate for a reference group, CMS could determine the payment rate for each drug based on the prevailing payment policy and then set the payment rate for all the clinically similar products in the drug group based on, for example, the weighted average of all products within the group, at the 50th percentile of all ASPs of all the products within the group, or based on the ASP of the least costly product.

Regarding how Medicare would define groups of products, the program could seek advice and possibly contract with pharmaceutical and therapeutics committees to help develop and update groups of Part B products with similar health effects.

To motivate choice, providers and beneficiaries should receive up-to-date information on the payment rates for drugs that are paid for under reference pricing (Robinson 2018). As we noted earlier, reference pricing gives providers and beneficiaries strong incentives to consider lower cost therapeutic alternatives. There is evidence to suggest that physician practices of certain specialties, including oncologists, rheumatologists, and ophthalmologists, already consider the cost of alternative therapies in selecting Part B drugs and provide their beneficiaries financial counseling services, such as advising beneficiaries about their cost sharing based on their treatment choices (Office of Inspector General 2012a, Office of Inspector General 2012b, UVA Cancer Center 2018).

Addressing key concerns about reference pricing strategies

Two key concerns that stakeholders have raised about the application of reference pricing strategies for drugs are (1) the effect of the policies on manufacturers' incentives to

innovate and (2) the effect of the policies on beneficiaries' access to care.

Some stakeholders raise concerns that policies aimed at reducing Medicare spending for Part B drugs would reduce incentives for innovation. For example, Danzon and Ketcham argue that reference pricing policies applied to on-patent innovator drugs decrease the manufacturer's ability to recoup the costs of research and development, which in turn negates the intent of patents and undermines the incentives for product improvement or innovation (Danzon and Ketcham 2004). While arguments can be made that any effort to reduce drug prices lessens incentives for innovation, there is an inherent need to strike a balance between those incentives with affordability and access. Arguments against reducing drug prices presume that current prices strike the appropriate balance. However, others argue that the current level of prices for some products adversely affects affordability and access and exceeds what is necessary to finance innovation (Nichols 2015).

Proponents of reference pricing policies argue that such policies might actually increase manufacturers' incentive to develop more innovative products. Under the current process, development focuses on a stand-alone assessment of the safety and efficacy of a product. In a reference pricing environment, manufacturers would have to compare their product with other products in the clinical trials they sponsor. Some analysts have argued that determining the impact of any health care policy on the pace of innovation is difficult to ascertain because the socially optimal level of research and development is unknown.

A second key concern is that reference pricing strategies could have an adverse impact on beneficiary access. However, that concern would be addressed with a clinical exceptions policy. If a patient needed a particular drug, the patient could obtain an exception (certified by a clinician) and continue to have access to that drug with no increase in cost sharing. Some observers have argued that use of information about a service's comparative clinical effectiveness in the payment processes ignores the variability among individual patients in treatment efficacy, safety, and tolerability of treatment interventions and could result in "one-size-fits-all" policies. Acosta and colleagues found that the effects of reference pricing on health are uncertain due to a lack of rigorous evidence, while Lee and colleagues concluded that reference pricing did not increase use of medical services such as physician visits and hospitalizations (Acosta et al. 2014, Lee et al. 2012). Robinson and colleagues lacked the necessary data

to examine the impact of reference pricing on patients' health outcomes (Robinson et al. 2017). Some observers have also suggested that the cost sharing that patients may incur in order to access the product of their choice (absent a clinical exception certified by a clinician) will lead to nonadherence. To address the concern that reference pricing might lead to patients becoming noncompliant, seeing their physician more frequently, or being hospitalized more frequently, the Secretary could monitor and publicly report on the outcomes of affected patients.

Stakeholders have raised concerns specific to international reference pricing that include:

- The transparency of a drug's transaction price across countries. Accurate measurement of transaction (net) prices is increasingly problematic due to the growing use of confidential rebates and other risk- and cost-sharing measures between manufacturers and payers/countries. Indeed, such confidential (off-invoice/postsale discounts) rebates may be preferred by manufacturers to reductions in list prices, which would spill over to countries through international reference pricing. Manufacturers may design and implement pricing and marketing strategies to counteract the effects of international reference pricing. For example, manufacturers can list high prices in reference countries while providing those countries with confidential rebates or discounts. Because off-invoice rebates and other confidential agreements are not reflected in publicly available drug prices, payers may ultimately reference inaccurate higher prices. Docteur argues that international reference pricing may inflate manufacturers' list prices (Docteur 2008). ASPE notes that using list prices in its analysis may not accurately reflect the actual amount paid in the U.S. and other countries and that its results may be biased due to differences across countries in the use of postsale discounts (and other policies) that are not reflected in the manufacturers' list price (Office of the Assistant Secretary for Planning and Evaluation 2018).
- Prices from existing data sources are not measured consistently. Toumi and colleagues state that comparing prices across countries is difficult because available pricing data are varied (Toumi et al. 2014). For example, pricing data could vary depending on whether they reflect the pharmacy's purchasing price, pharmacy's retail price, or the manufacturer's list price. Adjusting heterogeneous prices can be problematic. In its report, ASPE states that some

countries' data are collected at the hospital level, while others' are collected only at a higher level such as the wholesale level (Office of the Assistant Secretary for Planning and Evaluation 2018).

- Difficulty in identifying the same product across countries. Manufacturers sometimes launch the same products in different countries using different commercial names, pharmaceutical formulations, dosages, and vial and package sizes (Young et al. 2017). Indeed, marketing nonidentical products may be a technique used by manufacturers to counteract the use of international reference pricing. Thus, international reference pricing may promote minor product differentiation (with no therapeutic advances) across markets. ASPE acknowledges that products available in the U.S. do not always align with products available in other countries.

Addressing high launch prices with binding arbitration

Launch prices for some drugs and biologics have increased rapidly in recent years, even after taking into account differences in the clinical effectiveness of the products. Howard and colleagues analyzed the launch prices of anticancer drugs from 1995 and 2013 and found that after controlling for inflation and differences in survival benefits, launch prices increased about 10 percent per year (about \$8,500 per year) (Howard et al. 2015). The authors did not find a statistically significant relationship between launch prices and survival benefits.

For costly new drugs that face limited competition, such as the first drug in a class or a product that offers added clinical benefit over existing treatments, manufacturers have significant market power to set prices and payers currently have very limited ability to influence those prices. Under Section 1847A of the Social Security Act, FFS Medicare lacks the authority to implement tools to arrive at drug payment rates that balance an appropriate reward for innovation with value and affordability for beneficiaries and taxpayers. Medicare's payment rate for a drug may have little relationship to a drug's clinical effectiveness compared with other available treatments. Under the Medicare Part B ASP + 6 percent payment system, FFS Medicare acts as a price taker, and a drug manufacturer with a new product with limited competition effectively sets its own Medicare payment rate.

Binding arbitration is an approach that could be considered to address high launch prices for products with limited competition. Arbitration is a process by which two parties agree to accept the decision of a neutral third party in a dispute, such as a dispute over the price of a drug. Arbitration was an element of the Commission's June 2017 recommendation to improve Medicare payment methods for Part B drugs. That recommendation called for the development of a voluntary alternative to the ASP payment system in which physicians and HOPDs could choose to enroll. Under that alternative program, which we refer to as the Drug Value Program (DVP), Medicare would contract with private vendors to negotiate prices for Part B drugs and would permit vendors to use tools such as a formulary to create negotiating leverage. Because leverage is particularly challenging for drugs with limited alternatives—such as the first product in a class or a product that provides a significant clinical improvement over existing treatments—the Commission recommended that the DVP include binding arbitration as a tool to help vendors and manufacturers arrive at an agreed-on payment rate for high-priced Part B drugs with little or no competition.

Background on arbitration

Arbitration is used to settle disputes in a wide range of areas including labor, communications, international taxes, and health care in certain circumstances. Its most familiar use is in Major League Baseball where binding arbitration serves as a vehicle to settle salary disputes between players and teams. Baseball arbitration uses an approach called “final-offer” arbitration, in which the arbitrator must pick one of the offers made by the disputants. This approach provides an incentive for parties to make reasonable offers since an unreasonable offer may increase the odds that the arbitrator will choose the other party's offer. Final-offer arbitration is credited with encouraging negotiated settlements between players and owners because only a small share of players eligible for arbitration have their salaries decided through an arbitration hearing while the vast majority reach a settlement outside of arbitration.³⁰

States are using a number of different approaches to address out-of-network surprise bills, including in some cases independent dispute resolution processes or arbitration.³¹ A recent analysis indicates that about 10 states include independent dispute resolution or arbitration systems as a part of their approach to settling disputes about payment rates and/or cost sharing when a patient receives a surprise out-of-network bill (Hoadley et al.

2019). The structure of these systems vary by state. New York and recently New Jersey use baseball arbitration. According to one study looking at the early experience with New York's program, the initial effect appears to be in the intended direction, with the study finding a lower frequency of out-of-network billing and lower payment rates for emergency department physicians providing services in network after implementation of the program (Cooper et al. 2018). Another way that state dispute resolution or arbitration programs vary is in whether participation in the dispute resolution system by insurers and providers is voluntary or mandatory. A study of some early state experiences with out-of-network dispute resolution systems found that voluntary systems (such as those in California and Texas) have not been as effective as mandatory systems because voluntary systems have received little use (Hall et al. 2016).

Major League Baseball and out-of-network bills provide examples of how arbitration has been used to establish prices in situations where one party would otherwise have little negotiating leverage. Since Medicare and other payers also lack leverage to affect the price for drugs with limited competition, arbitration could have promise to address prices for such products. Clearly, there are differences between Major League Baseball, out-of-network claims, and drug pricing that would be expected to translate into differences in how an arbitration system is designed for these different purposes. For example, arbitration for out-of-network claims tends to occur at the level of an individual patient's claim and there is the potential for there to be a relatively large number of claims with relatively small dollar amounts per claim. In contrast, the use of arbitration for determining the price of a drug could occur at the level of the Secretary, with arbitration focusing on only a small number of products. The rules, criteria, and processes for arbitration for drug pricing could be designed to take into account the specific considerations and implications of drug-pricing decisions.

Although use of arbitration for drug pricing is not common, Germany offers an example of one such approach. In Germany, if a drug is found to have added clinical benefit over existing treatments, health insurers and manufacturers are given six months to negotiate the price, and if negotiations fail, they move to arbitration. In some circumstances, products found to be without added benefit over existing treatments go through negotiations and arbitration (e.g., if there are not enough products to form a comparator group for reference pricing). The arbitration process lasts up to three months and the

arbitration board consists of three neutral members, including the chair, plus one representative of the insurers and one of the manufacturer. The arbitration board's decision is based on a majority vote, with the chair's vote being decisive if a majority is not reached. The manufacturer and health insurers each offer a price, and the arbitration board chooses a price in the range between the two offers.³² The arbitration price goes into effect the 13th month the product is on the market. The parties can appeal to a court, but appeals do not have suspensive effect (Wenzel and Paris 2018). A process also exists for the parties to request that the price be revisited, generally after at least a year. In some cases, manufacturers have chosen to withdraw their product after an arbitration decision, with one motivating factor being concern about the effect that a lower German price could have on prices in other countries that use Germany as a reference price (Robinson et al. 2019).³³ These negotiation and arbitration processes apply to outpatient drugs; however, the prices arrived at through these processes also serve as a ceiling on prices manufacturers can charge to hospitals for inpatients.

Rationale for arbitration beyond the DVP

Although the Commission has recommended the inclusion of binding arbitration within the DVP, there may be a role for binding arbitration beyond the DVP. The Commission's recommended DVP design would be voluntary for providers. If the DVP were implemented, it is possible that a significant portion of Part B drug spending would remain under the traditional ASP system, unaffected by the DVP. Thus, if the DVP obtained a lower price through binding arbitration, it would not affect Medicare's ASP payment rates.

Some Medicare Part A providers (such as inpatient hospitals) are paid a bundled rate for all care provided, including drugs, based on a patient's case-mix group. Although bundles give providers an incentive to negotiate lower prices and use services efficiently, providers may have little leverage to negotiate favorable prices when a drug lacks competition. In addition, sometimes a drug can be covered under Part A or Part B depending on where it is administered. To the extent that a drug covered by Part B goes through arbitration, it would seem reasonable that Part A providers that also furnish that drug to Medicare beneficiaries should benefit from the lower price resulting from arbitration.

This chapter focuses on binding arbitration's potential use in FFS Medicare. However, we note that the concept of binding arbitration was first raised by researchers with

respect to Part D, and its use could also be explored for Part D (Frank and Newhouse 2008).

How binding arbitration could operate outside the DVP

In this chapter, we explore a potential policy that would permit the Secretary to enter into binding arbitration with drug manufacturers for Part B drugs with limited competition under certain circumstances. If this type of binding arbitration were available, there would be a number of important structural features for such a system. In the following sections, we discuss various design elements that would be involved in setting up such a system and some of the policy choices that would have to be contemplated.

- **Type of arbitration.** Two common forms of arbitration are conventional and final-offer arbitration, which is often referred to as "baseball arbitration." Under conventional arbitration, the arbitrator can select any award amount, whereas under baseball arbitration, the arbitrator picks the award amount from the offers made. The Commission has focused on baseball arbitration because it provides an incentive for parties to make reasonable offers since the arbitrator must pick one of the two offers. These incentives would make the process less risky for both the Secretary and manufacturers.
- **Selection of arbitrators.** Having neutral arbitrators with sufficient subject matter expertise would be essential to the success of an arbitration process. The arbitrator could be a single individual or panel of individuals. Some have suggested that a neutral third party propose a slate of arbitrators, with each party having the ability to veto certain arbitrators (Frank and Newhouse 2008). For example, a nonpartisan government entity (e.g., the Government Accountability Office) could propose a slate of five arbitrators with specialized expertise and without conflicts of interest and permit each side to strike one arbitrator, leaving a panel of three. Another component essential to this process would be the development of standards for what constitutes a conflict of interest and processes for how conflicts would be identified and handled.
- **Who would enter into binding arbitration and what would trigger it?** The Congress could establish the criteria for when the Secretary could seek arbitration for a product. For example, the Secretary could

be granted authority to seek arbitration if total Medicare Part B program expenditures for a product or the product's cost per patient (or per unit of health outcome) is estimated or projected to exceed specified dollar thresholds. These thresholds could be set at levels that would focus arbitration on those products for which it would have the most benefit by identifying products that have high total spending, a high cost per patient, or both. Because a small number of Part B drugs account for a large share of Part B drug spending, it would be possible to set criteria that could have a meaningful impact while involving a limited number of products. A second component of the criteria could be that the product faces limited competition (e.g., because few products with similar health effects exist). When these criteria are met, the Secretary could decide whether to request the manufacturer to enter arbitration.

- **Manufacturer obligation.** To give manufacturers a strong incentive to agree to participate in arbitration when requested by the Secretary, Medicare payment for a manufacturer's product could be conditioned on that manufacturer's participation in binding arbitration. Thus, if a manufacturer chose not to participate in arbitration for a particular product, that choice by the manufacturer would result in the Medicare program no longer paying for the product. While it is possible that a manufacturer could decline to participate in arbitration, the large size of the Medicare market and the high cost of the products that would meet the criteria for arbitration would be a strong disincentive for a manufacturer to decline Medicare payment for its product.
- **Timing of arbitration.** There may be benefits to granting the Secretary flexibility on the time period when the Secretary can first request arbitration for a product, either at a product's launch or later in a product's time on the market. For some products, it may be clear at launch that the product meets the criteria for arbitration, and, in that case, the arbitration process could begin quickly once the product has launched and the Secretary requests arbitration. If arbitration occurs at a product's launch, it would be important that access to the product not be delayed while the arbitration process is underway. The product could be paid its standard ASP-based payment amount while the process is underway. Once an arbitration price has been decided, several options exist for the effective date of that price. It could be effective on a

going forward basis immediately or (like Germany) after a specified time period, or it could be applied retroactively with the difference between the initial price and the arbitration price recouped. There could be situations in which a product at its launch does not appear to meet the cost criteria for arbitration, but later—after the product has been on the market—data indicate that it meets the criteria. Permitting the Secretary to request arbitration later in a product's market experience would ensure that arbitration is an available tool if a product's market size, usage, or pricing turns out to be different from initially expected.

- **Offer price.** If the Secretary and the manufacturer enter arbitration for a product, the Secretary and the manufacturer would submit offer prices to the arbitrator(s) who would choose one of those prices. How the Secretary would determine an appropriate offer price would be a key issue. This determination of an offer price could be left entirely to the Secretary or the Congress could specify factors the Secretary should consider or parameters the Secretary should use in developing an offer price. Another approach would be for the Congress to specify some bounds on the offer prices for both the Secretary and manufacturer—for example, by specifying a range in which an offer price should fall relative to various pricing benchmarks (e.g., ASP, prices in other countries, measures of price per unit of health outcome, and/or rate-of-return on investment).

The process by which the Secretary arrives at an offer price also could take several forms. The Secretary could seek input from neutral outside organizations with expertise in value-based pricing. Another approach would be for the Secretary to create the Department's own model of a value-based price. If the Department created its own model, it could use that same approach consistently across drugs for which it sought arbitration. The Secretary could also use a combination of approaches, seeking estimates from neutral outside experts as well as creating its own model. If manufacturers were required to submit a dossier on their products' comparative clinical effectiveness (as done in Germany) and cost (as done in some other countries like Australia), the Secretary could also consider such information in formulating an offer price. Since in the future high-priced breakthrough drugs may be developed for large populations, it would be important that

the Secretary be permitted to consider Medicare program affordability as one of many factors he or she considers in developing an offer price.

- **Pre-arbitration discussions.** The binding arbitration system described here does not necessitate direct negotiations between the Secretary and the manufacturer on price. The decision on price could be left entirely to the arbitrator. Without direct negotiations between parties, there could still be a role for informational meetings between the Secretary and a manufacturer before a product's launch. Such meetings could permit manufacturers to provide information on their new products and permit the manufacturer to ask questions about what the Secretary considers when deciding to pursue arbitration. The FDA–CMS parallel approval review program for devices is one example of a process for prelaunch consultations between CMS and manufacturers.³⁴

In other areas where binding arbitration is used, such as labor disputes, one benefit of binding arbitration is that it can encourage negotiated settlements and the avoidance of arbitration hearings. In applying binding arbitration to Part B drugs, there would be the question of whether (similar to Germany) the Secretary would be permitted to engage in pre-arbitration negotiations with the manufacturer to potentially reach agreement on a lower price for Medicare patients without entering arbitration. Because binding arbitration would be a fallback if negotiations fail, the Secretary would potentially have more leverage in negotiating with manufacturers under these circumstances than would otherwise be the case in the absence of arbitration. However, direct negotiation of prices between the Secretary and manufacturers is a controversial issue. An arbitration process could be feasible with or without permitting the Secretary to engage in pre-arbitration negotiations.
- **Length of arbitration process.** The length of time it takes to complete the arbitration process would depend on how it is structured. Certain design features—such as how the deadlines are spaced for parties to submit information and specific requirements about the content and amount of materials that parties can submit—affect the time involved. The arbitration system can be designed to be as expedient as judged appropriate. For example, in Germany, if price negotiations between insurers and a

drug manufacturer fail, an arbitration board makes its own determination on price within three months.

- **Criteria used by arbitrator.** An important feature of designing an arbitration system would be the criteria the arbitrator would use in making its decision between the parties' offers. Some potential criteria could include:
 - clinical benefit compared with existing treatments (which would provide an incentive for manufacturers to focus on the development of drugs that offer substantial clinical benefits over drugs with smaller added benefits)
 - prices of existing treatments
 - whether the drug addresses specific areas of need (e.g., new antibiotics)
 - whether the drug focuses on a rare condition and does not have other broader uses
 - cost of manufacturing the product
 - amount spent on the product's research and development by the manufacturer and other entities (e.g., government-sponsored research)
 - affordability for the Medicare program and beneficiaries
- **Operationalizing the award price.** Once the arbitrator decides on a price, the Medicare program would need to use that price as a basis for paying for Part B drugs. The arbitration price could be operationalized as an adjustment to the Medicare Part B drug payment rates or as a rebate paid by the manufacturer.
- **Approach 1: Part B payment rate based on the arbitration price and a manufacturer requirement.** The arbitration price could become the Medicare payment rate for a Part B drug. To ensure providers can acquire the product, manufacturers could be required as a condition of Medicare payment that they sell the product to providers for Medicare patients at a price no higher than the arbitration price. With this manufacturer pricing requirement, the 6 percent add-on to the Part B payment rate for the product could potentially be eliminated. To operationalize the manufacturer requirement, a back-end reconciliation process would be needed between providers and wholesalers, distributors,

or manufacturers to ensure that, for the volume of product furnished to Medicare patients, the price would be no higher than the arbitration price.

With this approach, the manufacturer requirement could also be extended to providers furnishing drugs under Part A. Although Part A providers are paid for drugs through larger payment bundles that create incentives for providers to be cost conscious and negotiate for lower prices, Part A providers may have little leverage with manufacturers when a product has limited alternatives. Making the arbitration price a ceiling on the price at which a manufacturer can sell drugs to these providers for their Medicare patients has the potential to assist Part A providers with their costs for expensive drugs with limited competition.

- **Approach 2: Manufacturer rebate.** Medicare could continue paying for Part B drugs under its standard approach of ASP + 6 percent, but manufacturers could be required to pay Medicare a rebate to achieve the price arrived at through arbitration. This approach would be relatively straightforward to implement and would accrue savings to Medicare Part B. However, this approach would not lower the drug acquisition prices paid by providers so it would not have the potential to assist Part A providers with drug costs.

Both approaches would have the potential to reduce beneficiary cost sharing. The first approach would automatically reduce cost sharing by lowering the Medicare payment amount on which the 20 percent cost sharing is calculated. Although not as automatic, the second approach—a manufacturer rebate—could be structured to lower beneficiary cost sharing. With the rebate approach, Medicare could reduce the cost sharing up front based on the arbitration price, with Medicare increasing its payment to the provider to make up the difference. The Medicare program would then receive rebates from the manufacturer afterward and keep the full amount of the rebate. The net result would be that the beneficiary would realize roughly 20 percent of the rebate through lower cost sharing and the program would realize 80 percent.

- **Process for revisiting arbitration price and addressing new products.** The arbitration process could include a process for the parties to request a

reconsideration at a later date. It may be in the interest of each party to have this option. For example, if new research comes out that suggests the clinical effectiveness of a drug is substantially more or less than initially thought, it could benefit one of the parties to request a new arbitration process. Another important issue would be what happens if a similar product to the one that underwent arbitration subsequently launches. Different approaches to that situation could be considered, such as applying the arbitration price to the new product or letting the products revert to the standard ASP payment system, with the potential to reenter arbitration if the pricing under the standard system rises.

- **Other design issues.** Other design features that would need to be considered include whether to allow the arbitrator to contract with a neutral third party to supplement or evaluate the information contained in each disputant's final offers (e.g., an independent fact finder) and what information from the arbitration process besides the arbitration price would be made public.

Implications and stakeholder concerns with binding arbitration

Binding arbitration is one of the few potential tools available to affect the price of drugs with limited competition. The binding arbitration process has the potential to incorporate value, affordability, and an appropriate reward for innovation into the determination of Medicare's payment for Part B drugs. Because the decision on Medicare's payment would ultimately be in the hands of a neutral arbitrator, it may help insulate the process from stakeholder pressure to some degree. Nonetheless, the Secretary would still likely face stakeholder pressure over when to invoke arbitration and at what level to set Medicare's offer price.

Whether arbitration is an effective process for arriving at a value-based payment would depend on how the arbitration process is designed. The Congress would need to specify a number of design elements for the binding arbitration process (as discussed above). Success of a binding arbitration process would also hinge on the ability to involve neutral arbitrators. Critics of binding arbitration argue that it would be challenging to find arbitrators with sufficient subject matter expertise who are without conflicts of interest. Putting the selection of arbitrators in the hands of a nonpartisan government agency could

help navigate that issue. With binding arbitration, there may also be concerns about whether a manufacturer might decline to participate in binding arbitration—and thereby decline to have its product covered by Medicare—and the implications of such a decision for beneficiary access. However, the large size of the Medicare market and the high cost of the products that would be eligible for arbitration would create a strong disincentive for a manufacturer to decline to have its product paid for by Medicare. As with other policies that would reduce drug prices, some stakeholders assert that arbitration would reduce the incentives for innovation. In contrast, if the arbitration process focuses on clinical effectiveness and the magnitude of clinical benefits over existing products, the process could improve the incentives for research and development aimed at products likely to have substantial added benefits over those with smaller added benefits. Furthermore, the establishment of criteria to help guide the arbitrator’s decision could include factors (such as market size, clinical benefit, unmet need, special populations, rate of return on investment) that are important for innovation.

Conclusion

Reference pricing and binding arbitration are two potential tools that could be considered to improve price competition and incorporate value into payment for Part B drugs. Reference pricing focuses on products with similar health effects, and binding arbitration focuses on expensive products with limited competition. Each approach is a distinct policy and could be adopted on its own. However, packaging both strategies together, along with the Commission’s June 2017 recommended policies, could provide added benefits because the various policies would complement each other by addressing different factors driving Medicare Part B drug spending growth. Medicare would need additional statutory authority to implement reference pricing and binding arbitration; the legislative provisions would influence each strategy’s effectiveness to improve price competition and value for Part B drugs. Finally, both reference pricing and binding arbitration could also be applied to pay for Part D drugs, although how each could be applied would differ from its use in Part B. ■

Endnotes

- 1 Spending on supplier-furnished drugs decreased by 11 percent in 2017 because of a statutory change in Medicare's payment formula for home infusion drugs and the entry of generics for a few high-expenditure products. Beginning January 2017, Medicare pays for Part B–covered home infusion drugs at a rate of ASP + 6 percent. Before that time, Medicare paid for these drugs based on 95 percent of the average wholesale price.
- 2 This analysis of the factors driving spending growth between 2009 and 2019 excludes any Part B drugs that were packaged into payment for other services, regardless of setting and year. This means that drugs that were packaged under the outpatient prospective payment system are excluded from the analysis, even if they were separately paid in the physician's office. We focused our analysis on this subset of drugs to ensure that shifts in a drug's status as separately paid or packaged or shifts in site of service did not skew our results. We also exclude vaccines to ensure that the analysis is not skewed by a substantial increase in the use and price of a new pneumococcal vaccine. For the period from 2009 to 2016, the average annual growth in spending for nonvaccine separately payable drugs was somewhat higher than for all Part B drugs (10.7 percent and 9.5 percent, respectively). Under the hospital outpatient prospective payment system, low-cost drugs (e.g., drugs with a cost per day of less than \$125 in 2019) and certain types of drugs regardless of cost (e.g., drugs that function as supplies for certain tests or procedures) are packaged into the payment for other services (unless they are new products and have received temporary pass-through status). Medicare Part B covers drugs that are administered in HOPDs when they are directly related and integral to a procedure or treatment and are required to be provided to a patient in order for a hospital to perform the procedure or treatment during a hospital outpatient encounter.
- 3 Because some beneficiaries begin treatment midyear and treatment carries into the following year, average spending per user in any given year understates the cost of a full year of treatment with the product.
- 4 Manufacturers calculate ASP based on sales to all purchasers, excluding nominal sales and prices that are exempt from the determination of the Medicaid best price (e.g., sales or discounts to other federal programs, 340B–covered entities, state pharmaceutical assistance programs, and Medicare Part D plans, as well as manufacturer coupons to consumers meeting certain criteria). Bona fide service fees are not considered price concessions for the purposes of ASP (for example, fees paid by the manufacturer to entities such as wholesalers or group purchasing organizations that are fair market value, not passed on in whole or in part to customers of the entity and are for services the manufacturer would otherwise perform in the absence of the service arrangement).
- 5 Manufacturers are required to report ASP data for a calendar quarter within 30 days after the close of that quarter. CMS then takes the data submitted by manufacturers and uses them to calculate the ASP + 6 percent payment rates for the next calendar quarter. For example, ASP data for the fourth quarter of 2018 were used to set the ASP + 6 percent payment rates for the second quarter of 2019. Manufacturers were required to report ASP data for the fourth quarter of 2018 by January 30, 2019. CMS then had two months to calculate, publish, and operationalize the new payment rates so they would go into effect at the start of the next calendar quarter, April 1, 2019.
- 6 Between 2016 and 2018, the Secretary assigned to a single billing code all biosimilar products that rely on a common originator product's biologics license under the Food and Drug Administration's approval process. Under this policy, all biosimilars associated with a particular originator product were paid under a single billing code and received a payment equal to 100 percent of the weighted average ASPs for the biosimilar products plus a constant add-on equal to 6 percent of the reference product's ASP. In 2018, the Secretary changed this policy and began assigning each biosimilar to its own billing code and paying each product based on its own ASP + 6 percent of the originator biologic's ASP.
- 7 The IMS Health Incorporated data were available by channel of purchaser. We examined the clinic channel, which included physician offices, hospital outpatient departments, dialysis clinics, nonhospital surgical centers, and public health service clinics. The IMS data for the clinic channel included discounted sales to 340B entities. To avoid reflecting 340B prices in our estimates, we did not use data on the average invoice price. Instead, we focused on invoice prices at the 75th percentile (i.e., the 75th percentile reflects the price at which 75 percent of the volume of a drug is sold at or below that price). The prices in the IMS data reflect all on-invoice discounts and rebates but not off-invoice rebates. As a result, in some cases the IMS data overstate the actual end price paid by the purchaser.
- 8 Like other Medicare services, Part B–covered drugs are subject to the budget sequester effective April 1, 2013, through 2027. The sequester reduces Medicare program payments by 2 percent but does not affect the beneficiary cost-sharing amount.
- 9 After a generic is launched (and assigned to the same billing code as its brand-name product), its lower price is averaged with the higher price of the brand product, which results in the ASP-based payment rate of the consolidated billing code falling over time as brand and generic products compete based on price.

- 10 For example: epoetin and darbepoetin (erythropoiesis-stimulating agents that treat anemia), aflibercept and ranibizumab (anti-vascular endothelial growth factors that treat eye conditions), and infliximab and rituximab (targeted immune modulators that treat immunologic conditions).
- 11 Although Granix is not a biosimilar in the U.S. (because it was approved under the standard FDA approval process for new biologics), we include it here because it was approved as a biosimilar to Neupogen in Europe and it functions as a competitor to Neupogen and Zarxio in the U.S. market.
- 12 Countries that CMS is considering including in the IPI are Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, and the U.K.
- 13 In remarks at an October 26, 2018, event hosted by the University of Southern California–Brookings Schaeffer Initiative for Health Policy, the Secretary of the Department of Health and Human Services stated that the IPI model would not include formularies (https://www.brookings.edu/wp-content/uploads/2018/10/es_20181026_hhs_medicare_transcript.pdf).
- 14 The Group of Seven is an informal grouping of seven of the world’s advanced economies consisting of Canada, France, Germany, Japan, Italy, the U.K., and the U.S.
- 15 Alternatively, all drugs within a reference pricing group could have the same payment (e.g., median of prices across products), with beneficiaries’ cost sharing based on 20 percent of the reference price. In that case, the provider would get paid the same amount regardless of the product chosen and would have an incentive to choose the lower priced product.
- 16 In 2015, total Part B spending for these eight groups totaled \$9.5 billion.
- 17 In its interpretive manuals, CMS explained that Medicare’s authority to apply LCA policies was based on the general provision requiring the program to pay the expenses of items and services that are reasonable and necessary (Medicare Payment Advisory Commission 2010).
- 18 The prostate cancer drugs were triptorelin pamoate, goserelin acetate implant, and leuprolide acetate suspension.
- 19 See Social Security Act Section 1833(t)(2)(E).
- 20 Reference pricing was applied to 76 therapeutic classes composed of multiple generic and therapeutically similar brand-name drugs.
- 21 Before the implementation of reference pricing, Reta Trust members paid an average of 31 percent more in copayments per prescription compared with the control population (Robinson et al. 2017). After reference pricing was implemented, the use of the lowest priced reference drugs was 11.3 percent higher among Reta Trust members than among the control group (Robinson et al. 2017).
- 22 According to researchers, in 2011, the following 16 countries used reference pricing to pay for drugs: Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, the Netherlands, Poland, Portugal, Spain, and Turkey. Austria, Norway, Sweden, and the U.K. did not use reference pricing (Dylst et al. 2012).
- 23 International reference pricing is considered in the following 29 countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Switzerland (Rémuzat et al. 2015).
- 24 For new products that DHA does not yet cover, the manufacturer is required to submit a clinical evaluation (that provides the best available evidence to support the comparative effectiveness and safety of the product) and an economic evaluation (cost-effectiveness analysis); for new forms of already covered products, an economic evaluation is usually not required.
- 25 All drugs approved by the European Medicines Agency are immediately available after launch for clinicians to prescribe (Robinson et al. 2019).
- 26 A new drug treating multiple indications may have multiple comparators.
- 27 There must be three therapeutically equivalent drugs to constitute a class for reference pricing (Robinson et al. 2019).
- 28 A mechanism for exceptions for patients who need higher priced products must be carefully designed. Exceptions that are too limited could lead to higher copayments for the most effective drug and to physicians prescribing less effective drugs. Too generous exceptions could reduce the savings by not shifting drug use toward less costly products (Acosta et al. 2014).
- 29 For example, Medigap policies F and G cover 100 percent of the costs known as Medicare Part B excess charges, the difference between what a doctor or provider charges and the amount Medicare will pay.

- 30 In Major League Baseball, out of 2,994 filings for arbitration between 1990 and 2016, only 246 (8 percent) were decided by an arbitration hearing (http://www.mlbplayers.com/ViewArticle.dbml?DB_OEM_ID=34000&ATCLID=211445796).
- 31 Some states have used dispute resolution or arbitration to address surprise billing situations. Other states have taken different approaches such as specifying the payment rate for out-of-network services based on a benchmark, prohibiting providers from balance billing, or requiring insurers to hold the patient harmless by paying a larger share of the payment to the provider (Hoadley et al. 2019). Research comparing the relative effects of the various approaches is limited.
- 32 According Ludwig and Dintsios, for the 16 products that completed arbitration through 2015, the arbitration price was closer to the insurers' offer price for 12 products and closer to the manufacturer's offer price for 4 products (Ludwig and Dintsios 2016). On average for the 16 products, the arbitration price was 20 percent below the midpoint between the insurers' and manufacturer's offer price (Wenzel and Paris 2018).
- 33 Manufacturers have the option to halt offering their product in the German market at any point, such as when the government has made a determination of the product's comparative effectiveness, during the negotiations process between insurers and the manufacturer, or in response to an arbitration decision. Between 2011 and 2017, of the 148 products that underwent a comparative effectiveness assessment, 29 products were withdrawn from the German market. Twelve products were withdrawn immediately without going through the negotiations and arbitration process and 16 were withdrawn after a pricing decision generally by the arbitration board. One product was withdrawn due to manufacturer bankruptcy (Robinson et al. 2019).
- 34 Although for a different purpose, the FDA–CMS parallel review program offers device manufacturers a voluntary opportunity to engage with FDA, CMS, and others about what type of evidence might be important to these agencies as they make decisions about product approval and coverage, which permits manufacturers to consider that feedback as they are designing their clinical trials (Food and Drug Administration and Centers for Medicare & Medicaid Services 2016).

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CHAPTER 4

**Mandated report on
clinician payment in Medicare**

Mandated report on clinician payment in Medicare

Chapter summary

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) repealed the previous formula for setting clinician fees (the sustainable growth rate, or SGR), established permanent statutory updates for clinician services in Medicare, created an incentive payment for clinicians who participate in certain types of payment arrangements, and created a new value-based purchasing program for all other clinicians. MACRA also requires the Commission to conduct a study of the statutory updates to clinician services from 2015 through 2019 and the effect these payment updates have on the access to and supply and quality of clinician services. The statutory updates were 0.5 percent each year from 2015 through 2018 and 0.25 percent in 2019 (changed from 0.5 percent to 0.25 percent in the Bipartisan Budget Act of 2018). The statutory update for 2020 through 2025 is 0 percent.

The Commission's statutory framework requires that we assess the payment adequacy of each sector (including the clinician sector) every year and make a recommendation on any necessary update. To conduct the payment adequacy assessment for physician and other health professional services, the Commission reviews a direct measure of access to care (a telephone survey), two indirect access measures (the supply of clinicians billing Medicare and changes in the volume of services), quality measures, and clinician input costs.

In this chapter

- Introduction
- Medicare's payment system for clinician services
- The Commission's assessment of payment adequacy
- Conclusion

To fulfill this mandate, we review the rate-setting and update process for Medicare's fee schedule and measures of payment adequacy over a longer time frame than is covered in our yearly payment assessments. Overall, payment updates for clinician services have generally been in the range of 0 percent to 1 percent each year since 2011. Our yearly assessment has found most measures of payment adequacy for clinician services generally to be positive or stable. Two notable features that may affect our payment adequacy measures are difficulties with nonresponse rates in telephone surveys (difficulties that are common to researchers in all fields that rely on telephone surveys) and the effect of site-of-service changes on fee schedule volume and spending.

Access for Medicare beneficiaries continues to be relatively stable and as good as or slightly better than access for individuals with private insurance. Volume growth varied by type of service, and some services have significantly shifted across settings, affecting both volume and spending for clinician services. Medicare's payment rates relative to private sector payment rates fell slightly from 81 percent to 75 percent since 2011, generally due to higher growth in private sector prices for clinician services. There continue to be disparities in physician compensation by specialty, which implicates mispricing in the fee schedule for certain ambulatory evaluation and management services relative to other services. Finally, our ability to detect and report national trends for Medicare clinician quality is limited.

Medicare's yearly payment rate update for clinician services has ranged from no update to 1 percent over the past decade, which is consistent with the updates from 2015 to 2018 (0.5 percent), 2019 (0.25 percent), and 2020 to 2025 (no update). To date, these payment updates have been associated with generally stable measures of access to clinician services for Medicare beneficiaries. The statutory mandate directing the Commission to conduct this evaluation requires us to make recommendations for future updates to the fee schedule rates that would be necessary to ensure Medicare beneficiaries' access to care. The trends we have observed over the last decade suggest that updates in the range of 0 percent to 1 percent have been sufficient to ensure beneficiary access to care, and we have recommended similar updates to physician payments based on these indicators. However, there is no certainty that this relationship will continue to hold in future years. Therefore, we will continue to evaluate the most currently available data on measures of payment adequacy and advise the Congress accordingly on our recommended payment updates on a year-by-year basis. Further, other patterns raise questions about the relationship between payment rates and access, suggesting that other factors may be more important than payment rate updates in maintaining beneficiary access to clinician services. ■

Statutory mandate: Public Law 114–10

(C) REPORT ON UPDATE TO PHYSICIANS’ SERVICES UNDER MEDICARE.—Not later than July 1, 2019, the Medicare Payment Advisory Commission shall submit to Congress a report on—

(i) the payment update for professional services applied under the Medicare program under title XVIII of the Social Security Act for the period of years 2015 through 2019;

(ii) the effect of such update on the efficiency, economy, and quality of care provided under such program;

(iii) the effect of such update on ensuring a sufficient number of providers to maintain access to care by Medicare beneficiaries; and

(iv) recommendations for any future payment updates for professional services under such program to ensure adequate access to care is maintained for Medicare beneficiaries. ■

Introduction

In the Medicare Access and CHIP Reauthorization Act of 2015, the Congress mandated that the Commission report on the effect of the statutory payment updates for clinician services from 2015 through 2019 on access to care, quality of care, and the supply of clinicians (see text box for mandate).

Although we reviewed evidence for the years mandated (where available) through 2018, we do not have complete data covering the time period requested by the mandate, particularly for 2019. We examined the evidence for some prior years, when payment updates were generally comparable to the statutory updates specified for 2015 through 2019. Topics covered in this chapter include:

- Medicare’s payment system for clinician services;
- Medicare’s statutory payment update, conversion factors, and spending growth for clinician services;
- the Commission’s payment adequacy assessment framework, including:
 - trends in telephone survey nonresponse;
 - the effect of site-of-service changes on fee schedule volume and spending and the implications for Medicare payment policy;

- trends in the payment adequacy indicators over time; and
- a summary of overall trends in Medicare’s payment updates in relation to those payment adequacy indicators.

Medicare’s payment system for clinician services

In 2017, Medicare paid \$69.1 billion for clinician services delivered by over 1 million clinicians in all settings.¹ Among clinicians billing for more than 15 unique beneficiaries each, there were 596,000 physicians and 389,000 advanced practice registered nurses, physician assistants, therapists, chiropractors, and other practitioners. Medicare pays for the services provided by physicians and other health professionals under Part B of Medicare using a fee schedule.

Medicare’s fee schedule for clinician services contains payment rates for over 7,000 distinct services identified by Healthcare Common Procedure Coding System—HCPCS—codes (which include Current Procedural Terminology codes). In determining payment rates for each service, CMS considers (1) the amount of clinician work required to provide a service, (2) expenses related

**TABLE
4-1**

GPCIs and adjusted RVUs for a Level 3 E&M visit for an established patient in a physician office, nationally and in four illustrative areas, 2019

	GPCIs			GPCI-adjusted RVUs			Total RVUs	Total payment amount
	Work	Practice expense	PLI	Work	Practice expense	PLI		
National	1.00	1.00	1.00	0.97	1.05	0.07	2.09	\$75.32
Alaska	1.50	1.12	0.71	1.46	1.18	0.05	2.65	\$96.49
Rest of Missouri	1.00	0.86	0.99	0.97	0.90	0.07	1.94	\$70.12
Manhattan	1.05	1.18	1.62	1.02	1.24	0.11	2.33	\$85.50
New Orleans	1.00	0.97	1.27	0.97	1.02	0.09	2.05	\$74.72

Note: GPCI (geographic practice cost index), RVU (relative value unit), E&M (evaluation and management), PLI (professional liability insurance). The table shows Current Procedural Terminology code 99213. The conversion factor is \$36.04. GPCIs are often set for certain metropolitan areas and then the rest of a state; "Rest of Missouri" refers to all areas in Missouri except for Kansas City and St. Louis. The work GPCI for Alaska is set at 1.5 by statute.

Source: Physician fee schedule data from Centers for Medicare & Medicaid Services.

to maintaining a practice, and (3) professional liability insurance costs (each of which is expressed in terms of relative value units, or RVUs). Collectively, the three factors compose the resource-based relative value scale. Each year, CMS, with input from the American Medical Association and specialty societies through the Relative Value Scale Update Committee, revises the relative values underlying some of these codes based on changes in clinical practice, coding, policy, or other factors.

Each RVU category (work, practice expense, and professional liability) for each code is adjusted by variation in the input prices in different markets, and the sum is multiplied by the fee schedule's conversion factor (or base payment amount) to produce a total payment. These geographic adjustments are designed to account for the varying costs in running a practice in different geographic locations. See the Commission's *Payment Basics* document for more information on how Medicare calculates payment rates (available at http://www.medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_18_physician_final_v2_sec.pdf?sfvrsn=0).

Table 4-1 shows how the geographic practice cost indexes (GPCIs) modify the payment amount in four illustrative areas, compared with the national payment amount, for a Level 3 evaluation and management (E&M) visit for an established patient.

Medicare's conversion factor for clinician services

CMS updates the conversion factor each year using any applicable statutory update plus other statutory or regulatory adjustments. Each year, through the fee schedule rule-making process, CMS outlines new, revised, and deleted codes from the fee schedule for clinician services, including adjustments to the relative values. CMS also reviews potentially mispriced services and may adjust their RVUs. CMS then applies a budget-neutrality adjustment so that, in aggregate, the total RVUs remain constant from one year to the next.²

As part of this process, CMS also applies any relevant statutory payment policies. For example, the Congress established a statutory provision setting a target for CMS to adjust the prices of misvalued services for a three-year period (2016 through 2018). The target was set at 1 percent of fee schedule spending for 2016 and 0.5 percent for 2017 and 2018. CMS did not meet the target in any of the three years, which meant that payment rates for all fee schedule services were reduced by the difference between the target and the actual aggregate reduction to the RVUs of misvalued services.

Separately, CMS can use its regulatory authority to make technical adjustments to the relative weights or conversion factors. For example, in 2011 and 2014, CMS made a large adjustment to the practice expense (PE)

**TABLE
4-2**

Statutory updates and net effective update to the conversion factor

CY	Statutory update	RVU budget-neutrality adjustment	Other changes			Net effective update to the conversion factor	Conversion factor on January 1
			Misvalued codes target recapture amount	Imaging MPPR adjustment	Rescaling to match MEI weights		
2011	0%	0.45%	N/A	N/A	-8.19%*	-7.74%*	\$33.9764
2012	0	0.18	N/A	N/A	N/A	0.18	\$34.0376
2013	0	-0.043	N/A	N/A	N/A	-0.04	\$34.0230
2014	0.5	0.046	N/A	N/A	4.718*	5.29*	\$35.8228
2015	0 (January–March) 0.5 (April–December)	-0.06	N/A	N/A	N/A	0.31	\$35.9335
2016	0.5	-0.076	-0.78%	N/A	N/A	-0.36	\$35.8043
2017	0.5	-0.013	-0.18	-0.07%	N/A	0.24	\$35.8887
2018	0.5	-0.10	-0.09	N/A	N/A	0.31	\$35.9996
2019	0.25	-0.14	N/A	N/A	N/A	0.11	\$36.0391

Note: CY (calendar year), RVU (relative value unit), MPPR (multiple procedure payment reduction), MEI (Medicare Economic Index), N/A (not applicable).
 *Conversion factor adjustments in 2011 and 2014 maintained the budget neutrality of practice expense (PE) and professional liability insurance (PLI) RVUs that were rescaled to match revised MEI weights. A -8.19 percent adjustment in 2011 to the conversion factor offset PE and PLI RVUs that were rescaled upward based on a survey of physician practice costs. A 4.718 percent adjustment in 2014 offset a reduction of PE and PLI RVUs that were rescaled downward based on a reclassification of expenses for nonphysician clinical personnel who can bill independently (e.g., nurse practitioners) from PE to clinician work.

Source: Physician fee schedule final rules with comment periods for CY 2011–2019 and physician fee schedule correction notices for CY 2013 and CY 2016.

and professional liability insurance (PLI) RVUs, and a commensurate adjustment to the conversion factor, based on a revision to the Medicare Economic Index (MEI) (Table 4-2). This MEI rescaling adjustment affected the PE and PLI RVUs as well as the conversion factor, but on net, the adjustment did not affect total payments to clinicians. In other words, although the net effective update to the conversion factor declined in 2011 and then increased in 2014, total payments to clinicians were not affected as a result of these changes.

CMS may also apply other modifications or assumptions to the fee schedule through the yearly regulatory process, such as applying a multiple procedure payment reduction to certain services. All of these factors contribute to a difference between the statutory update and the ultimate change in the conversion factor each year.

Statutory payment updates for clinician services

From 1997 to 2015, Medicare payment for clinician services was governed by a statutory formula, the sustainable growth rate (SGR). The SGR was intended to limit growth in Medicare fee schedule spending to a target based on a formula comprising changes in gross domestic product, clinician input prices, growth in fee-for-service (FFS) enrollment, and changes in law and regulation. Because annual spending generally exceeded the SGR target, payments to clinicians were scheduled to be reduced by rising amounts, with the first reduction scheduled in 2002. The Congress overrode these payment reductions in all but the first year they were scheduled, providing either no update or updates in the 0.5 percent to 2 percent range to clinician fees as part of these overrides. Over time, these overrides, combined with continued

**TABLE
4-3**

Statutory payment updates and incentive payments for clinicians

	2015												2026 and later
	January- March	April- December	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
A-APM clinicians													
Update	0%	0.5%	0.5%	0.5%	0.5%	0.25%	0%	0%	0%	0%	0%	0%	0.75%
APM bonus						5%	5%	5%	5%	5%	5%		
Other clinicians													
Update	0%	0.5%	0.5%	0.5%	0.5%	0.25%	0%	0%	0%	0%	0%	0%	0.25%
Potential MIPS adjustments						(-4% to +4%)	(-5% to +5%)	(-7% to +7%)	(-9% to +9%)	(-9% to +9%)	(-9% to +9%)	(-9% to +9%)	(-9% to +9%)

Note: A-APM (advanced alternative payment model), MIPS (Merit-based Incentive Payment System). Clinicians who are subject to the MIPS can receive upward or downward adjustments of up to 4 percent in 2019, 5 percent in 2020, 7 percent in 2021, and 9 percent in 2022 and later. The maximum upward adjustment may exceed these limits or be less than these amounts due to scaling factors and an additional increase for exceptional performance. The basic MIPS adjustments are budget neutral, and there is an additional \$500 million per year from 2019 to 2024 for exceptional performance under MIPS. Although the maximum MIPS adjustments are set by statute at +/-4 percent in 2019, the effective maximum increase was significantly smaller due to CMS regulatory action. The 5 percent incentive payment for A-APM participation expires after 2024. The Bipartisan Budget Act of 2018 changed the 2019 payment update from 0.5 percent (under prior law) to 0.25 percent.

Source: Medicare Access and CHIP Reauthorization Act of 2015, Bipartisan Budget Act of 2018.

growth in clinician service volume, increased the scheduled update reduction to 21 percent in 2015.

In 2015, the Congress repealed the SGR and established a new approach for paying clinicians in Medicare. The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) established a set of permanent statutory updates to the conversion factor for clinician services, combined the current clinician performance assessment systems into a revised system starting in 2019, and created incentives for participation in certain payment models (advanced alternative payment models, or A-APMs).

Essentially, MACRA establishes two paths for payment updates—a path for clinicians who substantially participate in A-APMs and a path for all other clinicians. These statutory updates are displayed in Table 4-3 and are broadly consistent with the updates over the past decade.

Payments for clinicians outside of A-APMs are determined by an updated performance assessment system, the Merit-based Incentive Payment System (MIPS). Further detail on MIPS and the Commission’s position is contained in

the March 2018 report to the Congress (Medicare Payment Advisory Commission 2018).

Other factors can affect spending

Separate from the rate-setting process, other changes in clinician billing and practice patterns affect total spending for Medicare clinician services.

First, Medicare makes additional payment adjustments to reflect certain policies (e.g., adjusting for whether the clinician participated in certain quality or value programs, resided in a health professional shortage area, or is part of Medicare’s participating provider program) or certain provider types (most advanced practice registered nurses and physician assistants are paid at 85 percent of the fee schedule amount if they bill Medicare directly). Changes in the share of clinicians who are subject to these adjustments affect total spending.

Second, changes in where a service is provided (e.g., in a hospital setting or a physician office) can affect both fee schedule volume and spending, as well as total Medicare spending.

Medicare Payment Advisory Commission's payment update recommendation for clinician services for calendar year 2020

In our March 2019 report to the Congress, the Commission assessed the payment adequacy of clinician services for payment year 2020. Overall, the payment adequacy measures for clinician services were relatively stable. First, beneficiaries reported that they were generally able to obtain care when needed, at rates equal to or better than the rates for individuals with private insurance; volume growth was 1.5 percent between 2016 and 2017; and the number of clinicians

treating beneficiaries grew apace with fee-for-service (FFS) beneficiary growth. Second, quality remained indeterminate. Third, Medicare FFS payment rates for physician and other health professional services were 75 percent of the commercial rates of preferred provider organizations, unchanged from 2016. On the basis of these indicators, the Commission recommended no update for clinician services in 2020, which is current law (Medicare Payment Advisory Commission 2019). ■

Third, changes in the volume and intensity of services delivered to beneficiaries affect spending. Though the statutory update for clinician services was 1 percent or less per year over the past decade, Medicare clinician spending per beneficiary grew more rapidly due to the growth in the volume and intensity of services. This growth reflects a number of factors, including changes in medical practice and clinicians' input costs, new technology, patient illness/disease burden, and economic changes. The growth in the volume and intensity of services has varied significantly over time and across broad categories of service.

Fourth, although the payment update in total was between 0 percent and 1 percent each year over the past decade, there were substantial changes to payment rates for individual services. Clinicians may respond to these payment changes by adjusting the volume (or intensity) of services they provide, or beneficiaries may change their consumption of these services (as a result of changes in cost sharing). For example, clinicians may be able to adjust their patient panel, volume, the type of services provided, or the setting where they practice, and a clinician's payer mix and specialty affects his or her ability to substitute a higher paying patient for a lower paying one. Some clinicians may react to payment changes by changing their own capacity (e.g., seeing more patients, seeing patients for shorter visits, reorganizing their offices to be more efficient, or hiring staff to perform more functions). Clinicians in some specialties have opportunities to increase revenue by shifting to a more lucrative setting (hospital outpatient department or ambulatory surgical centers), while others do not.

The Commission's assessment of payment adequacy

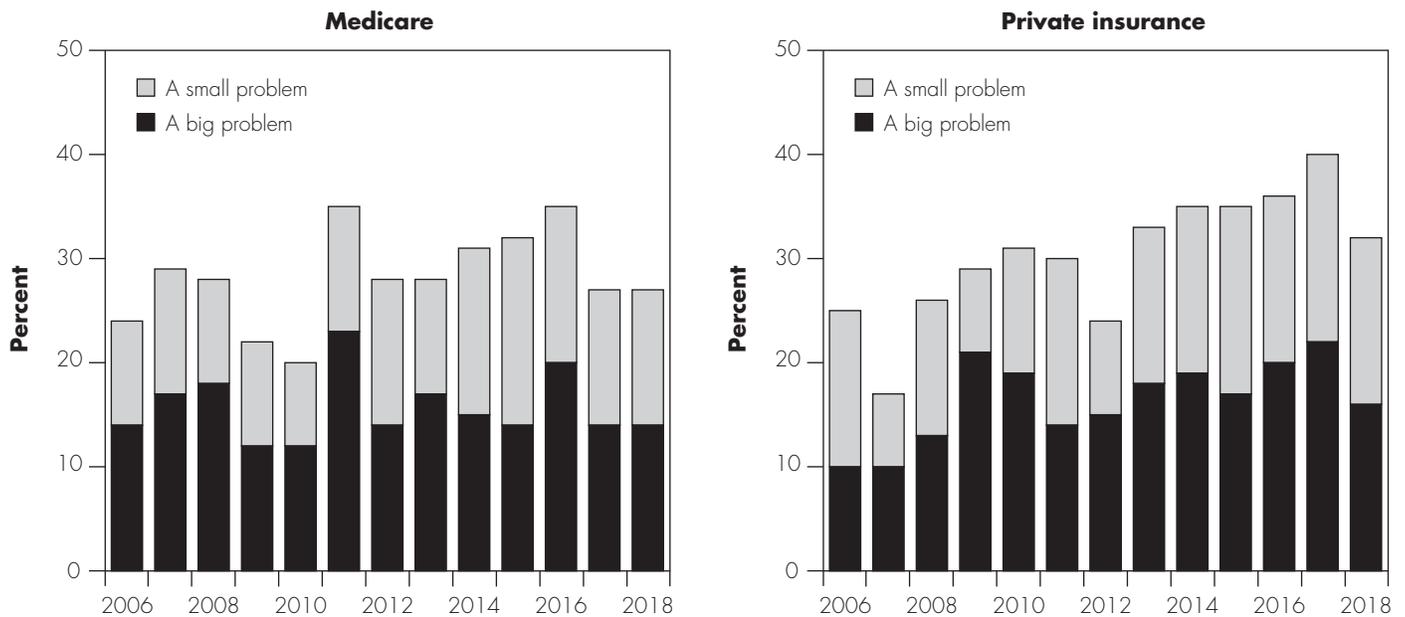
The Commission's authorizing statute requires us to consider annually whether Medicare's payments are adequate for the efficient provision of services delivered to beneficiaries. To conduct this assessment, the Commission uses a framework of payment adequacy indicators applied to all sectors. The framework entails a review of beneficiary access to care, providers' access to capital, quality, and Medicare payments and providers' cost. The Commission uses different measures and criteria for each sector, based on a sector's specific circumstances, data availability, and relevance of the measures.

In conducting the annual payment adequacy assessment, the Commission generally strives to balance multiple priorities: ensuring the program provides beneficiaries with access to high-quality care in an appropriate setting, assuring the best use of Medicare taxpayer and beneficiary dollars, giving providers an incentive to supply efficient and appropriate care, and paying them equitably. The payment adequacy assessment seeks to determine whether an update is needed (or whether current payment rates are adequate). The decision of whether an update is necessary and the size of that update is based on the Commission's judgment in the context of the payment adequacy indicators. (See text box for a summary of the Commission's most recent assessment of payment adequacy for clinician services.)

Specifically, for clinician payment adequacy, the Commission reviews measures of direct access to care,

**FIGURE
4-1**

Among those looking, share of respondents who indicated trouble finding a new primary care doctor, Medicare and private insurance



Note: The share of respondents looking for a new doctor each year is about 10 percent for primary care. Therefore, the share of Medicare respondents facing a problem (small or big) in obtaining a new primary care doctor was 2.7 percent in 2018, and the share of private insurance respondents facing a problem (small or big) was 3.2 percent in 2018.

Source: MedPAC beneficiary surveys, 2006–2018.

two indirect measures of access (the number of clinicians billing Medicare and changes in volume), quality, and input costs (measured by the MEI). We are unable to review providers' costs or calculate a margin because clinicians do not report their costs to Medicare; we also do not assess clinicians' access to capital, given the many small providers and organizations that make up the clinician sector.

In responding to this mandate, our review of the various payment adequacy indicators for clinician services covers a longer time frame than does our yearly payment adequacy assessment and highlights two factors that provide additional context:

- developments in telephone survey coverage and nonresponse; and
- the effect of site-of-service changes on fee schedule volume and spending, including implications for Medicare payment policy.

Access to care measures

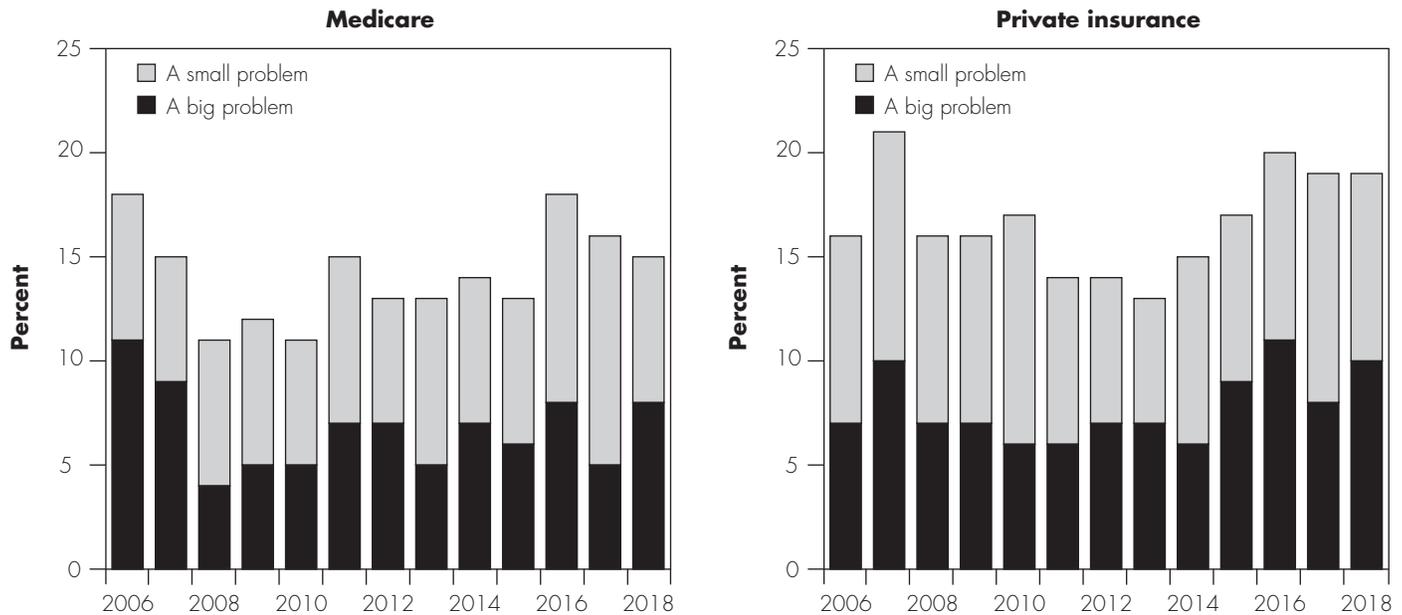
In some sectors, the Commission uses indirect measures of access such as changes in the volume of services provided and the number of providers available to Medicare beneficiaries. For the clinician sector, we conduct a telephone survey each year, assessing direct beneficiary access, supplementing this information with the number of clinicians billing Medicare and changes in the volume of services delivered.

Direct measure of access: Beneficiary access survey

The Commission has sponsored a telephone survey since 2003 to monitor ongoing changes in access and has used a consistent methodology over time to permit analyses of trends. The survey uses a dual-frame design to reach respondents through both landline and cell phones and oversamples certain respondent categories to improve statistical power. The telephone survey covers 4,000 Medicare beneficiaries ages 65 and over and 4,000

FIGURE 4-2

Among those looking, share of respondents indicating trouble finding a new specialist, Medicare and private insurance



Note: The share of respondents looking for a new doctor each year is between 15 percent and 20 percent for specialty care. Therefore, the share of Medicare respondents facing a problem (small or big) in obtaining a new specialist was 2.9 percent in 2018, and the share of private insurance respondents facing a small or big problem was 4.0 percent in 2018.

Source: MedPAC beneficiary surveys, 2006–2018.

individuals ages 50 to 64 with private insurance. The goal of surveying both groups is to help us assess whether any changes in access observed for the Medicare population are more widespread (indicating that market dynamics, changes in medical practice, and general economic changes could be factors) or are occurring for Medicare beneficiaries only (which could indicate Medicare-specific factors, including but not limited to Medicare’s payment rates).

Because the survey is small, there is some “noise” or unexplained variability from year to year in any of the measures. However, the survey results are available quickly, and the survey findings tend to be subsequently corroborated by larger surveys. Therefore, it has been a relatively reliable early indicator.

Overall, for the past decade, the share of beneficiaries having trouble finding or obtaining care has remained relatively steady. Medicare beneficiaries’ access appears

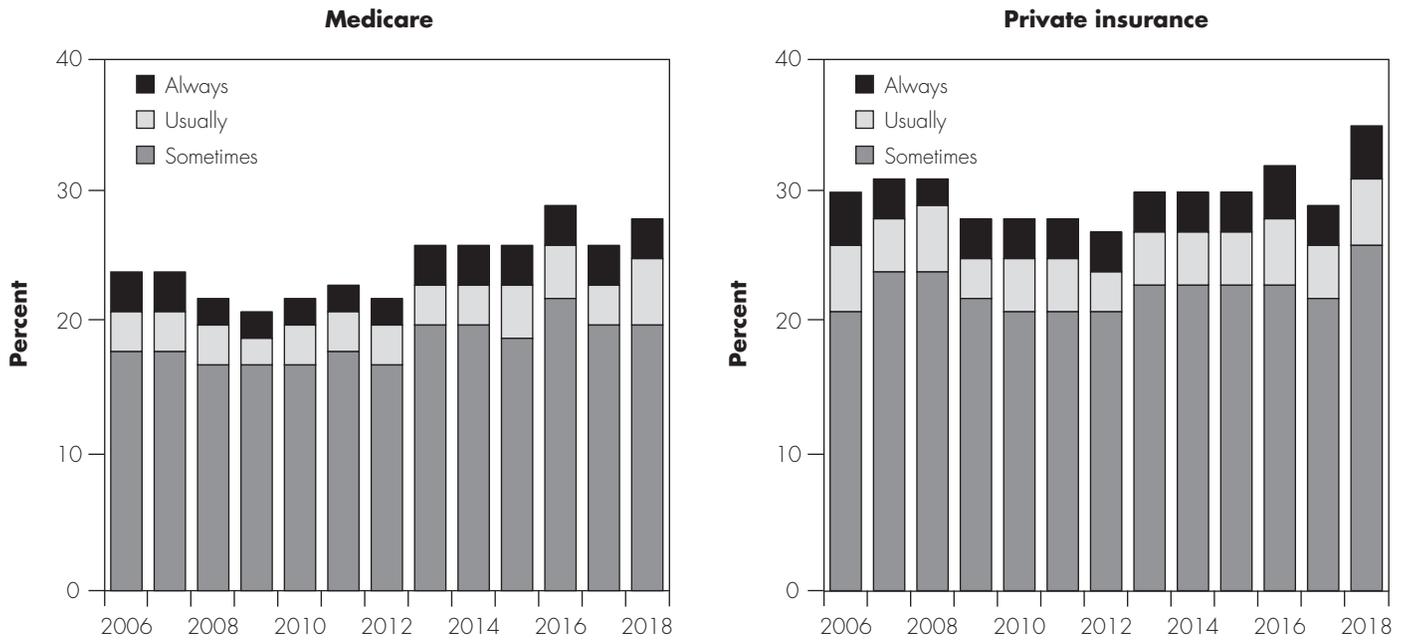
to be as good as or better than access for privately insured individuals. Both Medicare beneficiaries and individuals with private insurance report more trouble finding a new primary care doctor than a specialist (Figure 4-1 and Figure 4-2).

Access challenges could appear either as difficulty finding a new clinician or as a delay in receiving needed care. Over the past decade, the share of Medicare beneficiaries waiting longer than they wanted for care has increased slightly. However, Medicare beneficiaries overall still report slightly more timely care than privately insured individuals (Figure 4-3 and Figure 4-4, p. 102).

A final measure of reported access is whether patients end up not seeking care at all. Here again, the share of Medicare beneficiaries not seeking care increased slightly over time, but the rates for Medicare continue to be slightly better than those for the privately insured (Figure 4-5, p. 103).

FIGURE 4-3

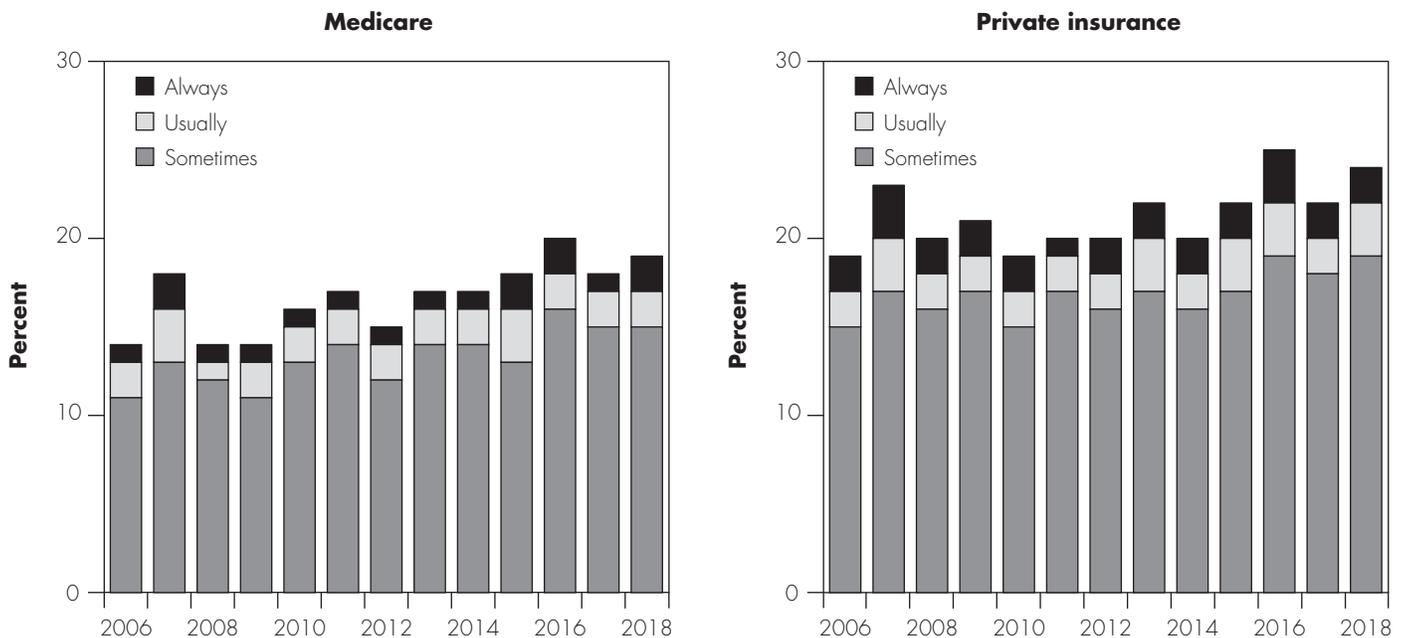
Among patients seeking care, share who ever waited longer than wanted for regular or routine care, Medicare and private insurance



Source: MedPAC beneficiary surveys, 2006–2018.

FIGURE 4-4

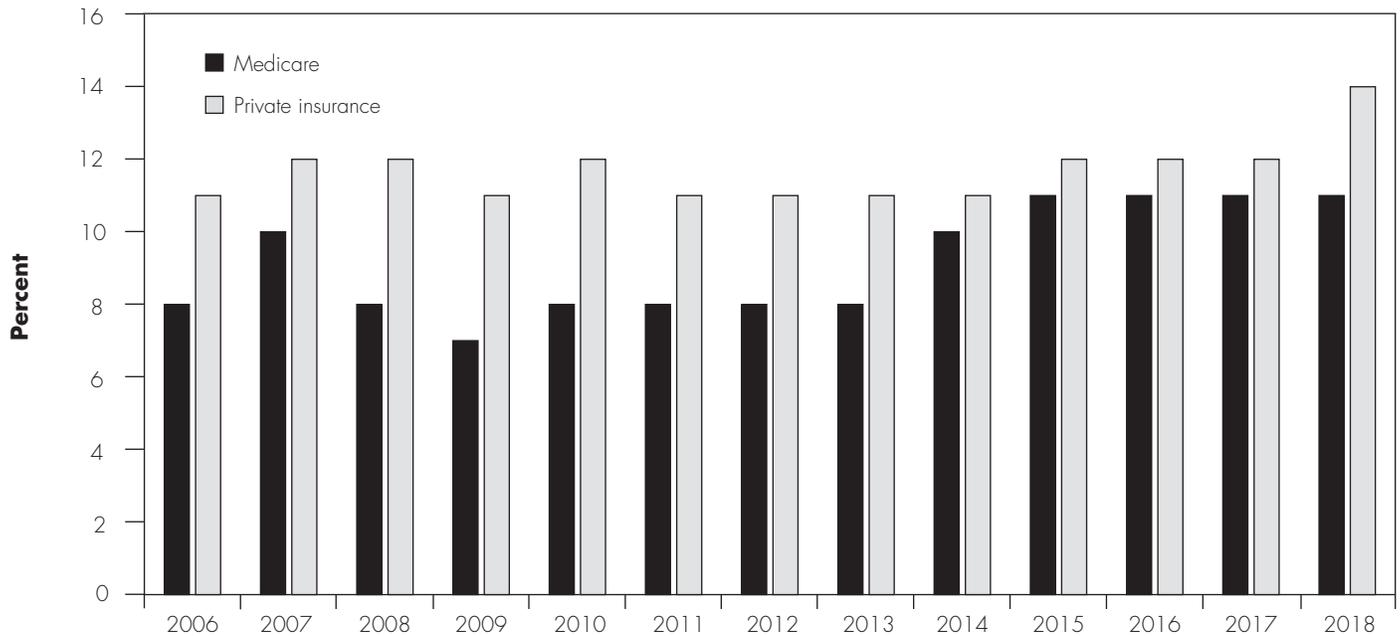
Among patients seeking care, share who ever waited longer than wanted for illness or injury care, Medicare and private insurance



Source: MedPAC beneficiary surveys, 2006–2018.

**FIGURE
4-5**

Medicare beneficiaries have been less likely than privately insured individuals to report that they had an issue they should have seen a doctor about but did not



Source: MedPAC beneficiary surveys, 2006–2018.

Despite the higher growth in private sector payment rates, access for Medicare beneficiaries remains as good as or better than access for privately insured individuals

These trends in reported access are notable because they occurred during a period of low payment rate updates in Medicare (payment updates have ranged between 0 percent and 1 percent since 2011). In contrast, private sector payment rates have grown faster. But this faster growth in payments (and overall higher level of payments) by private sector payers for clinician services has not translated directly into improvements in patient access to care among the privately insured individuals in our access survey.

In particular, private sector payment rates for clinician services are between 25 percent and 30 percent higher than Medicare’s payment rates, on average (Congressional Budget Office 2018, Trish et al. 2017). The Commission’s own analysis has found that this difference has grown over time as private sector rates grew more rapidly than Medicare’s payments (Congressional Budget Office 2018,

Medicare Payment Advisory Commission 2019, Medicare Payment Advisory Commission 2018, Medicare Payment Advisory Commission 2017a).

Table 4-4 (p. 104) displays one commercial price index, a measure of intensity-adjusted price per service for office visits aggregated from four large commercial insurance plans with 39 million covered lives (Health Care Cost Institute 2018).³ Growth in the prices paid on an intensity-adjusted basis for these four commercial plans averaged 5.3 percent per year, whereas growth in Medicare’s statutory update averaged less than a half a percent per year over the same time frame.

Because the Commission’s access survey assesses both Medicare beneficiaries and privately insured individuals, we are able to compare trends in reported access for both groups. At least among the privately insured individuals in the Commission’s survey, this growth in private sector prices has translated into neither improved patient access over time nor a greater differential in access between

**TABLE
4-4**

Commercial prices rose faster than Medicare’s statutory update, 2012–2016

	2012	2013	2014	2015	2016	Compound annual growth rate, 2012–2016
Medicare’s statutory update	0%	0%	0.5%	0.375%	0.5%	0.27%
Growth in average intensity-adjusted commercial price per service, office visits (from HCCI)	4.7	6.7	6.9	3.9	4.4	5.3

Note: HCCI (Health Care Cost Institute). The measure of intensity-adjusted price per service for office visits from HCCI is a commercial price index that was aggregated from four large commercial insurance plans with 39 million covered lives. The statutory update in Medicare in 2015 was 0 percent from January through March and 0.5 percent from April through December.

Source: MedPAC calculations of CMS final rule fee schedule data and data from HCCI.

Medicare and privately insured individuals. Instead, access for Medicare beneficiaries has been generally the same as or slightly better than access for privately insured individuals.

Other surveys comparing access for Medicare beneficiaries and privately insured individuals similarly show very little difference in trends, despite the more rapid growth of private sector prices for clinician services (Medicare Payment Advisory Commission 2017b). In general, there does not appear to be a strong or consistent relationship between payment updates and measures of access to care. Further, we do not observe a relationship between payment updates, changes in prices in the commercial sector, and access to care.

Patterns in telephone survey response and implications for the Commission’s beneficiary access survey

In recent years, administering our telephone survey has become more expensive because it has involved greater effort to obtain 8,000 completed responses by telephone. The increase in nonresponse has been greater for telephone surveys than face-to-face surveys, which is consistent with the growing number of solicitations that households receive by telephone and the increasing use of voicemail and caller ID to screen calls (Czajka and Beyler 2016). These declines in response rates for telephone-based surveys are not unique to the Commission’s beneficiary survey; other government household surveys and public opinion polls have also faced rising nonresponse rates over the years. For example, the Gallup Poll Social Series

surveys achieved a 7 percent response rate, on average, in 2017, compared with 28 percent in 1997 (Marken 2018).

In 2016, recognizing the problems federal agencies faced with declining trends in survey response, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) at the Department of Health and Human Services commissioned a technical expert panel to examine the extent of the problem of nonresponse and determine ways to ensure robust survey response. As a part of this work, ASPE commissioned a report on the trends in and implications of declining survey response rates for federally conducted household surveys. This report examined the response rates for seven surveys sponsored by the Department of Health and Human Services. These surveys differ in data collection methods, ranging from computer-assisted interviews to random-digit dialing. The study looked at response rates from 1995 to 2015 and found that while the response rate and trends differed from survey to survey, all surveys in the study experienced some decline in their response rates for the first half of the study period; additionally, six of the seven surveys experienced accelerated declines in recent years (Czajka and Beyler 2016).

For example, the Medicare Current Beneficiary Survey was among the surveys examined, and during the study period, it experienced a decline in response rate from 83 percent to 72 percent. Other surveys, like the National Health and Nutrition Examination Survey, which represents a two-year average, experienced a response decline from 82 percent from 1999 to 2000 to 79 percent

between 2009 and 2010 but then dropped another 8 percentage points in the next two years (Czajka and Beyler 2016).

The survey research literature states that there are three common ways to classify nonresponse to a survey: noncontact, refusal, or other. Other reasons for nonresponse include issues such as language barriers or poor health. Additionally, there are environmental and social factors that can increase the rates of nonresponse, including the increased prevalence of caller ID or the growth in the number of solicitation calls. While these problems will persist as more families abandon landline telephones and cell phones become ubiquitous, there are possible solutions that survey administrators could use to maximize response rates. Among these options are providing payment incentives, reducing survey burden, using address-based sampling in combination with a mail survey mode, using multiple modes within the same survey, and conducting double or two-phase sampling (Czajka and Beyler 2016). Other studies have suggested, specifically for telephone-based surveys, that increasing the number of call attempts or lengthening the survey period could improve response rates. However, these methods tend to be costly and time intensive and can negatively impact the survey taker.

Ultimately, the Commission's survey, along with other prominent federal household surveys and public opinion surveys, has experienced rising costs over the years. The study commissioned by ASPE underscores the fact that nonresponse is not unique to any particular survey and that declines in response rates are widespread (Czajka and Beyler 2016). However, attempts to engage participants and increase response rates can become costly and resource intensive for survey administrators (Marken 2018).

While in some instances low response rates can compromise the quality of the survey and results obtained, it is important to note that low response rates do not always compromise the quality of the data. In particular, we have not noted any degradation in accuracy for our survey (and our findings continue to track well with those of other surveys). While there have been increases in the cost of our survey, the increases match those of other high-quality, multiple-mode surveys. The weights for our survey have not unduly increased standard errors, meaning that we continue to have an adequately powered survey to detect substantive differences across population

subgroups. Going forward, we plan to continue monitoring our survey's reliability so that, if necessary, we can make methodological changes to ensure a reliable, robust assessment of directly measured beneficiary access.

Indirect measure of access: Clinicians billing Medicare

For the clinician sector, we track and report the number of clinicians billing Medicare to supplement the direct beneficiary access survey results. Over the past decade, the number of clinicians serving Medicare FFS beneficiaries has grown (Figure 4-6, p. 106). Among types of providers, the number of primary care and other specialty physicians increased by 1.8 and 1.5 percent per year, respectively, while the number of advanced practice registered nurses and physician assistants increased by 10.1 percent per year. As with our other payment adequacy measures, this growth is noteworthy because it occurred during a period when annual Medicare payment updates were 1 percent or less per year.

Other clinician participation measures

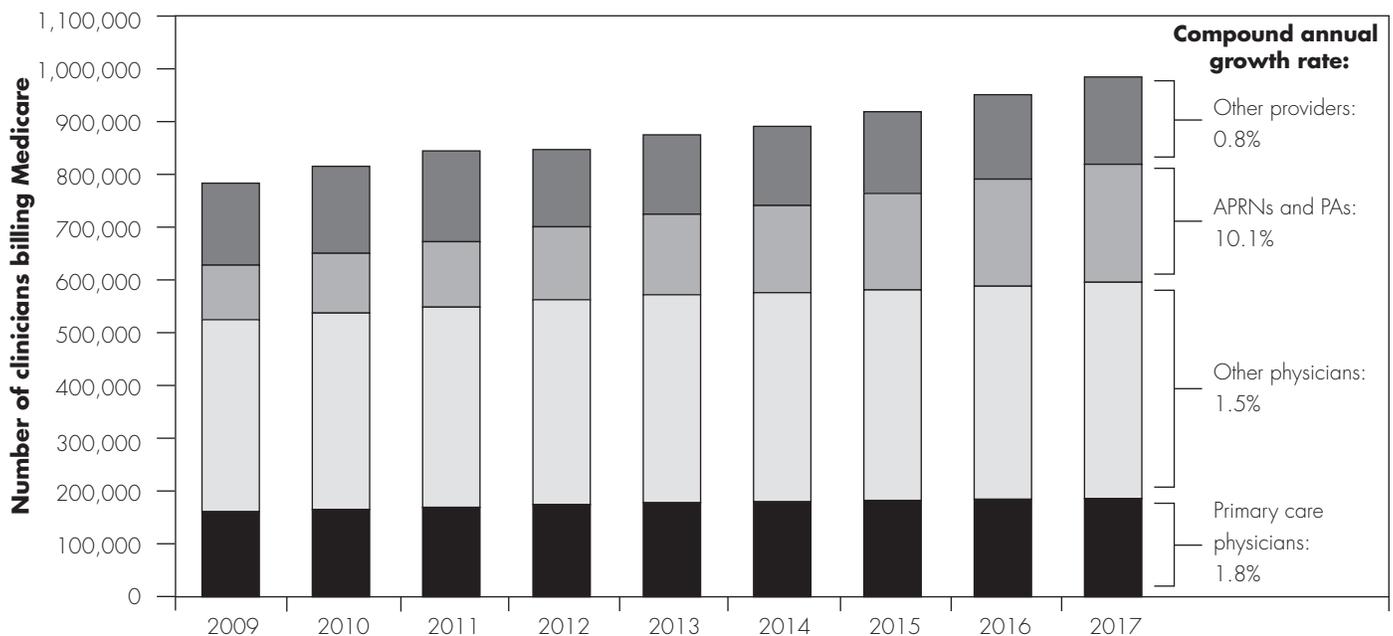
Other factors related to clinician participation in Medicare include the share of clinicians who are part of Medicare's participating provider program, the share of claims that are paid on assignment (that is, for which clinicians accept Medicare's payment amount as payment in full), and the number of clinicians who opt out of Medicare.

Clinicians who enroll in Medicare's participating provider program receive a payment amount equal to 100 percent of the fee schedule amount (80 percent from the program and 20 percent from the beneficiary through coinsurance). In turn, participating providers agree to assign all their claims, meaning they take Medicare's allowed amount as payment in full. Clinicians who are not in the participating provider program receive payments equal to 95 percent of the payment amount and can choose whether to take assignment for their claims on a claim-by-claim basis. If they do not assign a claim, providers may "balance bill" up to 109.25 percent of the fee schedule amount, with the beneficiary paying, in addition to the 20 percent coinsurance, the additional difference between 95 percent of the fee schedule amount and the amount billed.

In practice, the number of clinicians who are in Medicare's participating provider program is very high—over 95 percent—and has been well above 90 percent for over a decade (Medicare Payment Advisory Commission 2019). Similarly, nearly all claims are

FIGURE 4-6

Trends in clinicians billing Medicare



Note: APRN (advanced practice registered nurse), PA (physician assistant). “Primary care physicians” includes those who were eligible for the Primary Care Incentive Payment program: physicians in family medicine, internal medicine, pediatric medicine, and geriatric medicine. In 2017, CMS introduced a new physician specialty code for hospitalists. Most of the physicians who billed Medicare as hospitalists in 2017 billed as a primary care specialty in 2016. To maintain consistency across years, we assigned physicians who billed as hospitalists in 2017 to the “primary care physicians” group. “Other providers” includes physical and occupational therapists, chiropractors, optometrists, psychologists, social workers, and podiatrists. Figure excludes clinicians who bill services for 15 or fewer unique beneficiaries during the year.

Source: MedPAC analysis of carrier file data.

paid on assignment—99.5 percent in 2016 (Medicare Payment Advisory Commission 2019).

Clinicians may also formally opt out of Medicare. Under the opt-out procedures, clinicians must sign an affidavit stating that they will not receive any payment from Medicare, directly or indirectly, for any Medicare patient they see. If the clinician chooses to treat Medicare beneficiaries, he or she must enter into a contract with Medicare beneficiaries to treat them, and the patient must agree not to submit the claim to Medicare. Opt-out affidavits are in effect for two years and are renewed by default. CMS began releasing opt-out information in 2016, and overall, less than 1 percent of clinicians in total have opted out of Medicare. Dentists and behavioral health providers are the specialties most likely to opt out of Medicare, likely because their services are only rarely covered by Medicare (dental services) or because they have low rates of participation with any type of insurance

(behavioral health providers) (Medicare Payment Advisory Commission 2018).

Overall, the indicators for clinicians billing Medicare are positive over the past decade.

Indirect measure of access: Changes in the volume of services

Changes in the volume of services delivered provide another indirect measures of access. The Commission’s measure of volume reflects both (1) the units of service and (2) the complexity (or intensity) of the service. We use this definition of volume because either component separately—the count of services or the average intensity—would be incomplete on its own. For example, a substitution of a computed tomography (CT) scan for an X-ray represents an increase in intensity but no change in the number of services.

Changes in our measure of volume can result from a number of factors, including changes in clinical practice, movement of services from the physician office to the hospital outpatient department (HOPD) setting, beneficiary health and disease prevalence, coverage of Medicare benefits, changes in technology, and beneficiary preferences. Medicare payment rates (and changes to them) also affect volume growth if, for example, clinicians favor certain services because of their relative profitability.

Growth in the volume of clinician services in Medicare has varied over time and by type of service (Figure 4-7). After a substantial increase in the early 2000s, volume growth slowed significantly between 2010 and 2014, coinciding with similar trends across all payers and types of services after the economic recession. From 2015 through 2017, volume growth rose modestly.

The effect of site-of-service changes on fee schedule volume and spending

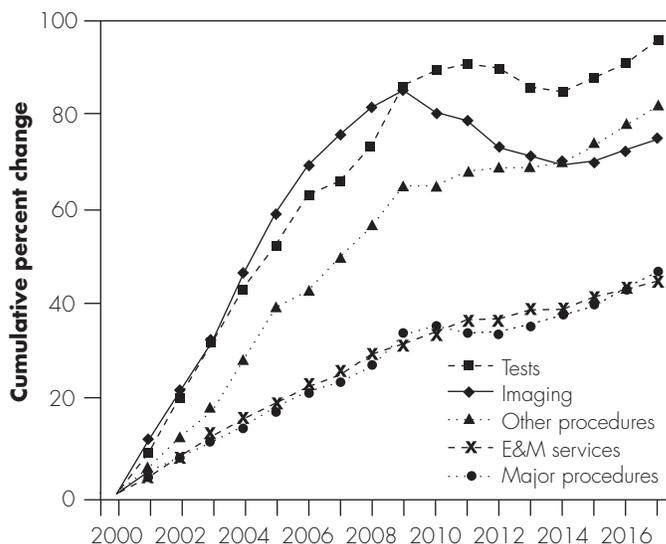
Overall, volume per beneficiary (which reflects changes in both the units of service and intensity) grew about 1.0 percent per year between 2012 and 2016, with growth accelerating to 1.6 percent from 2016 to 2017. However, because of how we measure volume, our figures are sensitive to shifts in the site of service.

In our payment adequacy assessments, we have generally noted that shifts in the site of service will have an effect on fee schedule volume and fee schedule spending. With respect to volume, in the March 2019 report, we noted certain services for which site-of-service shifts seem to be prevalent. For example, between 2013 and 2017, the number of chemotherapy administration services per beneficiary delivered in HOPDs grew 28.7 percent, while the number provided in physician offices declined by 13.1 percent (Medicare Payment Advisory Commission 2019, Medicare Payment Advisory Commission 2014, Medicare Payment Advisory Commission 2012). We reported that a slowdown in the rate of volume growth for imaging and tests may have been due to services shifting from the physician office to the HOPD.

A similar effect occurs with spending. In the March 2019 report to the Congress, for example, we estimated that Medicare spent \$1.9 billion more in 2017 than it would have if payment rates for E&M office/outpatient visits in HOPDs were the same as rates for freestanding offices. In addition, beneficiaries' total cost sharing for E&M office visits in HOPDs was \$480 million higher in 2017 than it would have been had payment rates been the same in both settings.

FIGURE 4-7

Changes in the volume of clinician services per FFS beneficiary, 2000-2017



Note: FFS (fee-for-service), E&M (evaluation and management). Volume is measured as units of service multiplied by each service's relative value unit from the fee schedule for clinician services and therefore reflects changes in units and changes in intensity. Volume growth for E&M from 2009 to 2010 is not directly observable because of a change in payment policy for consultations. To compute cumulative volume growth for E&M through 2016, we used a growth rate for 2009 to 2010 of 1.85 percent, which is the average of the 2008 to 2009 growth rate of 1.7 percent and the 2010 to 2011 growth rate of 2.0 percent. The type-of-service categories and subcategories that we used in prior years were restructured for this table.

Source: MedPAC analysis of FFS claims data for 100 percent of Medicare beneficiaries.

Although we have not done a comprehensive review of site-of-service shifts and their impact on fee schedule volume and spending in 15 years, this chapter provides a first step toward such a review. While our volume analysis is an essential component of measuring access (as well as identifying areas of high growth that may indicate mispricing), it is incomplete in terms of revealing global trends in the provision of clinician services because part of the activity occurs in HOPDs and is obscured in the physician data.

Furthermore, because clinician services are increasingly provided in the HOPD, it may be incomplete to determine decisions on payment adequacy for clinician services without also considering payments for services delivered in the HOPD and paid through the hospital outpatient

**TABLE
4-5**

Illustration of services moving from a nonfacility setting, such as a physician office, to a facility setting, such as a hospital outpatient department

Implications for fee schedule:

Service example	Units of service	Volume (units x RVUs)	Spending	Implications for total Medicare spending
Evaluation and management visit	No change	Decrease	Decrease	Increase
Computed tomography	Decrease	Decrease	Decrease	Increase
Chemotherapy administration	Disappears entirely	Disappears entirely	Disappears entirely	Increase

Note: RVU (relative value unit). Our measure of volume captures both the units of service and the intensity (measured by RVUs). Chemotherapy administration services, when they are provided in a hospital outpatient department, no longer generate a fee schedule claim. The units of service when a computed tomography service migrates may fall or may remain the same, depending on how the service is billed.

prospective payment system. We discuss the mechanics of site-of-service shifts, trends in site of service–adjusted volume, and the implications for Medicare payment policy in the sections that follow.

The mechanics of site-of-service shifts

When a service moves from one setting to another, it can affect clinician fee schedule volume and spending as well as total Medicare spending. Of particular interest is the shift in services delivered in a freestanding physician office to the hospital outpatient setting.

In many cases, Medicare’s total payment is higher in the outpatient hospital setting than in the physician office setting, and this difference may create an incentive for services to shift to the higher paid setting. Some clinicians may seek to augment their payments from Medicare by shifting from a lower paid setting to a higher paid setting. Some researchers have posited that these higher payments in the HOPD, coupled with the lower payment updates for clinician services, have accelerated shifts in the site of services to higher paid settings.

In 2012 and 2014, the Commission made recommendations for setting site-neutral payment rates for certain services (Medicare Payment Advisory Commission 2014, Medicare Payment Advisory Commission 2012). The Congress and CMS have also implemented changes to payment systems to establish roughly site-neutral payments for certain fee schedule services.

We have identified three categories of services for which shifts in the site of service will have differential effects on fee schedule volume and spending: E&M visits, computed tomography, and chemotherapy administration (Table 4-5).

The next sections explore each example in more detail. Overall, services shifting from the physician office to the HOPD will artificially depress our measures of fee schedule volume and fee schedule spending. And because in most instances Medicare’s total payment is higher when the service is delivered in the HOPD, total Medicare spending increases.

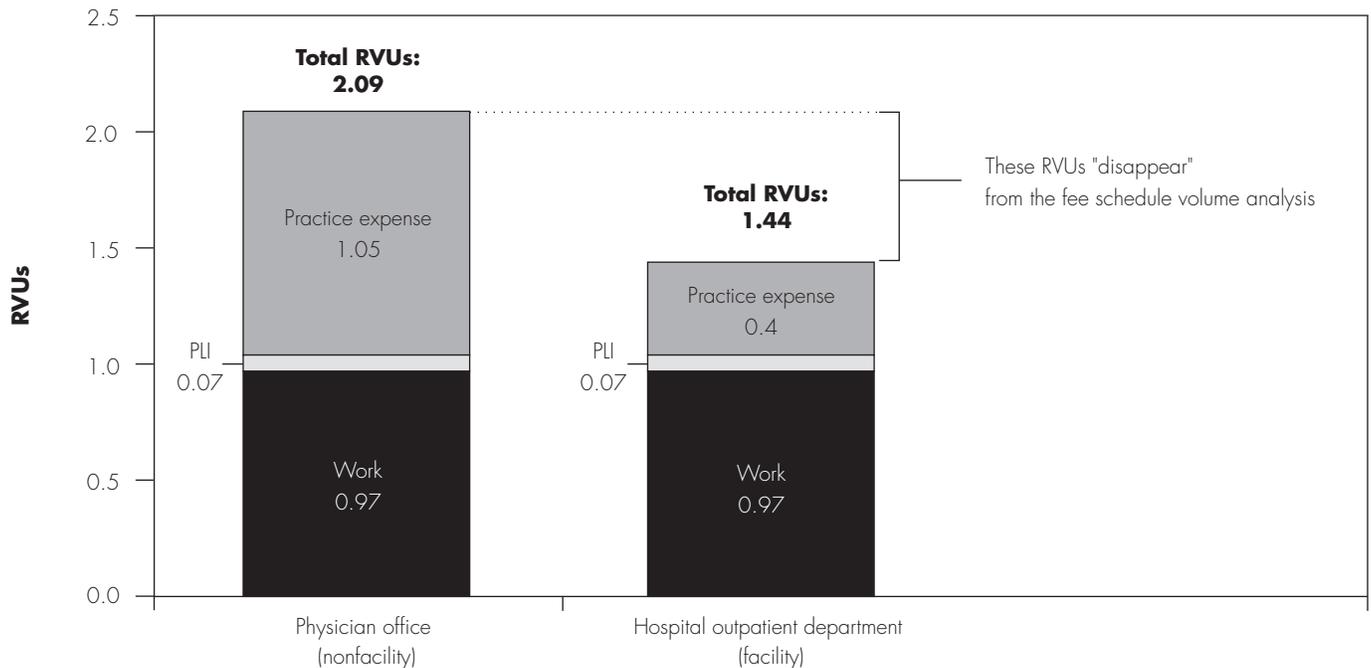
Category 1: Services such as E&M visits When E&M visits shift from the physician office to the HOPD:

- fee schedule units are unchanged,
- fee schedule volume declines,
- fee schedule spending declines, and
- total Medicare spending goes up.

Figure 4-8 illustrates the migration of an illustrative E&M service. When the E&M visit is provided in the physician office, the total RVU is 2.09. When this service is provided in an HOPD, the total RVU is 1.44. In other words, it appears that some of the RVUs disappear. When services shift from the physician office to the HOPD, these “disappearing” RVUs make it appear that

FIGURE 4-8

When E&M services shift from the physician office to the hospital outpatient department, some of the RVUs “disappear” in the fee schedule volume analysis



Note: E&M (evaluation and management), RVU (relative value unit), PLI (professional liability insurance). This graphic shows the RVUs for 99213, a Level 3 E&M visit for an established patient. RVUs are for 2019.

Source: Centers for Medicare & Medicaid Services.

volume growth is generally smaller than it would be if the services remained in the same setting over time.

Figure 4-8 illustrates what happens to volume. Figure 4-9 (p. 110) shows the effect on fee schedule spending and total spending. While fee schedule spending declines (from \$75.32 to \$51.90) when the E&M service moves to the HOPD, there is an additional payment through the outpatient prospective payment system (OPPS) of \$115.85, which is intended to cover the facility component of the service. So Medicare’s total payment for the service is \$167.75 when provided in the HOPD. Thus, though fee schedule spending for this illustrative E&M visit declines by 31 percent, total Medicare spending for the visit increases by 123 percent.

Category 2: Services such as computed tomography

The second category of services includes most imaging services (with a technical and professional component

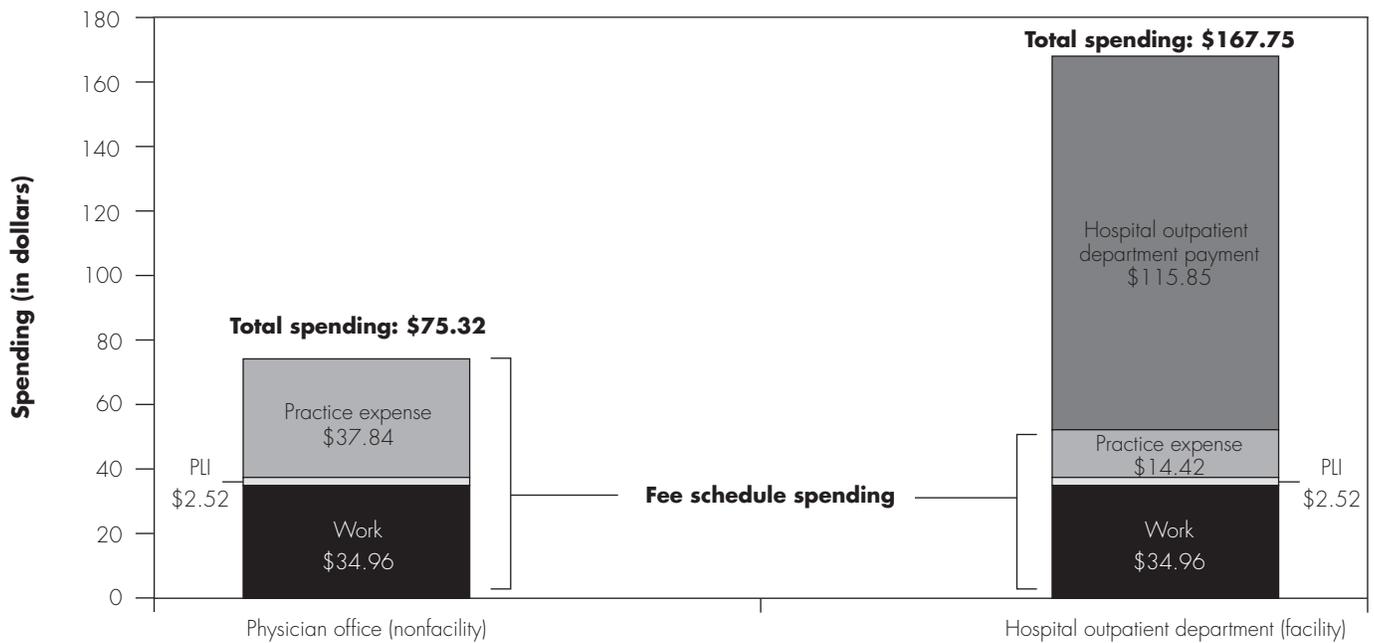
to the fee). When these services shift from the physician office to the HOPD:

- fee schedule units may change,⁴
- fee schedule volume declines,
- fee schedule spending declines, and
- total Medicare spending goes up.

Figure 4-10 (p. 111) shows the effect on RVUs when this shift occurs. When this illustrative CT service is provided in the physician office, the total RVU is 3.26, and when it is provided in an HOPD, the total RVU is 1.21 (therefore, 2.05 RVUs “disappear”). Shifts over time from the physician office to the HOPD make it appear that volume growth is generally smaller than it would be if the services remained in the same setting over time.

FIGURE 4-9

Fee schedule spending declines, but total spending increases when E&M services shift from the physician office to the hospital outpatient department



Note: E&M (evaluation and management), PLI (professional liability insurance). The figure reflects Healthcare Common Procedure Coding System® code 99213. The outpatient prospective payment system rate in this figure is based on an E&M visit provided at an on-campus provider-based department. Spending figures are for 2019.

Source: Centers for Medicare & Medicaid Services.

Similar to the first category (services such as E&M visits), Medicare’s total payment for services in our second category is higher when provided in the outpatient department setting than in the physician office setting (Figure 4-11, p. 112). When the service shifts from the physician office to the outpatient department, fee schedule spending declines from \$117.49 to \$43.61 and an additional payment of \$112.51 is made through the hospital OPSS. Overall, Medicare’s total payment for the service increases from \$117.49 to \$156.12 when the service shifts from the physician office to the HOPD.

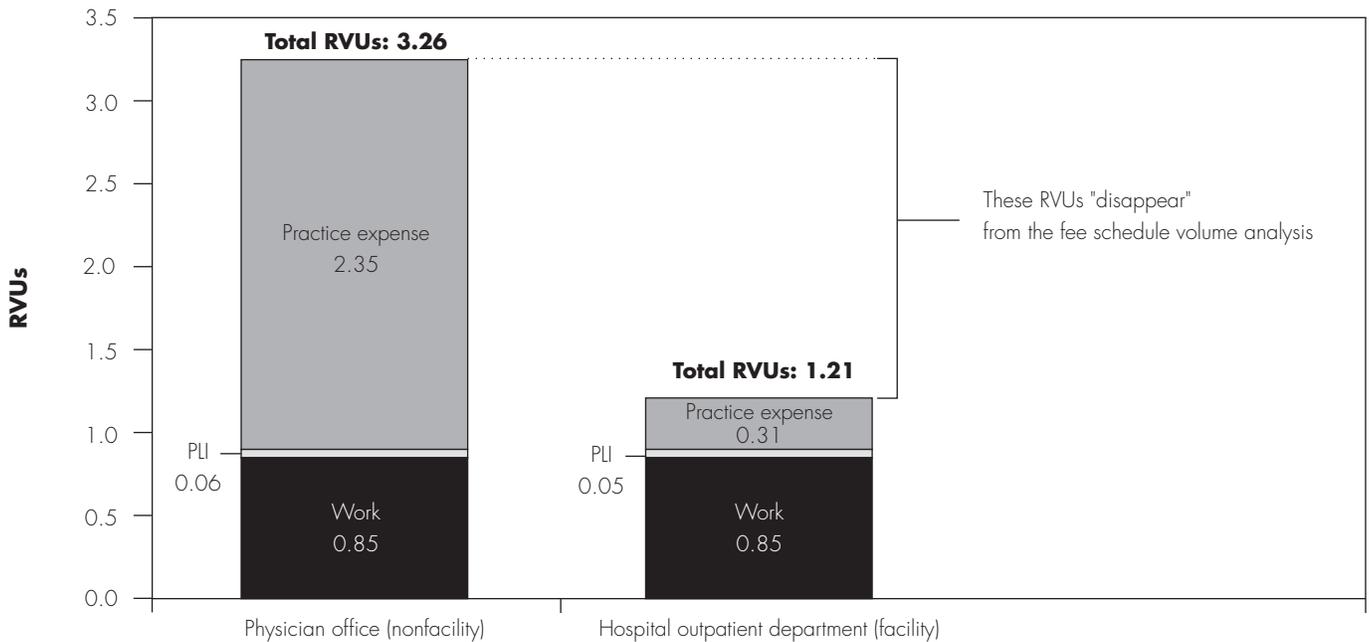
Category 3: Services such as chemotherapy administration The third category includes services such as chemotherapy administration. When these services shift from the physician office to the HOPD:

- fee schedule units disappear,
- fee schedule volume disappears,
- fee schedule spending disappears, and
- total Medicare spending goes up.

This category of services differs from the first and second categories (E&M visits and imaging, respectively) because when the service shifts from the physician office to the HOPD, the RVUs entirely disappear (Figure 4-12, p. 113). In other words, there is no longer a physician fee schedule claim and the entire payment for the service is made through the hospital OPSS (or another payment system).

**FIGURE
4-10**

When CT services shift from the physician office to the hospital outpatient department, some of the RVUs “disappear” in the fee schedule volume analysis



Note: CT (computed tomography), RVU (relative value unit), PLI (professional liability insurance). The figure reflects Healthcare Common Procedure Coding System® code 70450 (corresponding to Ambulatory Payment Classification 5522), computed tomography, head or brain. RVUs are for 2019.

Source: Centers for Medicare & Medicaid Services.

Similar to the first and second categories, however, Medicare’s total payment for this illustrative service (chemotherapy administration) is higher when the service is provided in an HOPD than in a physician office (Figure 4-13, p. 114). In the physician office setting, Medicare’s fee schedule payment is \$143.08. When the service is delivered in the HOPD, Medicare’s payment is twice as high—\$288.38—and the payment for the service is made entirely through the hospital OPSS.

Trends in site of service-adjusted volume

We conducted an analysis of volume growth over the period from 2012 to 2017, holding the site of service constant between the two periods.⁵ This method allowed us to identify services that may be growing more rapidly

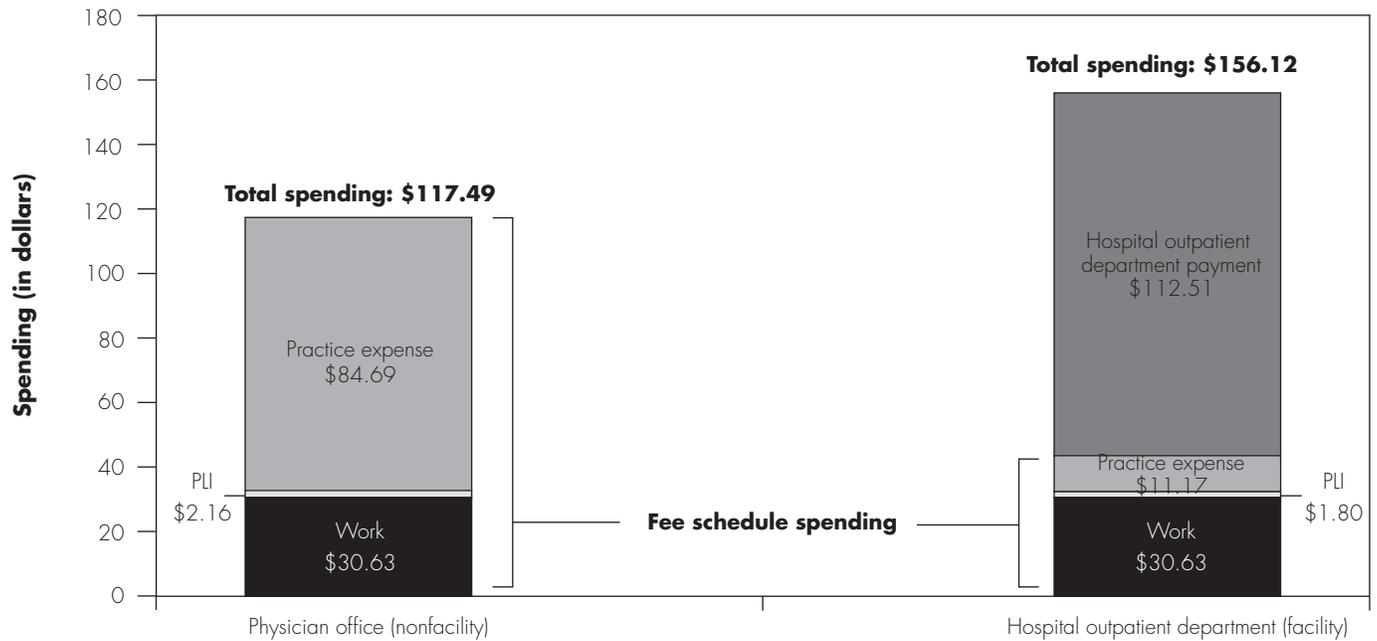
than they may otherwise appear due to the disappearing RVUs (and spending) from the fee schedule as the service shifts from a high-RVU to a low-RVU setting.

Our analysis adjusts for the first two categories discussed previously: (1) services such as E&M visits where the place of service shifts from the nonfacility to the facility setting, or vice versa, and (2) services such as CT scans that can be billed either as a global payment or separately for the professional and technical components. In future analyses, we plan to adjust for the third category of services such as chemotherapy administration.

Overall, annual volume growth in the fee schedule over the past six years would be higher if site-of-service shifts were accounted for. Specifically, average annual

**FIGURE
4-11**

Fee schedule spending declines, but total spending increases when CT services shift from the physician office to the hospital outpatient department



Note: CT (computed tomography), PLI (professional liability insurance). The figure reflects Healthcare Common Procedure Coding System® code 70450 (corresponding to Ambulatory Payment Classification 5522), computed tomography, head or brain. Spending figures are for 2019. Components may not sum to totals due to rounding.

Source: Centers for Medicare & Medicaid Services.

volume growth from 2012 through 2017, holding site of service constant, would have been 1.5 percent per year, instead of 1.1 percent per year (Figure 4-14, p. 115). In other words, if services in 2017 were delivered in proportionally the same setting as they were in 2012, volume growth over that period would have been nearly 40 percent higher—1.5 percent per year versus 1.1 percent per year.

By type of service, there are disparate trends in services shifting across settings. Most commonly observed are E&M visits shifting to the HOPD, which is consistent with continued hospital acquisition of physician practices (Medicare Payment Advisory Commission 2017a). Imaging, which grew only by 0.1 percent per year on an unadjusted basis, grew by 1.2 percent per year when site of service is held constant. Similarly, the unadjusted volume growth for tests was 0.3 percent per year, while the site of service–adjusted volume growth

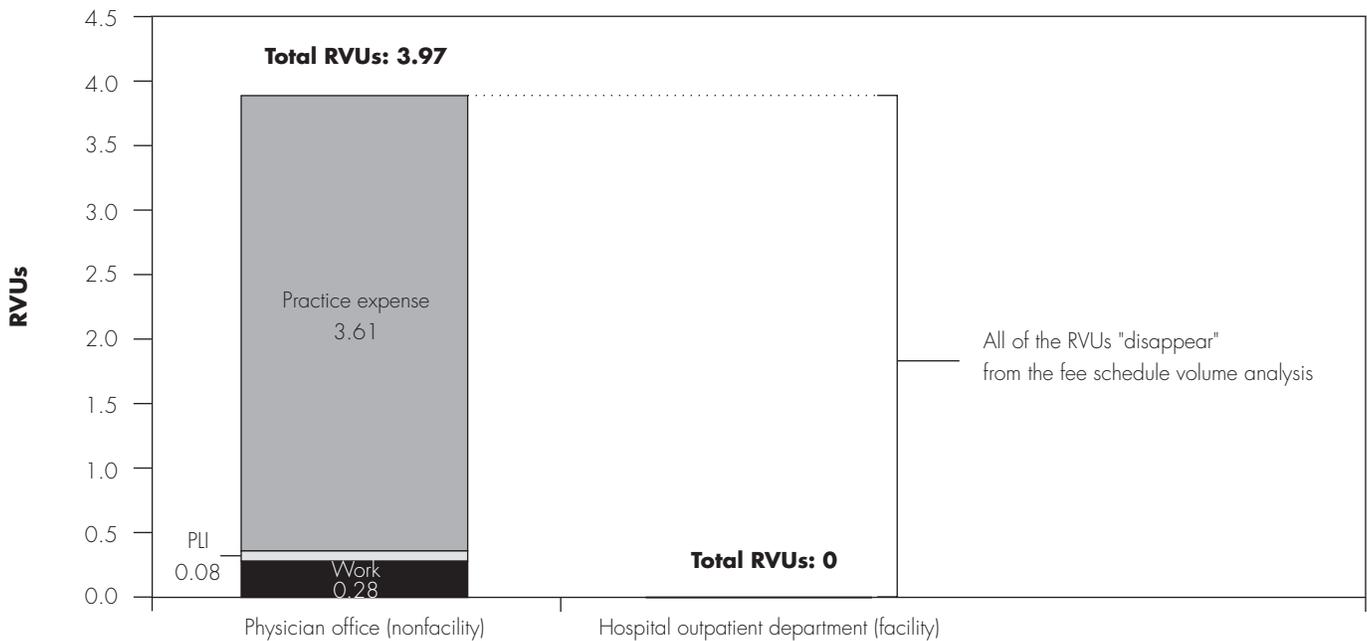
was 1.0 percent per year. However, when we adjust for site-of-service shifts, we see that the volume growth for major procedures was lower than the unadjusted rates (1.5 percent per year for the adjusted rates vs. 2.2 percent per year for the unadjusted rates).

The effect of adjusting for shifts in site of service is even more significant for particular services (Table 4-6, p. 116). For example, certain imaging services—ultrasound, CT, magnetic resonance, and nuclear imaging—grew by more than 1.0 percentage point per year faster between 2012 and 2017 when site of service is held constant. And cardiography test volume grew by 2.0 percentage points per year when the site of service is held constant, as compared with negative annual growth for the unadjusted rates.

Holding site of service constant reveals other changing practice patterns. Major vascular procedures, for

**FIGURE
4-12**

When chemotherapy administration services shift from the physician office to the hospital outpatient department, all of the RVUs “disappear” in the fee schedule volume analysis



Note: RVU (relative value unit), PLI (professional liability insurance). The figure reflects Healthcare Common Procedure Coding System® code 96413 (corresponding to Ambulatory Payment Classification 5694) chemotherapy administration. RVUs are for 2019.

Source: Centers for Medicare & Medicaid Services.

example, are unlike most other services in that volume growth is lower when the site of service is held constant (Table 4-6, p. 116). The difference is due to rapid growth of angioplasty, stenting, and other procedures for treatment of peripheral artery disease. Most of this growth has occurred in the high-RVU physician office setting. Such growth is consistent with media reports of increases in stenting for peripheral vascular disease, supplanting a decrease in the volume of cardiac stents (Creswell and Abelson 2015).

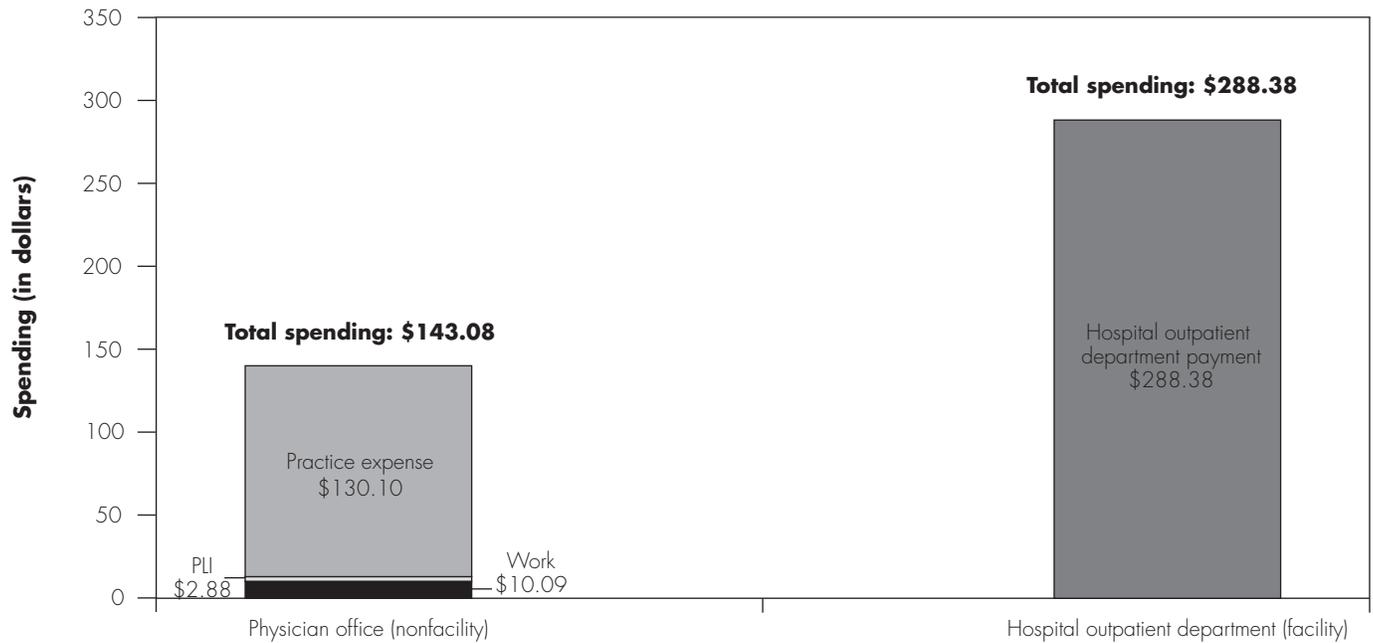
We are still developing the mechanism to adjust fee schedule volume for our third category of services, characterized by chemotherapy administration. Such services (1) generate a fee schedule claim when performed in noninstitutional settings; and (2) generate claims in other payment systems (e.g., the OPPS) when performed

in institutional settings, with no associated fee schedule claim. The services in this category include radiation therapy, other tests (e.g., skin, audiology, cardiology), and chemotherapy or intravenous injection services.⁶

For the 169 billing codes we identified in the third category, total fee schedule spending was \$2.7 billion in 2017 and accounts for nearly all spending associated with the chemotherapy administration and injection/infusion (non-oncologic) services. The fact that the modest spending for these services (relative to all fee schedule spending) is concentrated in a few service types suggests that adjusting for shifts in the site for these services may have a limited impact on overall fee schedule volume but would likely substantially affect the volume analysis for the few service types in which these services are concentrated.

**FIGURE
4-13**

Fee schedule spending is eliminated, but total spending increases when chemotherapy administration services shift from the physician office to the hospital outpatient department



Note: PLI (professional liability insurance). The figure reflects Healthcare Common Procedure Coding System® code 96413 (corresponding to Ambulatory Payment Classification 5694) chemotherapy administration. Spending figures are for 2019. Components may not sum to total due to rounding.

Source: Centers for Medicare & Medicaid Services.

Implications for Medicare payment policy

In addition to providing a deeper understanding of trends in services provided by clinicians, examining site-of-service shifts suggests that Medicare payment policy changes may be necessary.

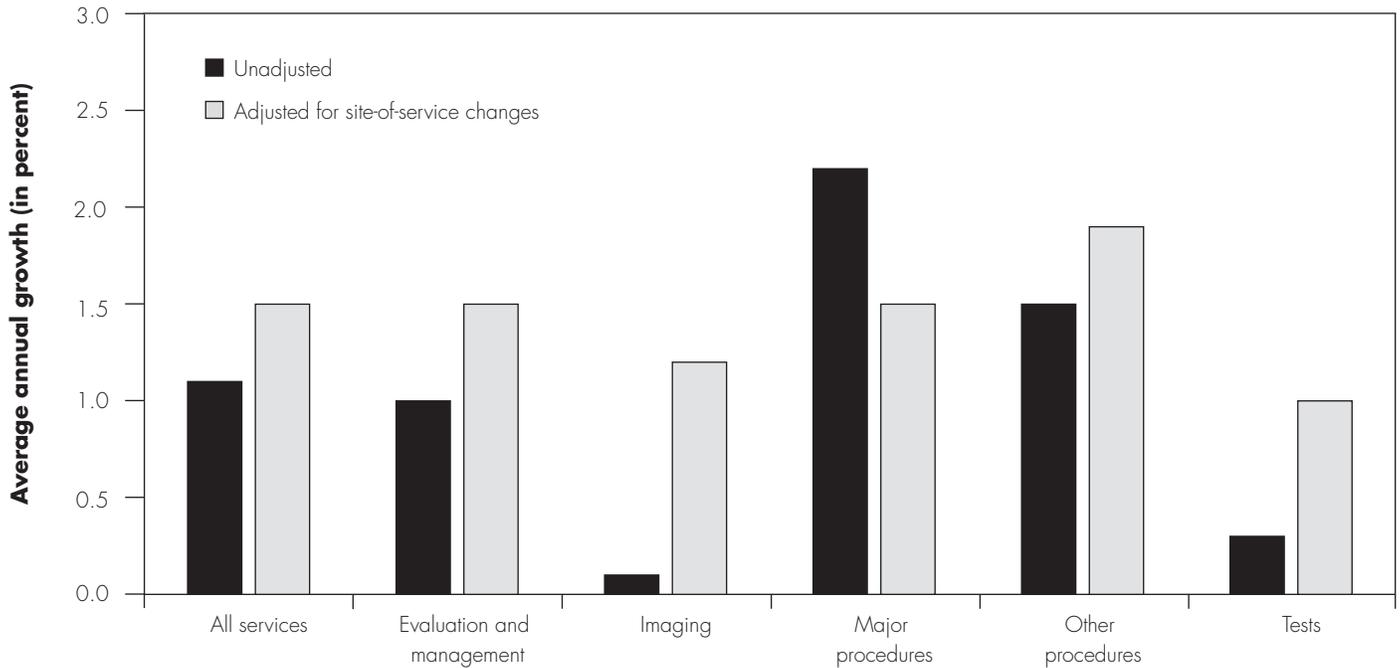
One of the Commission's principles has been that a prudent purchaser of health care (supported by the financial constraints facing the Medicare program and the beneficiaries and taxpayers who fund it) should not pay more for a service than is necessary to provide high-quality care. Along these lines, the Commission has made recommendations for site-neutral policies for certain services. First, the Commission recommended adjusting payment rates in the OPSS so that Medicare pays the same amount for E&M office/outpatient visits in freestanding physician offices and HOPDs (Medicare Payment Advisory Commission 2012). Beginning in

2019, Medicare will pay a comparable amount for E&M office/outpatient visits in freestanding physician offices and off-campus HOPDs; however, Medicare will continue to pay a higher amount for these visits when provided in on-campus outpatient departments. Second, the Commission also recommended adjusting OPSS rates for services in ambulatory payment classification groups that meet certain criteria so that payment rates are equal or more closely aligned between HOPDs and freestanding offices (Medicare Payment Advisory Commission 2014).

However, other approaches may be feasible for setting payment rates for services provided in multiple settings. For example, some of the services that show the greatest shift in setting over the past five years are imaging and tests. Certain imaging services, in particular, do not involve substantial clinician work but do constitute

**FIGURE
4-14**

Average annual growth in fee schedule volume is higher overall when site-of-service changes are taken into account, 2012-2017



Source: MedPAC analysis of claims data for 100 percent of fee-for-service Medicare beneficiaries.

substantial practice expense costs for the equipment and so may lend themselves to a different price-setting and updating mechanism from other fee schedule services (in contrast to E&M services, for which about half of the valuation is for the clinician work component).

Quality

Over the past decade, CMS has generally measured the quality of care provided by clinicians using sets of clinician-chosen and clinician-reported quality measures. Starting in 2007, clinicians qualified for an incentive payment by reporting quality measures through the voluntary Physician Quality Reporting Initiative. The program was rebranded as the Physician Quality Reporting System (PQRS) in 2010 and began imposing a payment penalty for nonreporting in 2015. At that time, CMS began to adjust payments to clinicians based on the cost and quality of care they provided using the PQRS set of

clinician-reported measures plus a set of claims-calculated cost measures under the value modifier program.

Starting in 2019, CMS makes payment adjustments to clinician services through the Merit-based Incentive Payment System (MIPS). MIPS is an individual clinician-level payment adjustment that adjusts Medicare FFS payments based on performance in four areas: quality, resource use, clinical practice improvement activities, and promotion of interoperability. It generally relies on many of the measures and processes used in prior efforts. Due to the Commission's serious concerns about MIPS, in 2018 the Commission recommended its repeal and outlined a path forward on clinician quality measurement (Medicare Payment Advisory Commission 2018).

To assess overall clinician quality, the Commission has generally reviewed a set of population-based measures assessing avoidable hospitalizations for ambulatory

**TABLE
4-6**

Average annual growth in volume of clinician services per fee-for-service beneficiary, with adjustment for changes in site of service and bundling, 2012–2017

Type of service	Change in volume per beneficiary		Type of service	Change in volume per beneficiary	
	Not holding site of service constant	Holding site of service constant		Not holding site of service constant	Holding site of service constant
All services	1.1%	1.5%	Other organ systems	-0.4	-0.4
Evaluation and management	1.0	1.5	Digestive/gastrointestinal	-1.8	-1.9
Office/outpatient services	1.5	2.4	Skin	-0.1	0.7
Hospital inpatient services	-1.3	-1.3	Eye	-0.7	-0.2
Emergency department services	1.0	1.0	Other procedures	1.5	1.9
Nursing facility services	2.5	2.5	Skin	1.7	2.6
Ophthalmological services	0.1	0.3	Physical, occupational, and speech therapy	5.6	5.7
Critical care services	1.5	1.5	Musculoskeletal	1.5	2.2
Care management/ coordination	32.3	32.4	Eye	1.1	1.1
Observation care services	6.5	6.6	Radiation oncology	-0.7	0.4
Home services	-1.1	-1.1	Other organ systems	2.4	2.6
Imaging	0.1	1.2	Digestive/gastrointestinal	0.1	0.8
Standard X-ray	-0.3	0.3	Dialysis	0.1	0.2
Ultrasound	-1.0	0.2	Vascular	3.1	2.7
CT	3.1	4.1	Chiropractic	-2.2	-2.2
MRI	1.5	2.6	Injections and infusions: non-oncologic	-2.2	-1.8
Nuclear	-2.8	-0.7	Chemotherapy administration	-3.7	-3.5
Major procedures	2.2	1.5	Tests	0.3	1.0
Musculoskeletal	3.0	2.7	Anatomic pathology	0.0	0.3
Vascular	8.3	2.4	Cardiography	-0.5	2.0
Cardiovascular	1.4	2.4	Neurologic	1.0	0.8

Note: CT (computed tomography), MRI (magnetic resonance imaging). Volume is measured as units of service multiplied by each service’s relative value unit (RVU) from the fee schedule. To put service use in each year on a common scale, we used the RVUs for 2017. Use of behavioral health services is not shown because of a change in billing codes implemented in 2013. Some low-volume categories are not shown but are included in the summary. To hold site of service constant, we allowed units of service to change but held constant each billing code’s proportional distribution of units, by payment modifier and place of service.

Source: MedPAC analysis of claims data for 100 percent of Medicare beneficiaries.

care-sensitive conditions, which can help gauge the quality of ambulatory care (Medicare Payment Advisory Commission 2019). Over the past seven years, these rates have mostly improved (Figure 4-15).

The Commission has also presented results on the prevalence and trends of low-value care, finding substantial use of low-value care in FFS Medicare

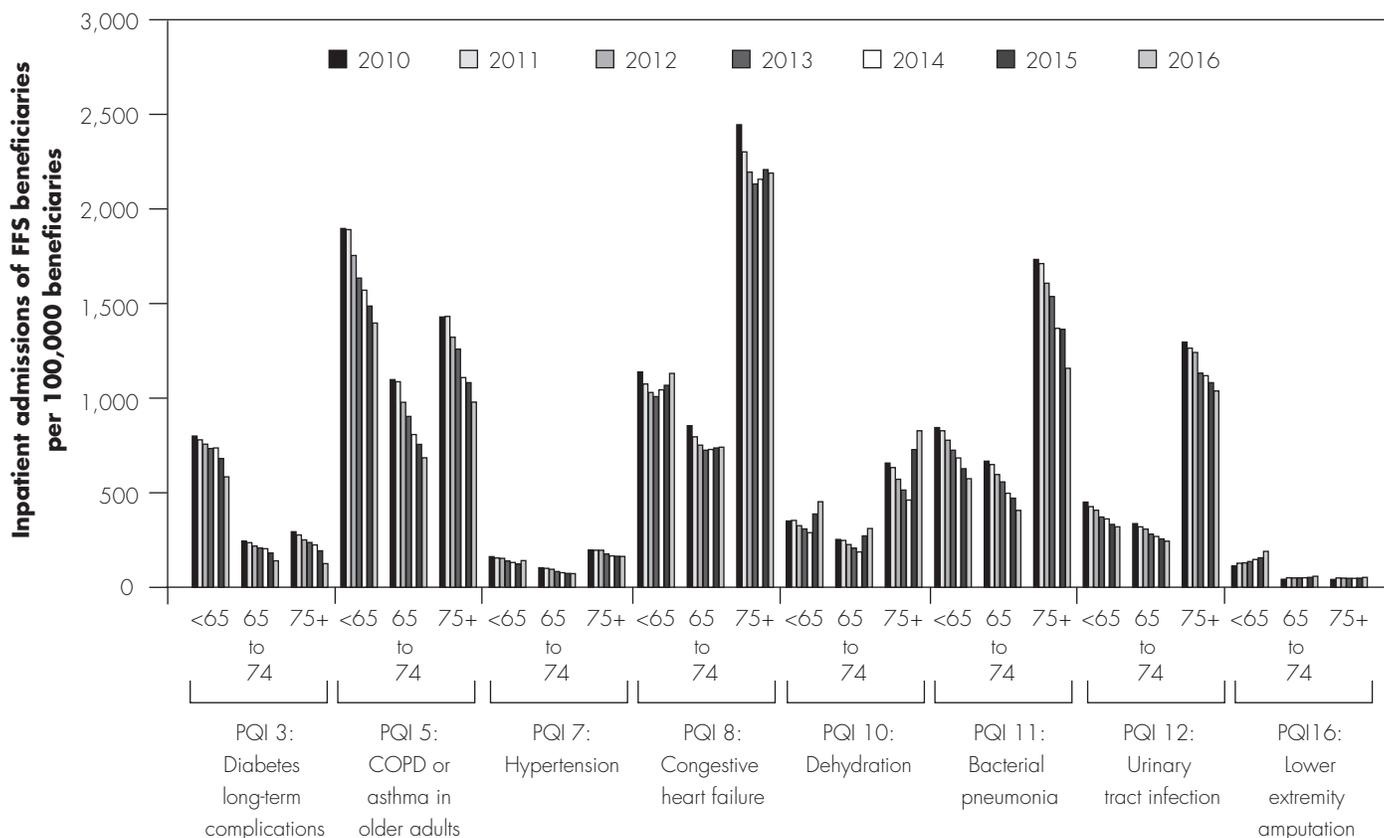
(Medicare Payment Advisory Commission 2018). Overall, the collective assessment as part of the payment adequacy assessment is that clinician quality has been indeterminate.

Medicare’s payments and clinicians’ costs

Clinicians do not report their costs to Medicare, so we are unable to assess clinician costs or calculate a margin. In lieu of financial performance, we report a measure

FIGURE 4-15

Trends in selected PQIs for inpatient admissions of FFS beneficiaries for ambulatory care-sensitive conditions, by age, 2010-2016



Note: PQI (Prevention Quality Indicator), FFS (fee-for-service), COPD (chronic obstructive pulmonary disease). Figures represent the number of hospital admissions for the identified condition for Medicare beneficiaries in each age range per 100,000 beneficiaries. Only FFS beneficiaries with both Part A and Part B are included. Beneficiaries who died during the year are included.

Source: CMS data on geographic variation. Figures calculated by CMS from the Chronic Conditions Data Warehouse of 100 percent of claims.

of clinician input costs (the Medicare Economic Index, or MEI); calculate the ratio of Medicare’s payments for clinician services relative to private sector payments; and report differences in physician compensation by specialty.

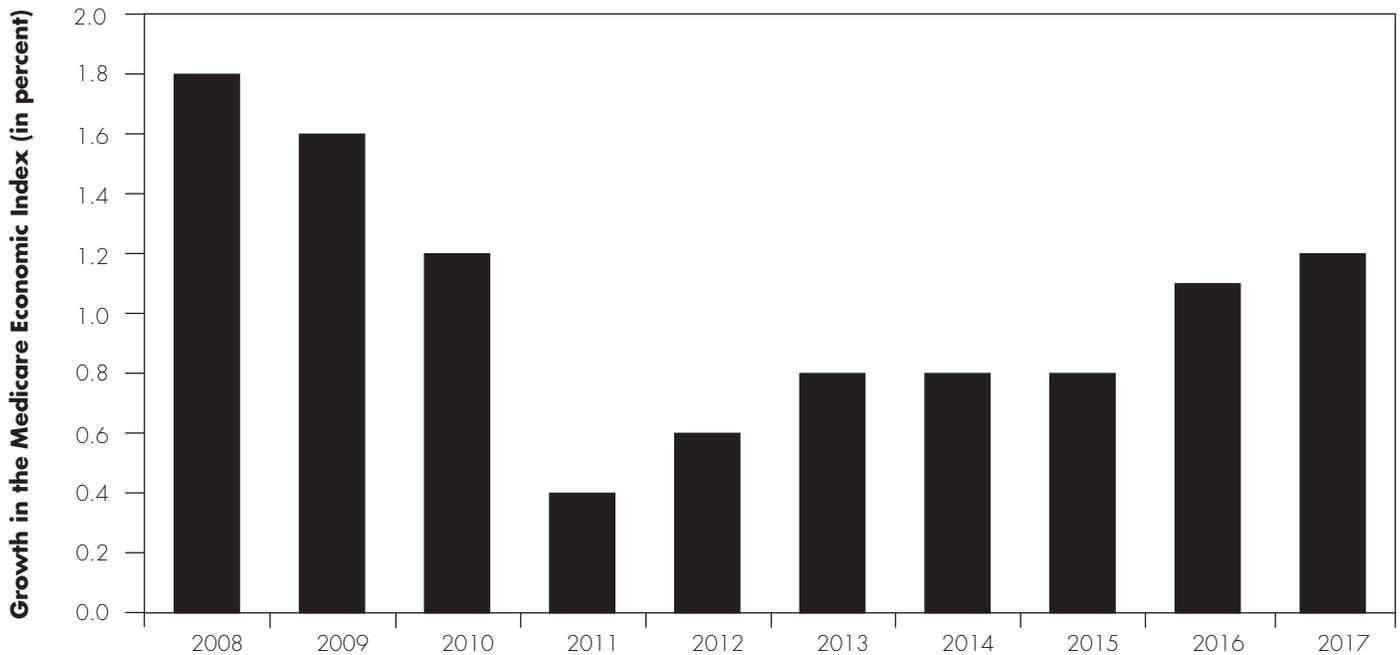
The MEI is an index designed to reflect changes in the typical costs of running a clinician practice, including labor, materials, and rent. The MEI was established in Medicare statute and was a component of the sustainable growth rate calculation. The MEI uses inputs from the Bureau of Economic Analysis and Labor Statistics and is adjusted for economy-wide multifactor productivity.

Figure 4-16 (p. 118) shows the growth in the MEI over the past decade, averaging about 1 percent per year.

We also compare how Medicare FFS payment rates for physician and other health professional services compare with commercial rates for preferred provider organizations (PPOs). In 2017, Medicare’s payment rates were 75 percent of commercial rates for PPOs, unchanged from 2016. This analysis uses data on paid claims for PPO members of a large national insurer that covers a wide geographic area across the United States. This rate has fallen slightly since 2010 (when it was 81 percent). This pattern is due to faster growth in commercial rates and largely stable Medicare rates (consistent with the Health Care Cost Institute data we use to examine payment rates in the commercial sector) (Congressional Budget Office 2018).

**FIGURE
4-16**

Annual growth in the Medicare Economic Index, 2008-2017



Source: Market basket data from the Centers for Medicare & Medicaid Services.

Finally, we consider median compensation by specialty. Persistent income disparities between primary care physicians and certain other specialties raise concerns about fee schedule mispricing for ambulatory E&M services relative to other services, such as procedures. Median compensation in 2017 was much lower for primary care physicians than for physicians in specialty groups such as radiology and nonsurgical, procedural specialties.

Conclusion

Overall, our review of Medicare's payment updates and our measures of payment adequacy show stable access to clinician services for Medicare beneficiaries over the past decade and as good or better access compared with privately insured individuals. Nevertheless, our work signals a number of areas of policy interest, including site-neutral payment policies; the need to address persistent disparities in physician compensation by specialty that

may lead to issues in the future supply of primary care services; and disproportionate growth in certain services, suggesting that prices may be too high.

Medicare's yearly payment rate update for clinician services has ranged from no update to 1 percent over the past decade. This range is consistent with the updates from 2015 through 2018 (0.5 percent), 2019 (0.25 percent), and 2020 to 2025 (no update). To date, there has been largely stable access to clinician services for Medicare beneficiaries in the context of these payment updates.

The statutory mandate directing the Commission to conduct this evaluation requires us to make recommendations for future updates to fee schedule payment rates that would be necessary to ensure Medicare beneficiaries' access to care. The trends we have observed over the last decade suggest that updates in the range of 0 percent to 1 percent have been sufficient to ensure beneficiary access to care. Further, the fact that commercial payment rates for clinician services are higher than Medicare's fee schedule rates, but that

commercially insured patients report access to care that is generally comparable to or slightly worse than Medicare beneficiaries raises questions about the relationship between payment rates and access, suggesting that other factors may be more important than payment rate updates in maintaining beneficiary access to clinician services.

In fulfilling this mandate, we refrain from mapping out a series of future updates and instead are best able to provide guidance to the Congress by continuing to conduct our yearly payment adequacy assessment. The Commission's

approach to assessing the adequacy of Medicare payments, not only in the clinician sector but also across all FFS sectors, is to evaluate the most currently available data on measures of payment adequacy and advise the Congress accordingly on our recommended payment updates on a year-by-year basis. We have done so for the 2020 payment year in our March 2019 report to the Congress, and going forward, we will continue to advise the Congress as necessary to ensure Medicare beneficiaries can obtain high-quality, needed clinician services in a timely way. ■

Endnotes

- 1 CMS's Office of the Actuary reports that Medicare benefit outlays for physician fee schedule services were \$69.1 billion in calendar year 2017.
- 2 Pursuant to statute, if the changes in RVUs for any year exceed \$20 million, CMS is required to apply a budget-neutrality adjustment to the conversion factor.
- 3 This analysis differs from our analysis of private preferred provider organization rates because it uses different data sources and methods. However, the overall pattern of higher private-payment rates (and faster growth rates) than Medicare continues to be true.
- 4 Changes in units may depend on how a service was originally billed in the physician office (nonfacility) setting. For example, if the professional and technical components of a CT were billed separately in a physician office, fee schedule units would decrease if that CT shifted to an HOPD because only one claim (the professional component) would be billed under the fee schedule (and the technical component would be billed under the OPPOS).
- 5 Our specific analytic approach holds the share of services billed in a facility and nonfacility setting constant over the period examined within each HCPCS code. To do so, we used the place of service variable for most services. For other services (e.g., certain radiology services), we adjusted our service counts to reflect the fact that the same service could be billed as one claim (a global claim) or as two claims (separate technical and professional claims).
- 6 A fourth set of codes (physical, occupational, and speech-language pathology services) also affects fee schedule volume and spending when they shift settings, but because the services are paid the fee schedule rate no matter where they are performed, there is no financial incentive for the services to migrate to a higher cost setting. For that reason, we do not discuss those codes in detail.

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CHAPTER

5

**Issues in
Medicare beneficiaries'
access to primary care**

R E C O M M E N D A T I O N S

5-1 The Congress should require advanced practice registered nurses and physician assistants to bill the Medicare program directly, eliminating “incident to” billing for services they provide.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

.....
5-2 The Secretary should refine Medicare’s specialty designations for advanced practice registered nurses and physician assistants.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

Issues in Medicare beneficiaries' access to primary care

Chapter summary

High-quality primary care is essential for creating a coordinated health care delivery system. Primary care services—such as ambulatory evaluation and management visits—are provided by physicians and other health professionals, such as nurse practitioners (NPs) and physician assistants (PAs). Physicians who focus on primary care are generally trained in family medicine, internal medicine, geriatric medicine, and pediatrics.

The Commission has a long-standing interest in ensuring that Medicare payments for primary care services are accurate. These services are underpriced in the fee schedule for physicians and other health professionals relative to other services, and the nature of fee-for-service (FFS) payment allows certain specialties to increase the volume of services they provide—and the payments they receive—more easily than primary care clinicians. In addition, the fee schedule—with its orientation toward discrete services that have a defined beginning and end—is not well designed to support primary care, which requires ongoing care coordination for a panel of patients. In response to these concerns, the Commission has made several recommendations over the years to improve payment accuracy for primary care services and better support primary care.

According to our surveys of beneficiaries, beneficiaries have access to clinician services that is largely comparable with (or in some cases, better

In this chapter

- Background
- Commission's prior work to ensure the accuracy of fee schedule payments for primary care services
- The supply of primary care physicians in Medicare
- The supply of APRNs and PAs in Medicare
- Prevalence of “incident to” billing for NPs and PAs
- Eliminating “incident to” billing for APRNs and PAs
- Medicare's specialty designations for APRNs and PAs
- Conclusion

than) access for privately insured individuals, although a small number of beneficiaries report problems finding a new primary care doctor. The number of primary care physicians treating Medicare beneficiaries increased by 13 percent between 2010 and 2017, although the number per 1,000 beneficiaries declined modestly. The number of family medicine and internal medicine residents has grown in recent years, but the majority of internal medicine residents plan careers in a subspecialty instead of general internal medicine, which raises concerns about the pipeline of future primary care physicians. In addition, significant disparities in compensation between primary care physicians and other specialties could deter medical school graduates and residents from pursuing primary care careers, which could reduce beneficiaries' access to primary care physicians in the future.

A variety of factors influence specialty choices by medical school graduates and residents: lifestyle preferences, personality fit, student characteristics, factors related to the medical school and curriculum, and income expectations. The findings on the influence of medical school debt on specialty choice are mixed. Some studies show no relationship between debt and physicians' career choices, but other studies find that debt is modestly related to their career decisions.

According to a survey administered by the Association of American Medical Colleges, almost half (46 percent) of medical school graduates responding to the questionnaire in 2018 planned to participate in programs to reduce their educational debt. There are several government-run scholarship, loan forgiveness, low-interest loan, and loan repayment programs for clinicians, such as the Public Service Loan Forgiveness program, military programs, state programs, the National Health Service Corps (NHSC), and the Primary Care Loan program. For example, the NHSC includes scholarship and loan repayment programs for primary care providers who agree to practice at designated ambulatory care sites in underserved areas for a minimum amount of time (between two and four years). In 2018, about 10,900 NHSC providers (such as primary care physicians, nurse practitioners, physician assistants, and mental health providers) furnished care to 11.5 million people at more than 5,000 of these sites.

Policymakers may wish to consider establishing a scholarship or loan repayment program for physicians who provide primary care to Medicare beneficiaries. Although physicians in several specialties (e.g., family medicine, general internal medicine, and geriatrics) furnish primary care to beneficiaries, a Medicare-specific scholarship or loan repayment program should target those physicians most likely to treat beneficiaries to ensure the best use of scarce resources. In addition, because Medicare serves disabled and elderly beneficiaries, the goals of a Medicare-specific program will differ from the goals of other programs that focus on different

populations. Therefore, a Medicare-specific program could target geriatricians because they specialize in managing the unique health and treatment needs of elderly individuals. In 2017, only 1,830 geriatric medicine physicians treated beneficiaries in traditional FFS Medicare (less than 1 percent of all physicians who treated FFS beneficiaries in that year). Between the 2013–2014 academic year and the 2017–2018 academic year, the number of residents in geriatric medicine declined by 2 percent, which raises concerns about the future pipeline of geriatricians.

By reducing or eliminating educational debt, a Medicare-specific scholarship or loan repayment program could provide medical students and residents with a financial incentive to choose geriatrics. However, it is difficult to anticipate how medical students and residents would respond to such an incentive. It could convince some medical students and residents to choose geriatrics over another specialty, while others could decide to pursue another specialty regardless of the subsidy. Nevertheless, policymakers could consider such a program as an option to address concerns about the future pipeline of geriatricians. We begin exploring design choices for this program in this chapter and plan to continue examining them in future work.

Although the Commission has concerns about the supply of primary care physicians, the number of advanced practice registered nurses (APRNs) and PAs has increased rapidly and is projected to continue to do so in the future. Medicare beneficiaries rely on APRNs and PAs to provide an increasingly substantial share of their medical services. APRNs and PAs are graduate-level trained clinicians who predominantly work in collaboration with or under the supervision of physicians to deliver care to patients. The growth in the number of NPs (one type of APRN) and PAs who bill Medicare has been particularly rapid. From 2010 to 2017, the combined number of NPs and PAs who billed Medicare more than doubled, reaching 212,000 in 2017.

In addition, state governments have steadily increased NPs' and PAs' scopes of practice, meaning that these clinicians have an increasing amount of authority and autonomy. While the existing literature has some methodological limitations, the preponderance of research suggests that NPs and PAs provide care that is substantially similar to physicians in terms of clinical quality outcomes and patient experience, within the confines of their respective scopes of practice. The evidence base regarding how NPs and PAs affect costs for payers such as Medicare is less robust and somewhat mixed since at least a few studies suggest that NPs and PAs order more services.

Medicare allows NPs and PAs to bill under the national provider identifier (NPI) of a supervising physician if certain conditions are met, a practice known as “incident to” billing. Medicare pays for services at 100 percent of the fee schedule rate when a service provided by an NP or PA is billed “incident to” and 85 percent of the fee schedule rate when the same service is billed under the NPI of the NP or PA who provided the service. While the existing literature on the prevalence of “incident to” billing is limited, we conducted two original analyses that suggest a substantial share of services furnished by NPs and PAs to Medicare FFS beneficiaries was likely billed “incident to” in 2016.

Medicare also collects little up-to-date information regarding the specialty in which NPs and PAs practice. While NPs and PAs have historically been concentrated in primary care, a large share of NPs and PAs do not work in primary care, and more recent patterns suggest that NPs and PAs are increasingly practicing in specialty fields.

Given the growing roles of NPs and PAs and their shift away from primary care, Medicare’s “incident to” rules and lack of specialty data create several problems, including obscuring important information on the clinicians who treat beneficiaries and inhibiting Medicare’s ability to identify and support clinicians furnishing primary care. Therefore, the Commission recommends that (1) the Congress require APRNs and PAs to bill the Medicare program directly, eliminating “incident to” billing for services they provide, and (2) the Secretary refine Medicare’s specialty designations for APRNs and PAs. These recommendations are designed to give the Medicare program a fuller accounting of the breadth and depth of services provided by APRNs and PAs and improve policymakers’ ability to target resources toward primary care. ■

Background

High-quality primary care is essential for creating a coordinated health care delivery system. Primary care has five core elements:

- first-contact accessibility, including the affordability of services, the ease of getting an appointment and after-hours care, and geographic access;
- continuity, including the availability of a patient’s health information at the point of care and continuity with the same practitioner or practice over time;
- comprehensiveness, which involves meeting the majority of each patient’s physical and mental health care needs, including preventive, acute, and chronic care;
- coordination of care for a patient among multiple providers and settings; and
- accountability for the whole person, which means that the clinician is knowledgeable about the patient’s overall medical history, preferences, and family and cultural orientation (O’Malley et al. 2015).

Primary care services are provided by physicians and other health professionals. Physicians who focus on primary care generally are trained in family medicine, internal medicine, geriatric medicine, and pediatrics. About 186,000 primary care physicians billed Medicare in 2017, accounting for 19 percent of all health professionals who billed Medicare. A substantial share of physician assistants (PAs) and advanced practice registered nurses (APRNs)—such as nurse practitioners (NPs)—also provide primary care.

The Commission has a long-standing interest in ensuring that Medicare payments for primary care services—such as ambulatory evaluation and management (E&M) services—are accurate. Ambulatory E&M services include office visits, hospital outpatient department visits, nursing facility visits, and home visits. Primary care services are underpriced in the fee schedule for physicians and other health professionals relative to other services, and the nature of fee-for-service (FFS) payment allows certain specialties to increase the volume of services they provide—and the payments they receive—more easily than primary care clinicians. In addition,

the fee schedule—with its orientation toward discrete services that have a defined beginning and end—is not well designed to support primary care, which requires ongoing care coordination for a panel of patients. These issues have contributed to substantial compensation disparities between primary care physicians and other specialties (see pp. 132–133).

Payment rates in the fee schedule are based on relative weights, called relative value units (RVUs), which account for the amount of clinician work required to provide a service, expenses related to maintaining a practice, and professional liability insurance costs. Work RVUs are based on an assessment of how much time and intensity (e.g., mental effort and technical skill) services require relative to one another. Because estimates of time and intensity are not kept up to date, especially for services that experience efficiency improvements, the accuracy of the work RVUs has declined over time. Due to advances in technology, technique, and clinical practice, efficiency improvements are achieved more easily for procedures, imaging, and tests than for ambulatory E&M services, which are composed largely of activities that require the clinician’s time and so do not lend themselves to efficiency gains. When efficiency gains reduce the amount of work needed for a service, the work RVUs for the affected service should decline accordingly. Because the fee schedule is budget neutral, a reduction in the RVUs of some services raises the RVUs for all other services. However, because of problems with the process of reviewing mispriced services, this two-step sequence tends not to occur. As a result, ambulatory E&M services become passively devalued over time, while many other services become overvalued.

CMS, with input from the American Medical Association/Specialty Society Relative Value Scale Update Committee (RUC), has reviewed the work RVUs of many potentially mispriced services since 2009. However, CMS’s review has taken several years and has not yet addressed services that account for a substantial share of fee schedule spending. CMS’s review is hampered by the lack of current, accurate, and objective data on clinician work time and practice expenses. For example, CMS relies on data from surveys conducted by specialty societies to estimate clinician work time for specific services. These surveys have low response rates and low total number of responses, which raises questions about the representativeness of the results.

**TABLE
5-1**

Number of physicians billing Medicare, 2010–2017

Physician type	2010		2017	
	Number	Number per 1,000 beneficiaries	Number	Number per 1,000 beneficiaries
Primary care	165,499	3.8	186,193	3.5
Other specialties	369,580	8.4	409,995	7.7
Total	535,079	12.2	596,188	11.2

Note: Specialty is self-reported by physicians and other health professionals when they enroll in the Medicare program. “Primary care” specialties are specialties that were eligible for the Primary Care Incentive Payment program: family medicine, internal medicine, pediatric medicine, and geriatric medicine. These figures may overstate the number of primary care physicians because we count all internal medicine physicians as primary care even though many of them practice in a subspecialty. The number billing Medicare includes those with a caseload of more than 15 different beneficiaries during the year. Beneficiary counts used to calculate numbers per 1,000 include those in fee-for-service and Medicare Advantage on the assumption that physicians are furnishing services to beneficiaries in both programs. Figures for 2010 may vary from figures that appeared in prior Commission reports due to minor technical changes.

Source: MedPAC analysis of Medicare claims data for 100 percent of beneficiaries and the 2011 and 2018 annual reports of the Boards of Trustees of the Medicare trust funds.

Commission’s prior work to ensure the accuracy of fee schedule payments for primary care services

To improve payment accuracy for primary care services and better support primary care, the Commission has made several recommendations over the last several years. In 2008, the Commission recommended that the Congress establish a bonus for primary care services billed by practitioners who have practices focused on primary care (Medicare Payment Advisory Commission 2008). This recommendation was adopted by the Congress as the Primary Care Incentive Payment (PCIP) program. The PCIP program, which existed from 2011 to 2015, provided a 10 percent bonus payment on fee schedule payments for certain primary care services provided by eligible primary care practitioners. The services defined as primary care were a subset of E&M services: office and home visits and visits to patients in certain nonacute facility settings (e.g., skilled nursing and intermediate care). Primary care practitioners included clinicians (1) who had a primary Medicare specialty designation of family practice, internal medicine, pediatrics, geriatrics, nurse practitioner, clinical nurse specialist, or physician assistant and (2) for whom primary care visits accounted for at least 60 percent of allowed charges under the fee schedule.

In 2011, the Commission recommended replacing the sustainable growth rate system with payment updates that would have been higher for primary care than for specialty care (Medicare Payment Advisory Commission 2011). Specifically, payment rates for primary care would have been frozen at their current levels for 10 years, while rates for all other services would have been reduced in each of the first 3 years and then frozen for the subsequent 7 years. Also in 2011, the Commission recommended that CMS use a streamlined method to regularly collect data—including service volume and work time—from a cohort of efficient practices to establish more accurate work and practice expense RVUs (Medicare Payment Advisory Commission 2011). These data should be used in a “top-down” approach to calculate the amount of time that a physician worked over the course of a week or month and compare it with the time estimates in the fee schedule for all of the services that the physician billed for over the same period. If the fee schedule’s time estimates exceed the actual time worked, this finding could indicate that the time estimates are too high. Neither of these recommendations was adopted.

In 2015, the Commission recommended that the Congress establish a per beneficiary payment for primary care clinicians to replace the PCIP program

after it expired at the end of 2015 (Medicare Payment Advisory Commission 2015). This payment would encourage care coordination, including the non-face-to-face activities that are a critical component of care coordination, and would be exempt from beneficiary cost sharing. To fund this payment, the Commission recommended reducing fees for all fee schedule services other than primary care visits furnished by any provider, including specialists. This funding method would be budget neutral and would help rebalance the fee schedule between specialty care and primary care. At least as a starting point, the Commission supported funding the per beneficiary payment at the same aggregate level as the PCIP program, which means that each practitioner would receive an annual per beneficiary payment of about \$28. This funding level would require reducing fees for non-primary care services in the fee schedule by 1.3 percent. The Congress has not adopted this recommendation.

In our June 2018 report to the Congress, the Commission described a budget-neutral approach to rebalance the fee schedule that would increase payment rates for ambulatory E&M services while reducing payment rates for other services (e.g., procedures, imaging, and tests) (Medicare Payment Advisory Commission 2018a). Under this approach, the increased payment rates would apply to ambulatory E&M services provided by all clinicians, regardless of specialty. We modeled the impact of a 10 percent payment rate increase for ambulatory E&M services, although a higher or lower increase could be considered. A 10 percent increase would raise annual spending for ambulatory E&M services by \$2.4 billion. To maintain budget neutrality, payment rates for all other fee schedule services would be reduced by 3.8 percent. This change would be a one-time adjustment to the fee schedule to address several years of passive devaluation of ambulatory E&M services. Even if this approach were adopted, we urged CMS to accelerate its efforts to improve the accuracy of the fee schedule by developing a better mechanism to identify overpriced services and adjust their payment rates.

The supply of primary care physicians in Medicare

Between 2010 and 2017, the number of primary care physicians providing services to Medicare beneficiaries

increased by 13 percent, although the number per 1,000 beneficiaries declined modestly. During that period, the ratio of primary care physicians to beneficiaries fell from 3.8 per 1,000 to 3.5 per 1,000 (Table 5-1). These figures may overstate the number of primary care physicians because we count all internal medicine physicians as primary care even though many of them practice in a subspecialty. Between 2010 and 2017, the number of physicians in other specialties increased by 11 percent, although the number per 1,000 beneficiaries declined from 8.4 per 1,000 to 7.7 per 1,000.

In recent years, the number of Medicare beneficiaries has grown rapidly as the baby boomers age into the program. This enrollment increase shrinks the ratio of physicians to beneficiaries over time, even though the overall number of physicians has been growing. By contrast, the ratio of practicing physicians to the entire U.S. population has increased slightly since 2011, from 2.5 physicians per 1,000 U.S. residents in 2011 to 2.6 per 1,000 in 2016 (Organisation for Economic Co-operation and Development 2018). As the overall population ages and more people shift from commercial insurance to Medicare, beneficiaries will probably become a larger share of physicians' caseloads over time. The share of physicians billing Medicare who are in primary care specialties grew slightly between 2010 and 2017, from 30.9 percent to 31.2 percent (data not shown). By comparison, the share of all physicians in the U.S. who practice primary care was 31.9 percent in 2017 (Pettersson et al. 2018).

In our March 2019 report, which included a chapter on the adequacy of payments for physician and other health professional services, we found that beneficiaries have access to clinician services that is largely comparable with (or in some cases, better than) access for privately insured individuals, although a small number of beneficiaries report problems finding a new primary care doctor (Medicare Payment Advisory Commission 2019). Our primary data sources were a telephone survey of Medicare beneficiaries ages 65 and over and privately insured individuals ages 50 to 64, focus groups of beneficiaries and primary care physicians in three markets, and site visits to health care facilities. The survey, focus groups, and site visits were conducted in 2018. In general, beneficiaries reported adequate access to clinician services. For example, most beneficiaries reported that they never had to wait longer than they wanted to for routine, illness, or injury care.

However, beneficiaries looking for a new doctor generally reported more problems finding one when seeking a new primary care doctor than when seeking a new specialist. For primary care, 10 percent were looking for a new doctor, and of those looking, 14 percent reported a big problem, meaning that, on net, 1.4 percent of the Medicare population reported a big problem. For specialty care, 19 percent were looking for a new doctor; of those looking, 8 percent reported a big problem, meaning that, on net, 1.5 percent of the total Medicare population reported a big problem. These results are consistent with prior years, other surveys, and our beneficiary focus groups.

Although the number of family medicine and internal medicine residents has grown in recent years, the majority of internal medicine residents plan careers in a subspecialty instead of general internal medicine, which raises concerns about the pipeline of future primary care physicians. Between the 2013–2014 academic year and the 2017–2018 academic year, the number of active residents in family medicine and internal medicine increased at a faster rate than the total number of active residents (Accreditation Council for Graduate Medical Education 2018). The number of family medicine residents grew by 17.9 percent and the number of internal medicine residents increased by 15.7 percent, compared with 12.7 percent growth in the total number of active residents across all specialties. By contrast, the number of geriatric medicine residents declined by 2 percent (from 323 to 315).¹ Family medicine residents' share of total residents grew from 8.6 percent in the 2013–2014 academic year to 9.0 percent in the 2017–2018 academic year (Accreditation Council for Graduate Medical Education 2018). Internal medicine residents' share of total residents increased from 19.9 percent in the 2013–2014 academic year to 20.4 percent in the 2017–2018 academic year.

Although nearly all family medicine residents practice as generalists after their residencies, most internal medicine residents enter subspecialties such as cardiology, gastroenterology, hematology, oncology, and pulmonary medicine (Dalen and Ryan 2016). According to a large survey of internal medicine residents, only 21.5 percent of third-year internal medicine residents in 2009 through 2011 planned careers in general internal medicine; the remainder planned careers in subspecialties (64.2 percent) or hospital medicine (9.3 percent) or were undecided (4.1 percent) (West and Dupras 2012).²

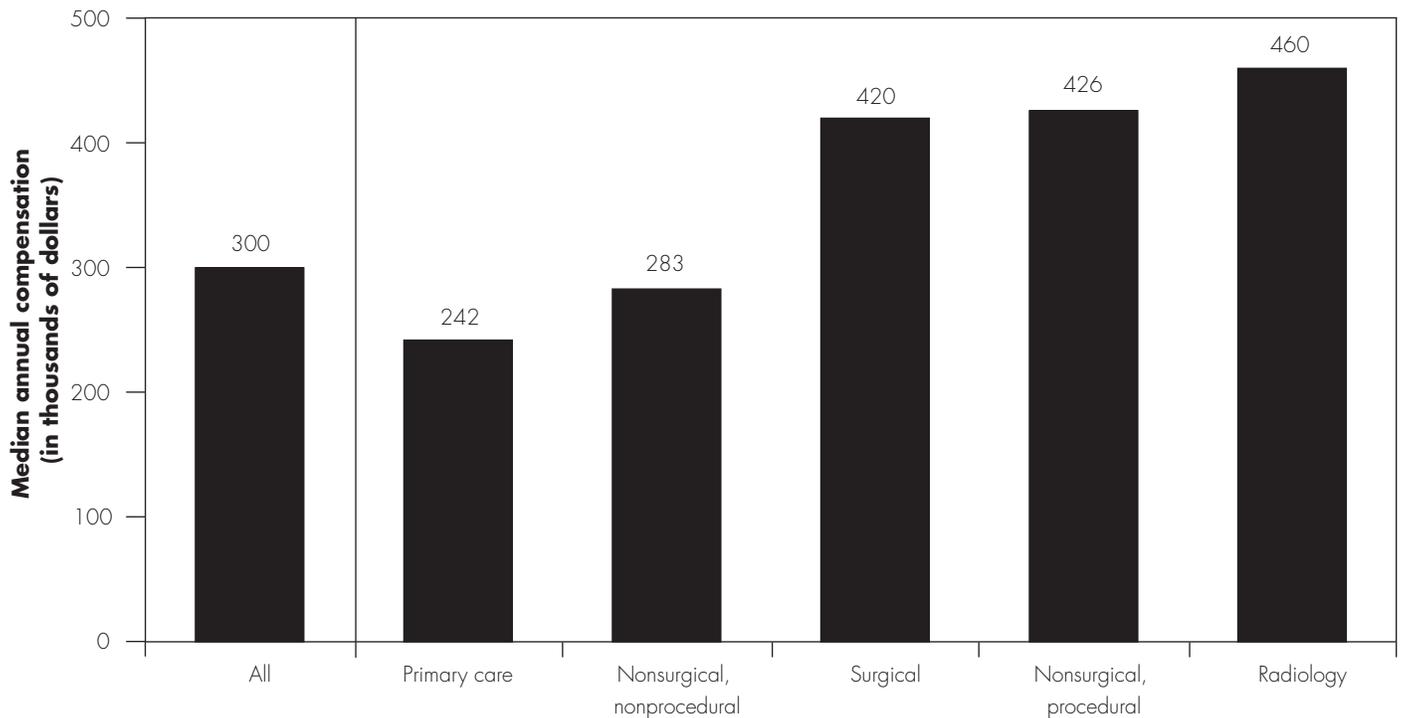
According to an estimate by Jolly and colleagues, 43 percent of internal medicine residents who began their residencies in 2010 were predicted to practice general internal medicine, compared with 49 percent of internal medicine residents who began their residencies in 2001 (Jolly et al. 2013). This estimate was based on a comparison of the number of new internal medicine residents in a given year with the number of internal medicine subspecialty fellowships that began in the same year.

There are concerns that significant disparities in compensation between primary care physicians and other specialties are deterring medical school graduates and residents from choosing to practice primary care, which could reduce beneficiaries' access to primary care in the future. For an analysis of the compensation received from all payers by physicians, the Commission contracted with the Urban Institute, working in collaboration with SullivanCotter. The contractor calculated median compensation based on 2017 data from SullivanCotter's Physician Compensation and Productivity Survey. Median compensation across all specialties was \$300,000 in 2017. Compensation was much higher for some specialties than for others. The specialty groups with the highest median compensation were radiology (\$460,000); the nonsurgical, procedural group (\$426,000); and surgical specialties (\$420,000) (Figure 5-1).³ Median compensation for radiology (\$460,000) was almost double the median compensation for primary care (\$242,000), and median compensation for nonsurgical, procedural specialties was 76 percent higher than that of primary care.

Multiple studies show that a diverse health care workforce is associated with better access to care for underserved populations and with greater patient choice and satisfaction (Health Resources and Services Administration 2006, Institute of Medicine 2004). Students from rural areas, students who are from ethnic or racial minorities, and students who have lower socioeconomic status are more likely to choose a primary care career and practice in underserved areas (Brooks et al. 2002, Phillips et al. 2009, Senf et al. 2003). However, our June 2009 report found that minority, low-income, and rural students are underrepresented in medical schools (Medicare Payment Advisory Commission 2009). For example, medical students tend to come from more affluent families. In 2005, 55 percent of students came from families in the

FIGURE 5-1

Disparities in physician compensation are widest when primary care physicians are compared with surgeons, nonsurgical proceduralists, and radiologists, 2017



Note: Figure includes all physicians who reported their annual compensation in the survey (76,336).

Source: Urban Institute analysis of data from SullivanCotter's Physician Compensation and Productivity Survey, 2018.

top quintile of family income; only about 5 percent came from families in the lowest quintile (Association of American Medical Colleges 2008).

Medicare's role in financing graduate medical education

Medicare is the largest financial supporter of graduate medical education (GME)—spending about \$14 billion in 2017 at more than 1,100 acute care hospitals—but requires minimal accountability from its recipients for achieving education and training goals (Medicare Payment Advisory Commission 2010a). In addition to Medicare, state Medicaid programs, the Department of Veterans Affairs, the Department of Defense, the Health Resources and Services Administration (HRSA), and teaching hospitals support GME training (Government Accountability Office 2018b, Medicare Payment Advisory Commission 2009).

Medicare GME funding includes direct GME and indirect medical education (IME) payments (Medicare Payment Advisory Commission 2009). Direct GME payments—about \$4 billion in 2017—fund the teaching aspects of residency programs: residents' salaries and benefits, supervisory physician salaries, and administrative overhead expenses. Direct GME payments, which go to teaching hospitals, are based on a hospital-specific per resident payment amount for which Medicare pays its share.

IME payments—about \$10 billion in 2017—account for the higher costs of patient care associated with care in teaching hospitals, such as unmeasured severity, “learning by doing,” and greater use of emerging technologies. Medicare pays for IME through a percentage increase (or add-on) to the inpatient prospective payment system

rate that varies with the intensity of hospitals' residency programs. A Commission analysis found that total IME payments are higher than the empirically calculated indirect patient care costs associated with a teaching environment (Medicare Payment Advisory Commission 2010b). The Commission identified gaps in the mix of physicians produced by the GME system and in the content of their education and training (Medicare Payment Advisory Commission 2010a). For example, the share of physicians who practice primary care may not be adequate for a high-quality, high-value delivery system.

To increase accountability for Medicare's GME payments, the Commission recommended in 2010 that the Secretary create a new, performance-based GME program to support the workforce skills needed in a delivery system that reduces cost growth while improving quality (Medicare Payment Advisory Commission 2010a). We recommended that the Secretary establish standards for distributing the performance-based funds based on goals for practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. The performance-based funds should be allocated to institutions—teaching hospitals, medical schools, and other entities that support residency programs—that meet the new standards. The recommendation stated that funding for this initiative should come from reducing IME payments to eliminate the amount currently paid above empirically justified IME costs.

Factors that influence physicians' specialty choice

A variety of factors influence specialty choices by medical school graduates and residents: personality fit, lifestyle preferences, student characteristics, factors related to medical schools and curricula, and income expectations. Educational debt may also play a role, but the evidence is mixed. Some studies show no relationship between debt and physicians' career choices, but other studies find that debt is modestly related to their career decisions.

Personality fit, content of the specialty, and role model influence

The Medical School Graduation Questionnaire, administered annually by the Association of American

Medical Colleges (AAMC) to graduates of U.S. medical schools, asks respondents to rate the influence of various factors on their specialty choice (Association of American Medical Colleges 2018b). In 2018, a majority of graduating students reported that the following three factors had a "strong influence" on their specialty choice: fit with their personality, interests, and skills (87.6 percent of respondents); content of the specialty (83.8 percent); and role model influence (50.8 percent). The share of respondents rating these factors as having a strong influence on their specialty choice was stable between 2014 and 2018. A smaller share of graduates reported that income expectations and educational debt had a "strong influence" on their specialty choice in 2018 (13.5 percent and 6.3 percent, respectively). Over half of graduates (55.3 percent) responded that debt had "no influence" on their specialty choice, while almost half (44.7 percent) reported that debt had a minor, moderate, or strong influence on their specialty choice.

However, the AAMC survey is administered to graduating students before they begin their residency, and their reasons for choosing a specialty may change during their residency. In addition, they may change their specialty choice during or after their residency. For example, according to survey data from 2009 through 2011, almost half (45 percent) of first-year internal medicine residents who reported that they planned to practice general internal medicine changed their career plans by the third year of their residency (West and Dupras 2012).⁴ Similarly, only 38 percent of third-year internal medicine residents who planned to practice general internal medicine had reported this career plan as first-year residents.

Lifestyle preference

Several studies found that lifestyle preference (e.g., work hours and time with family) is an important predictor of specialty choice. A survey of third-year internal medicine residents found that time with family was the most important factor in their career choices (West et al. 2009). A survey of fourth-year medical students at two medical schools found that lifestyle was a more important factor than income in students' choices of certain specialties (e.g., radiology, physical medicine, emergency medicine) (Newton et al. 2005).⁵ But students who chose certain other specialties (e.g., general surgery and obstetrics/gynecology) valued income more highly than lifestyle. A study of the specialty preferences

of graduating medical students from 1996 to 2002 found that perceptions of controllable lifestyle accounted for most of the variation in specialty choice when controlling for income, work hours, and years of training (Dorsey et al. 2003). The authors defined controllable lifestyle as control of the number of hours devoted to clinical practice. Using data from a survey of fourth-year medical students at 11 medical schools, Hauer and colleagues examined the factors that affected whether students chose careers in internal medicine or another specialty (Hauer et al. 2008). They found that students were more likely to pursue a career in internal medicine if they had a favorable impression of their educational experiences in internal medicine, favorable feelings about caring for internal medicine patients, and favorable impressions of internists' lifestyle. Debt was not related to specialty choice.

Student characteristics

There is evidence of a relationship between the characteristics of students and their specialty decisions. A review of the literature found that rural background, lower socioeconomic status, and lower parental income were correlated with the choice of family medicine (Senf et al. 2003). A study based on data from the AAMC's 2002 Medical School Graduation Questionnaire found that students' demographic characteristics were the factors that best predicted choice of practice location and specialty (Rosenblatt and Andrilla 2005). For example, African American students were much more likely than other students to plan to practice in underserved inner-city areas, and female students were much more interested than male students in practicing primary care.

Factors related to medical schools and curricula

The characteristics of medical schools and curricula also influence specialty choice. Medical schools that graduate a higher proportion of primary care physicians are more likely to use community hospitals as teaching sites instead of academic medical centers, have strong primary care missions, and have family medicine departments (Phillips et al. 2009). In addition, curricula that require students to be exposed to primary care increase the likelihood that students will choose primary care careers (Phillips et al. 2009, Senf et al. 2003). Examples include requiring students to complete a clinical clerkship in family medicine and requiring an outpatient rotation in internal medicine (Phillips et al. 2009).

Income expectations

Evidence suggests that income expectations play an important role in the choice of certain specialties but not others. Senf and colleagues found that students with lower income expectations were more likely to choose family medicine and that students who chose a different specialty were concerned about the lower income potential of family medicine relative to other specialties (Senf et al. 2003). A survey of fourth-year medical students at two medical schools found that students who planned to enter certain specialties (e.g., orthopedics, general surgery, and internal medicine subspecialties) were more influenced by income issues than by lifestyle (Newton et al. 2005). A survey of third-year internal medicine residents found that financial considerations were an important factor in the career choices of residents with the most debt (greater than \$150,000) (West et al. 2009).

Educational debt

Evidence that educational debt affects specialty choice is mixed. A survey of fourth-year medical students at 11 medical schools found that debt was not related to specialty choice despite differences in average compensation among specialties (Hauer et al. 2008). Similarly, another survey of medical students at three medical schools found no relationship between anticipated debt and intended specialty choice (Phillips et al. 2010). However, students from middle-income families (defined as an annual income between \$50,000 and \$99,999) were less likely to choose primary care as their debt levels increased. These students may be less likely than wealthier students to have financial support from their families, which may make them more inclined to choose specialties with higher compensation if they expect to accumulate higher debt. A study using data from the AAMC's 2002 Medical School Graduation Questionnaire found that total debt was modestly related to students' career choices when controlling for the students' demographic characteristics (Rosenblatt and Andrilla 2005). Higher debt had a modest negative impact on the likelihood that students would choose primary care, and the impact was greatest among those with the highest debt loads (greater than \$150,000).

A large retrospective study of physicians who graduated from medical school between 1988 and 2000 examined the influence of various factors on the likelihood of practicing primary care and family medicine in 2010

(9 to 22 years after graduation) (Phillips et al. 2014).⁶ Controlling for demographic and socioeconomic characteristics and the type of medical school (public or private), the authors found a nonlinear relationship between debt and specialty choice. Graduates with little or no debt were less likely to practice primary care, perhaps because they came from wealthier families and had higher income expectations. Among graduates of public medical schools, those with debt levels between \$50,000 and \$100,000 were most likely to choose primary care. At higher debt levels, the probability that graduates of public medical schools would practice primary care declined, perhaps because these graduates perceived a need to choose higher paying specialties to finance their higher debt. Among graduates of private medical schools, however, the likelihood of practicing primary care did not decline when debt exceeded \$100,000.

The finding that graduates of public medical schools were less likely to choose primary care when their debt levels exceeded \$100,000 is particularly concerning because median debt levels among all medical school graduates have grown. Data from the AAMC indicate that median medical education debt among medical school graduates increased between 2010 and 2016, from \$164,850 to \$180,000 (adjusted for inflation) (Grischkan et al. 2017).⁷ This increase is likely related to rising tuition and a greater reliance on loans. Surprisingly, over the same period, the share of students graduating with no medical education debt also increased, from 16 percent to 27 percent.⁸ This finding indicates a growing concentration of debt among a smaller share of students. Although there is no clear explanation for the growth in the share of graduates with no debt, three factors appear to play a role: the elimination of federally subsidized loans that were the only source of debt for a subset of borrowers, an increase in the share of graduates who received a scholarship, and growth in the share of graduates from families with parental income of at least \$200,000 (Association of American Medical Colleges 2018a).

Federal and state scholarship, loan forgiveness, and loan repayment programs for clinicians

A growing share of medical school graduates plan to participate in loan forgiveness programs. According to the AAMC's Medical School Graduation Questionnaire, 45.7 percent of 2018 graduates planned to enter a loan forgiveness program, compared with 39.7 percent in 2014

(Association of American Medical Colleges 2018b).⁹ There are several federal and state scholarship programs, loan forgiveness programs, and loan repayment programs for clinicians, including:

- the Public Service Loan Forgiveness (PSLF) program,
- programs sponsored by the Department of Defense (DoD),
- programs for civilian federal employees,
- state loan repayment programs,
- the National Health Service Corps (NHSC), and
- the Primary Care Loan (PCL) program.

Although some of these programs are available to a variety of clinician types (e.g., physicians, dentists, NPs, and PAs) and specialties regardless of where they practice, others are more limited. For example, the NHSC is restricted to primary care clinicians who commit to practicing in underserved areas.

According to the Medical School Graduation Questionnaire, of the approximately 5,280 surveyed medical school graduates in 2018 who planned to enter a loan forgiveness program, the majority (76.3 percent) planned to participate in the PSLF program, followed by hospital programs (8.4 percent), state loan forgiveness programs (6.8 percent), the NHSC (4.4 percent), other programs (2.4 percent), and military programs (0.8 percent) (Association of American Medical Colleges 2018b). By comparison, of those who graduated in 2014 who planned to enter a loan forgiveness program, a smaller share (62.6 percent) indicated they planned to participate in the PSLF program than in 2018, and larger shares planned to participate in state loan forgiveness programs (10.1 percent) and the NHSC (7.6 percent) than in 2018 (Association of American Medical Colleges 2018b).

Public Service Loan Forgiveness program

The PSLF program, which is administered by the Department of Education, was established in 2007 and provides student loan forgiveness to borrowers who have worked full time for a public service employer for 10 years and made at least 10 years of loan payments while working in a public service position (FinAid 2019). This program is not limited to health professionals. Public service employers include federal, state, local, and tribal

government agencies; the military; and tax-exempt organizations (e.g., medical schools, residency programs, and nonprofit hospitals). Only loans provided through the William D. Ford Federal Direct Loan program qualify for forgiveness.

The AAMC estimates the financial benefit of the PSLF program for a medical student who borrows \$200,000 in federal direct loans (Association of American Medical Colleges 2018c). If the student makes loan repayments during three years of residency (which count as time working in public service) and while working in a public service job for seven years after residency, the student would repay a total of \$130,000 and receive \$226,000 of loan forgiveness.¹⁰ These figures assume that the borrower is a 2018 medical school graduate, earns a starting salary of \$160,000 after residency, and participates in an income-driven repayment plan (Association of American Medical Colleges 2018c).

Medical students may be more likely to plan to participate in the PSLF program than the NHSC or state loan repayment programs because the PSLF program does not require them to practice primary care or work in underserved areas. Although there are data on the share of medical students who plan to participate in the PSLF program, there is no information on the share of physicians across all specialties who actually participate. However, a 2016 survey of recent graduates of family medicine residency programs found that, of the 30 percent of respondents who reported participating in a loan repayment program, 23 percent participated in the PSLF program (6.9 percent of all respondents) (Nagaraj et al. 2018).¹¹

The Consumer Financial Protection Bureau (CFPB) and the Government Accountability Office (GAO) have identified significant problems with how the Department of Education and its contractors manage the PSLF program (Consumer Financial Protection Bureau 2017, Government Accountability Office 2018c). The Department of Education contracts with several private companies (student loan servicers) to administer federal student loan programs, and it contracts with one company (the PSLF servicer) to certify borrowers as eligible for the PSLF program and to process loan forgiveness applications. Hundreds of borrowers have complained to the CFPB that student loan servicers have made it difficult for them to navigate the PSLF program (Consumer Financial Protection Bureau 2017). In some cases, the

loan servicers have withheld essential information from borrowers about eligibility for the program, such as the types of loans that are eligible for the program. Borrowers also report that loan servicers have provided them with inaccurate counts of the number of qualified loan payments they have made. This information is important because borrowers must make at least 120 payments (the equivalent of 10 years of payments) to qualify for loan forgiveness.

According to the GAO report, as of April 2018, the Department of Education had processed applications for loan forgiveness from almost 17,000 borrowers but had approved only 55 applications. Forty percent of the applications were denied because the borrower had not yet made 120 loan payments while working in a public service position. Applications were also denied because the application was missing information or because the borrower did not have a qualifying federal loan. The high number of denials suggests that many borrowers are confused about the program's requirements. GAO found that the Department of Education provides insufficient guidance and instructions to the PSLF servicer to operate the program. For example, the Department of Education has not provided the PSLF servicer or borrowers with sufficient information to determine whether an employer qualifies a borrower for loan forgiveness, even though working for a qualifying employer is a key requirement of the program.

State loan repayment programs

Most states have loan repayment programs for health care professionals to meet their workforce needs and expand access to care. These programs are either solely funded by a state or jointly funded by a state and the NHSC (see p. 141 for a description of joint state and NHSC programs). In 2010, there were 93 state programs in 43 states and the District of Columbia (Pathman et al. 2013). Fifty-five programs were solely state-funded loan repayment programs; 27 were joint state and NHSC loan repayment programs; and 11 were direct financial incentive programs, which are similar to loan repayment programs but allow clinicians more flexibility in using program funds (Pathman et al. 2013). A total of 3,325 clinicians (1,288 physicians) participated in these programs. Solely state-funded programs had the largest number of clinicians—2,284 (863 physicians). State programs vary in their eligibility rules and the amount that participants can receive. For example, the Colorado Health Services Corps

Loan Repayment Program is a joint state–NHSC program that provides up to \$90,000 for full-time physicians and dentists; \$50,000 for PAs, APRNs, pharmacists, and mental health professionals; and \$20,000 for dental hygienists who work for three years at an approved site in a health professional shortage area (HPSA) (Association of American Medical Colleges 2019a). California’s Steven M. Thompson Physician Corps Loan Repayment Program is a solely state-funded program that repays up to \$105,000 in educational loans for physicians who serve for three years in a medically underserved area (Association of American Medical Colleges 2019b).

California recently launched a new state-funded loan repayment program called the CalHealthCares program, which is designed to encourage recently graduated physicians and dentists to maintain or increase their caseload of beneficiaries in California’s Medicaid program (Medi-Cal) (Physicians for a Healthy California 2019b). Physicians and dentists are eligible to receive up to \$300,000 for loan repayment in exchange for a five-year service obligation during which Medi-Cal beneficiaries must constitute at least 30 percent of their patient caseload. Physicians in any specialty are eligible to apply. Although applicants are not required to practice in a HPSA, practicing in a HPSA is one of the factors used to determine awards (Physicians for a Healthy California 2019a). The program has \$220 million in funding for 5 years and will make awards to about 125 physicians and 20 dentists per year.

Department of Defense programs

DoD has two primary programs to recruit and train physicians for the military: (1) the Health Professions Scholarship Program (HPSP) and (2) a medical school: The Uniformed Services University of the Health Sciences (USUHS) (Government Accountability Office 2018a).¹² These programs are not limited to specific physician specialties. Under the HPSP, the Army, Navy, and Air Force pay tuition, educational fees, a signing bonus, and a monthly stipend for students enrolled in civilian medical schools and training programs for other health professionals (e.g., dentists, nurses, optometrists, and clinical psychologists) (Congressional Research Service 2016, Department of the Army 2012, Government Accountability Office 2018a). In exchange, students agree to serve six months of active duty for each six months of benefits received, with a two-year minimum obligation. After graduation, most scholarship recipients go on active duty and begin residency training in military hospitals,

while others are granted deferments to receive residency training in civilian hospitals. In fiscal year (FY) 2016, about 3,000 medical students participated in the HPSP, and the program spent about \$150 million on their educational costs (Government Accountability Office 2018a).¹³ USUHS—located in Bethesda, MD—trains physicians, nurses, NPs, and other health professionals (Government Accountability Office 2018a). Medical students do not pay tuition and receive a salary and benefits as commissioned officers. After physicians graduate from USUHS and complete their residency, they are required to serve seven years of active duty. There were 681 medical students at USUHS in FY 2016 (Government Accountability Office 2018a).

Programs for civilian federal employees

The Veterans Health Administration (VHA) of the Department of Veterans Affairs and the Indian Health Service (IHS) of the Department of Health and Human Services have scholarship and loan repayment programs for health professionals who are civilian employees. The VHA operates a scholarship program that provides tuition, fees, and a stipend to students pursuing degrees in certain health professions (Department of Veterans Affairs 2019). In FY 2019, these degrees include master of science in nursing for mental health practitioners and master of physician assistant studies. In exchange for the scholarship, participants who were full-time students must work for the VHA for two to three years. Under the Veterans Affairs Mission Act of 2018, the VHA expects to also offer scholarships to medical and dental students in FY 2020 (Department of Veterans Affairs 2019). In addition, the VHA will begin a loan repayment program for VHA physicians who are board certified in specialties for which recruitment or retention is difficult, but it has not yet implemented this program. The IHS runs a loan repayment program for health professionals who practice in IHS facilities (Indian Health Service 2019). In exchange for a two-year service commitment, clinicians may receive up to \$40,000 to repay educational loans.

The National Health Service Corps

The NHSC was created in 1970 to encourage primary care providers to practice in underserved areas (Congressional Research Service 2018). The program is run by HRSA. As of 2018, there were about 10,900 NHSC providers furnishing care to 11.5 million people at more than 5,000 ambulatory care sites (Health Resources & Services Administration 2019b, Health Resources & Services

Administration 2018d). NHSC providers include primary care physicians, PAs, NPs, nurse midwives, dentists, dental hygienists, and mental and behavioral health providers.¹⁴ In 2016, physicians, PAs, and NPs in the program treated about 6 million patients. A 2016 survey of recent graduates of family medicine residency programs found that, of the 30 percent of respondents who reported participating in a loan repayment program, 13 percent participated in NHSC programs (3.9 percent of all the respondents) (Nagaraj et al. 2018). An evaluation conducted in 2012 found that 55 percent of NHSC clinicians continued to practice in underserved areas 10 years after completing their service commitment (Health Resources & Services Administration 2016). As of February 2011, 42 percent of NHSC clinicians served in rural areas (Pathman and Konrad 2012).

We do not have data on the payer type or other characteristics of patients who receive care from NHSC providers. However, over 60 percent of NHSC clinicians serve in federally qualified health centers (FQHCs), and HRSA collects data on the payer mix of FQHC patients (Health Resources & Services Administration 2018c). About half of FQHC patients in 2017 were covered by Medicaid, 23 percent were uninsured, 17 percent had private insurance, and 9 percent were covered by Medicare (including dual-eligible beneficiaries who were covered by both Medicare and Medicaid) (Health Resources & Services Administration 2019a).

Health care sites that participate in the NHSC Sites that participate in the NHSC include FQHCs, rural health clinics, private practices, Indian Health Service facilities, and community mental health centers. To participate in the NHSC, sites must be located in or serve HPSAs, which are specified geographic areas; certain population groups within a specified geographic area (e.g., migrant farmworkers); or designated facilities with a shortage of primary care, dental, or mental health providers (Health Resources & Services Administration 2018b). To determine a HPSA score, HRSA considers the area's provider-to-population ratio, the share of the population below 100 percent of the federal poverty level, and travel time to the nearest source of care outside of the area (Health Resources & Services Administration 2018a).

The NHSC consists of three types of programs The NHSC consists of three types of programs: (1) the Scholarship Program, (2) federal loan repayment programs, and (3) the State Loan Repayment Program (Table 5-2, p. 140).

They all require recipients to serve at an NHSC-approved site in an underserved area for a minimum amount of time. The largest set of programs is the federal loan repayment programs, followed by the State Loan Repayment Program and the Scholarship Program (Congressional Research Service 2018).

Scholarship Program The NHSC Scholarship Program pays for students' tuition, other educational costs, and a living stipend for up to four years while students train to become physicians, dentists, PAs, NPs, or nurse midwives (National Health Service Corps 2018b). In exchange, students agree to serve as a primary care provider in an underserved area for two to four years upon graduation, depending on the length of the scholarship. In FY 2018, the NHSC awarded 222 new scholarships (Health Resources & Services Administration 2019b).

Federal loan repayment programs There are three NHSC federally funded loan repayment programs:

- the Loan Repayment Program (LRP),
- the Students to Service Loan Repayment Program (S2S LRP), and
- the Substance Use Disorder (SUD) Workforce Loan Repayment Program.

Primary care physicians, PAs, NPs, nurse midwives, dentists, dental hygienists, and mental and behavioral health providers who are fully trained and licensed in their discipline are eligible to apply for the LRP. It pays full-time clinicians up to \$50,000 toward repaying their loans and part-time clinicians up to \$25,000 (National Health Service Corps 2018a). These clinicians must be employed by or have accepted an offer to work at an NHSC-approved site. In exchange, recipients commit to serve for two years. Recipients who have completed two years of service and still have educational debt may extend their service in exchange for additional loan repayment funds. In FY 2018, there were 3,262 new LRP agreements and 2,384 continuing LRP agreements between the NHSC and clinicians (Health Resources & Services Administration 2019b).

Full-time students in their last year of medical or dental school are eligible to apply for the S2S LRP, which HRSA established in 2012 with the goal of increasing the number of physicians and dentists in the NHSC pipeline. Medical students who receive an award must complete a postgraduate training program in primary

**TABLE
5-2**

National Health Services Corps scholarship and loan repayment programs

Program	Eligibility	Minimum service commitment	Number of new awards in FY 2018	Benefit
Scholarship Program	Students training to become physicians, dentists, NPs, PAs, NMs	2-4 years	222	Pays students' tuition, other educational costs, and living stipend
Federal loan repayment programs	Loan Repayment Program: Primary care physicians, NPs, PAs, NMs, mental and behavioral health providers who are trained and licensed	2 years	3,262	Pays full-time clinicians up to \$50,000 and part-time clinicians up to \$25,000 for an initial two-year obligation
	Students to Service Loan Repayment Program: Full-time students in their last year of medical or dental school; recipients who are medical students must complete a postgraduate training program in primary care	3 years	162	Pays full-time physicians and dentists up to \$120,000
	Substance Use Disorder Workforce Loan Repayment Program: Primary care physicians, NPs, NMs, PAs, behavioral health professionals, substance use disorder counselors, RNs, pharmacists	3 years	N/A ^a	Pays full-time professionals up to \$75,000 and part-time professionals up to \$37,500
State Loan Repayment Program	Primary care physicians, NPs, PAs, NMs, mental and behavioral health providers ^b	2 years ^c	625	Loan repayment for qualified educational debt (amount varies by state)

Note: FY (fiscal year), NP (nurse practitioner), PA (physician assistant), NM (nurse midwife), RN (registered nurse), N/A (not applicable).
^aBecause the Health Resources and Services Administration recently created the Substance Use Disorder Workforce Loan Repayment Program, the agency has not yet made any awards.
^bStates may choose to expand or limit the types of clinicians who are eligible to participate in their programs.
^cStates may require more than two years of service in exchange for loan repayments.

Source: Congressional Research Service 2018, Health Resources & Services Administration 2019b, National Health Service Corps 2018a, National Health Service Corps 2018b, National Health Service Corps 2018c, National Health Service Corps 2018d, National Health Service Corps 2017.

care. In exchange for a three-year commitment to provide primary care services in a high-priority HPSA, full-time physicians and dentists may receive up to \$120,000 toward repaying their loans (National Health Service Corps 2017). In addition, recipients who have completed their three-year commitment and have remaining debt may apply to continue in the program in exchange for additional loan repayment funds. In FY 2018, there were 162 new S2S LRP agreements with physicians and dentists (Health Resources & Services Administration 2019b).

The SUD Workforce Loan Repayment Program, created by HRSA in 2018 to support the recruitment and retention of health professionals in HPSAs, is intended to expand access to opioid and substance use treatment and prevent overdose deaths (Sigounas 2019). Providers in certain disciplines who are fully trained and licensed in their discipline are eligible to apply for this program.¹⁵ These providers must be employed at, or have accepted a position at, a SUD treatment site approved by the NHSC. Such sites include FQHCs, rural health clinics, and office-based opioid treatment facilities. This program pays full-time professionals up to \$75,000 for three years

of service and part-time professionals up to \$37,500 for three years of service. Because HRSA has just started to implement this program, the agency has not yet made any awards.

State Loan Repayment Program The State Loan Repayment Program is similar to the federal loan repayment programs except for three differences: (1) It is a federal grant program that requires matching grants from states that participate, (2) states may choose to expand or limit the types of primary care clinicians who are eligible for their programs (e.g., they may choose to include registered nurses and pharmacists), and (3) states may require more than two years of service in exchange for loan repayment (Congressional Research Service 2018). HRSA has awarded a total of \$19 million to the 41 states and the District of Columbia that participate in this program (National Health Service Corps 2019). In FY 2018, there were 625 new loan repayment agreements with clinicians (Health Resources & Services Administration 2019b). The annual award amount for each clinician varies by state (National Health Service Corps 2018d).

As NHSC funding has increased, clinician participation has grown rapidly, especially among nurse practitioners and mental and behavioral health clinicians An expansion of funding for the NHSC has been accompanied by rapid growth in the number of clinicians participating in the program since 2009. In 2009, America's Recovery and Reinvestment Act designated \$300 million to expand the NHSC (Pathman and Konrad 2012). As a result, the number of clinicians in the NHSC more than doubled between March 2009 and February 2011, from 3,017 to 7,713. Since FY 2011, the NHSC has received about \$300 million per year in mandatory funding, which is scheduled to expire after FY 2019 (Congressional Research Service 2018). In FY 2018 and FY 2019, the program also received over \$100 million in discretionary funding (Department of Health and Human Services 2019). Substantial growth in the number of clinicians in the NHSC between FY 2008 and FY 2018—from about 3,600 to about 10,900—suggests that scholarships and loan repayment assistance are a strong incentive for primary care clinicians to practice in underserved areas. However, it is unclear whether the clinicians who participate in the NHSC would have practiced primary care in underserved areas even in the absence of the program. Despite the increase in the number of NHSC clinicians, there is a large unmet demand for them at ambulatory care sites in

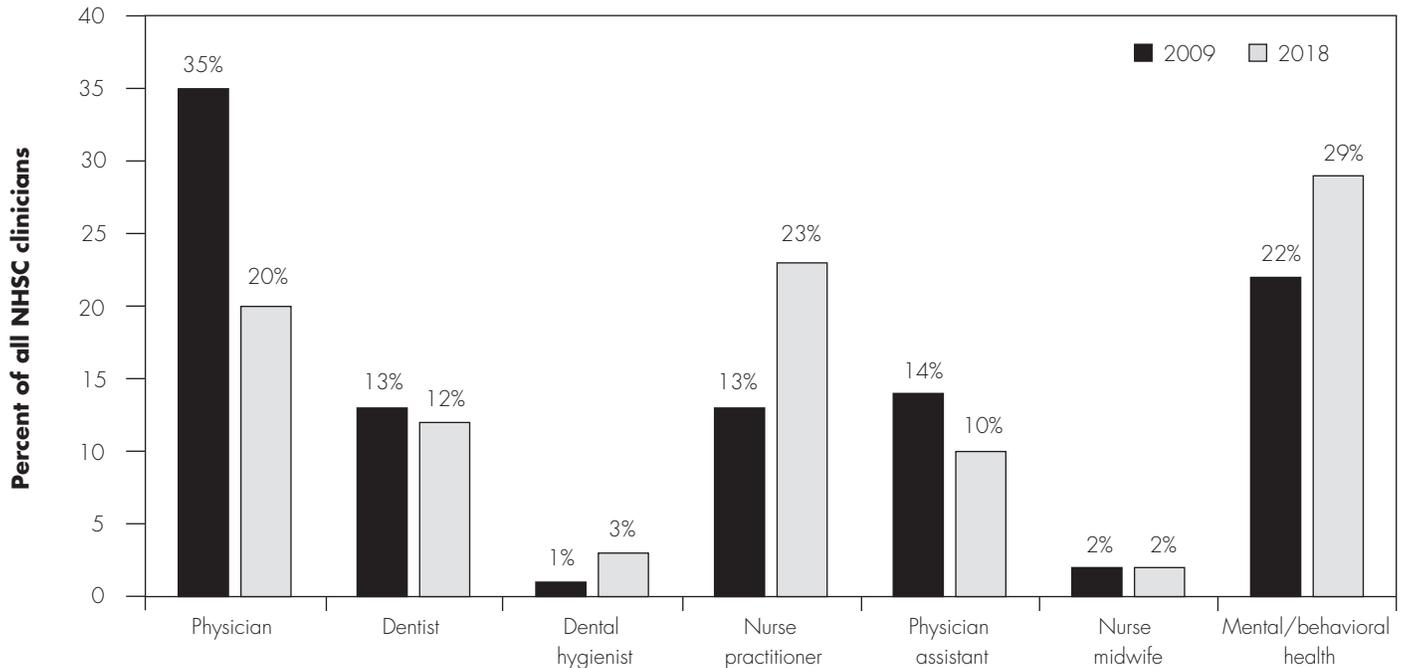
underserved areas. In April 2018, there were 4,605 open, unfilled positions for NHSC clinicians at NHSC sites.

Between 2009 and 2018, the distribution of NHSC clinicians shifted from physicians (including psychiatrists) to NPs and mental and behavioral health clinicians (e.g., psychologists and licensed clinical social workers). Although the number of NHSC physicians increased during this period from 1,689 to 2,149, their share of the total number of NHSC clinicians declined from 35 percent to 20 percent (Figure 5-2, p. 142). Between 2009 and 2018, NPs' share of the total grew from 13 percent to 23 percent, and mental and behavioral health clinicians' share of the total increased from 22 percent to 29 percent.

A relatively high share of NHSC clinicians are from racial and ethnic minorities Clinicians from racial and ethnic minorities account for a higher share of NHSC clinicians than for the health care workforce nationally. In FY 2016, African American physicians represented 17 percent of NHSC physicians, compared with 4 percent of the physician workforce nationally (Health Resources & Services Administration 2016). In the same year, African Americans accounted for 18 percent of NHSC NPs (compared with 8 percent of NPs nationally) and 9 percent of NHSC PAs (compared with 4 percent of PAs nationally) (Health Resources & Services Administration 2018e). Similarly, in the same year, Hispanic or Latino physicians represented 18 percent of NSHC physicians, compared with 4 percent of the physician workforce nationally (Health Resources & Services Administration 2016). In addition, Hispanics or Latinos accounted for 7 percent of NHSC NPs (compared with 3 percent of NPs nationally) and 12 percent of NHSC PAs (compared with 7 percent of PAs nationally) (Health Resources & Services Administration 2018e).

The Primary Care Loan program

The PCL program provides low-interest loans (at 5 percent interest rates) to medical students in exchange for a commitment to practice primary care for a certain amount of time (Health Resources & Services Administration 2018f, Health Resources & Services Administration 2011). By comparison, interest rates for federal graduate and professional loans disbursed between July 1, 2018, and June 30, 2019, ranged from 6.6 percent to 7.6 percent (Association of American Medical Colleges 2018c).¹⁶ HRSA runs the PCL program under Title VII of the Public Health Service Act. Students who receive a loan agree to complete a residency in primary care and practice primary

**FIGURE
5-2****Distribution of NHSC clinicians shifted from physicians to nurse practitioners and mental/behavioral health clinicians, 2009–2018**

Note: NHSC (National Health Service Corps). The physician category includes psychiatrists. The mental/behavioral health category includes psychologists, licensed clinical social workers, marriage and family therapists, psychiatric nurse specialists, and licensed professional counselors but excludes psychiatrists.

Source: Health Resources & Services Administration 2019b, National Health Service Corps 2009.

care after residency; the combined time in residency and in primary care practice must equal at least 10 years, unless the loan is repaid sooner.¹⁷ Unlike the NHSC, the PCL program does not provide scholarship or loan repayment options and does not require participants to practice in underserved areas. It is much smaller than the NHSC.

The PCL program is funded through a revolving fund that includes loan repayments from borrowers, penalty assessments on borrowers who make late payments or default on loans, a federal contribution, and matching contributions from each medical school that participates in the program (Health Resources & Services Administration 2018e). The program does not receive annual appropriations. Medical schools must meet certain requirements to participate in the program: (1) a minimum share of their graduates must practice primary care and (2) they must match one-ninth of the federal loans received by their students and contribute this amount to the revolving

fund. Of the nation's 154 accredited medical schools, 101 participate in the program (62 of them are public).

In the 2016–2017 academic year (the most recent year for which data are available), the program had 2,573 active borrowers, compared with 4,518 in the 2009–2010 academic year (Health Resources & Services Administration 2018e).¹⁸ Borrowers owed a total of \$18.3 million in the 2016–2017 academic year, down from \$23.4 million in the 2009–2010 academic year (Health Resources & Services Administration 2018e). Three factors have likely contributed to the decline in the number of borrowers and the total loan amount: (1) The program's 10-year obligation to practice primary care makes it less attractive than other loan programs, such as the PSLF, which do not require participants to practice a specific specialty; (2) the NHSC program has grown since 2009 and PCL borrowers are not eligible to participate in the NHSC; and (3) interest rates for federal graduate and professional loans fell below 5 percent for several years.

A small proportion of PCL borrowers serve in medically underserved areas or in rural areas.¹⁹ Among borrowers who graduated from medical school four years earlier, 9.4 percent were practicing in a medically underserved area and only 1.5 percent were practicing in a rural area in the 2016–2017 academic year (Health Resources & Services Administration 2018e). Racial and ethnic minorities account for a small share of PCL borrowers. Among PCL borrowers who were enrolled in medical school in the 2016–2017 academic year, only 2.3 percent were African American and only 2.5 percent were Hispanic or Latino (Health Resources & Services Administration 2018e). By comparison, African American physicians and Hispanic or Latino physicians each represent about 4 percent of the physician workforce nationally (Health Resources & Services Administration 2016).

Policy option: Create scholarship or loan repayment program for geriatricians who treat Medicare beneficiaries

Policymakers may wish to consider establishing a scholarship or loan repayment program for physicians who provide primary care to Medicare beneficiaries for a minimum number of years. (Because of the rapid increase in the number of APRNs and PAs (see p. 150), the Commission concludes that there is no need to create a new program to stimulate additional growth of APRNs and PAs.) Although physicians in several specialties (e.g., family medicine, general internal medicine, and geriatrics) furnish primary care to beneficiaries, a Medicare-specific scholarship or loan repayment program should target those physicians most likely to treat beneficiaries to ensure the best use of scarce resources. In addition, because Medicare serves disabled and elderly beneficiaries, the goals of a Medicare-specific program will differ from the goals of other programs that focus on different populations (e.g., patients in underserved areas or members of the military). Therefore, a Medicare-specific program could target geriatricians because they focus on treating elderly patients.

Geriatricians specialize in managing the unique health and treatment needs of elderly individuals, many of whom have multiple chronic conditions, use many medications, and require additional time for treatment and care coordination (Health Resources & Services Administration 2017). Most geriatricians are board certified in internal or family medicine and have completed a one-year fellowship in geriatric medicine. Despite the importance of geriatricians to the Medicare population, only 1,830 geriatricians treated beneficiaries in FFS Medicare in

2017 (less than 1 percent of all physicians who treated FFS beneficiaries in that year).²⁰ Between the 2013–2014 academic year and the 2017–2018 academic year, the number of geriatric medicine residents declined by 2 percent, which raises concerns about the future pipeline of geriatricians (Accreditation Council for Graduate Medical Education 2018).

In a 2008 report, the Institute of Medicine (IOM) called for increasing the number of specialists in geriatric medicine and improving the geriatric competence of the entire health care workforce to meet the needs of the growing number of elderly Americans (Institute of Medicine 2008). Geriatricians are needed both for their clinical expertise and their critical role in educating and training the rest of the workforce in geriatric issues. Although geriatricians receive more training than other primary care physicians, the report found that they have lower incomes, which may discourage physicians from pursuing geriatrics. To increase the number of geriatricians, the report recommended that states and the federal government create loan forgiveness, scholarship, and direct financial incentive programs for professionals who enter geriatrics.

By reducing or eliminating educational debt, a Medicare-specific scholarship or loan repayment program could provide medical students and residents with a financial incentive to choose geriatrics. However, it is difficult to anticipate how medical students and residents would respond to such an incentive. The evidence on whether educational debt influences specialty choice is mixed (see pp. 134–136). The availability of a scholarship or loan repayment subsidy may convince some medical students and residents to choose geriatrics over another specialty, while others may choose a different specialty regardless of the subsidy. Medical students who graduate without debt would not need help repaying loans (about 30 percent of medical students graduated in 2018 without debt). Further, some students and residents would probably choose geriatrics with or without a Medicare-specific scholarship or loan repayment program, as is the case today. Nevertheless, policymakers could consider such a program as an option to address concerns about the future pipeline of geriatricians.

A Medicare-specific scholarship or loan repayment program focused on geriatricians would probably be much smaller than the ones offered by the NHSC, which received about \$400 million in total funding and made new awards to over 4,200 clinicians in 2018 (Congressional Research

Service 2018, Health Resources & Services Administration 2018d). In the 2017–2018 academic year, there were 315 residents in geriatrics (Accreditation Council for Graduate Medical Education 2018). Even if the number of residents in geriatrics doubled and all of them decided to participate in a Medicare-specific scholarship or loan repayment program, the number of participants in such a program would be about 600 per year.

Design issues

There are several issues to consider in designing a scholarship or loan repayment program for geriatricians:

- how the program should be financed,
- whether the program should provide scholarships or loan repayments,
- the minimum number of Medicare beneficiaries participants would be required to treat, and
- the length of the service commitment.

The design and experience of existing programs—such as the NHSC and California’s CalHealthCares program—could help inform these design choices.

A key issue is how to finance a Medicare scholarship or loan repayment program. There are two options that would finance the program with funds that are currently spent on Medicare clinician services. One is to fund it with savings from the Commission’s recommendation to eliminate the Merit-based Incentive Payment System (MIPS) (Medicare Payment Advisory Commission 2018b). Under MIPS, \$500 million is appropriated each year from 2019 to 2024 for exceptional performance (or \$3 billion over that time frame). When the Commission recommended eliminating MIPS, our intent was not to produce budget savings but to consider policies that would reinvest these funds elsewhere in Medicare clinician payment (Medicare Payment Advisory Commission 2018b). One possibility is to use these funds to finance a Medicare scholarship or loan repayment program for geriatricians. The second option is to finance the program with savings from the Commission’s recommendation to require APRNs and PAs to bill Medicare directly, eliminating “incident to” billing for services they provide (pp. 160–162). We estimate that this recommendation will reduce Medicare program spending by \$50 million to \$250 million in the first year and by \$1 billion to \$5 billion over the first five years.

Another issue is whether the program should provide scholarships, loan repayments, or both. The advantage of

scholarships is that they could attract students from low-income backgrounds who might be less likely to apply to medical school because of its high cost. The advantage of loan repayments is that they are targeted to medical students who are closer to graduation (or have already graduated) and therefore have a stronger idea of whether they would like to pursue a career in geriatrics. The program could offer both options, as the NHSC does.

The program would need to determine the minimum number of Medicare beneficiaries whom participating physicians would be required to treat. This standard could be expressed as the absolute number of beneficiaries, Medicare patients’ share of a physician’s total caseload, or a combination of the two (e.g., a physician must treat at least 500 beneficiaries per year and beneficiaries must account for at least 25 percent of the physician’s caseload). California’s CalHealthCares program requires that Medi-Cal beneficiaries constitute at least 30 percent of participants’ patient caseloads. However, the easiest measure to validate would be the absolute number of beneficiaries treated because it could be determined from Medicare claims data alone, whereas the other options would also require data from commercial insurance and Medicaid. It would also be prudent to set a minimum standard for the share of a physician’s Medicare fee schedule services that are primary care services (e.g., ambulatory E&M services) to ensure that participants are focused on primary care.

In addition, the program would need to determine the minimum service time for participants, which could vary based on the amount of the scholarship or loan repayment received. For example, students who participate in the NHSC’s scholarship program serve for two to four years upon graduation, depending on the length of the scholarship. A Medicare-specific program would be less restrictive than the NHSC because it would not require that clinicians serve at designated sites in certain geographic areas. Therefore, it could require additional years of service. One option is to require two to eight years of service (two years for each year of scholarship or loan repayment), which would be twice as long as the maximum service requirement of the NHSC’s scholarship program. By comparison, the PSLF and PCL programs require 10 years of service (unless the loan is repaid sooner), and the CalHealthCares program requires 5 years of service.

Because of limited resources and the difficulty of predicting the impact of a scholarship or loan repayment

program on the career choices of medical students and residents, it would be preferable to target one specialty (geriatrics). After the program is implemented, researchers could evaluate its cost, its impact on physicians' career decisions, and program operations. Policymakers could use this information to improve the program and decide whether to expand it to other primary care specialties.

The supply of APRNs and PAs in Medicare

While the Commission has concerns about the supply of primary care physicians, the number of advanced practice registered nurses (APRNs) and physician assistants (PAs) has increased rapidly and is projected to continue to do so in the future. As a consequence, Medicare beneficiaries rely on APRNs and PAs to provide an increasingly substantial share of their medical needs. However, Medicare collects little up-to-date information regarding the specialties in which APRNs and PAs practice, and Medicare's knowledge regarding who these clinicians treat is obscured by "incident to" billing, which allows APRNs and PAs to bill under the national provider identifier (NPI) of a supervising physician if certain conditions are met. These limitations obscure increasingly substantial amounts of important information on the clinicians who treat beneficiaries and inhibit Medicare's ability to identify and support clinicians furnishing primary care.

PAs are clinicians who have graduated from a PA educational program (most commonly a master's degree program), are certified by the National Commission on Certification of Physician Assistants, and are licensed by the state in which they practice. PA graduate programs are commonly 27 months (3 academic years) (American Academy of Physician Assistants 2018c). PAs train as generalists; their education is modeled after medical school curricula and includes both didactic training in basic medical science and clinical rotations. PAs are trained to work in collaboration with physicians. Currently, most state laws require PAs to have an agreement with a specific physician to practice.

APRNs are registered nurses who have completed additional training (most commonly a master's degree), are certified by one of several certifying bodies, and are licensed by the state in which they practice. There are four categories of APRNs: NPs, clinical nurse specialists

(CNSs), certified registered nurse anesthetists (CRNAs), and certified nurse midwives (CNMs).

Both NPs and PAs provide a broad range of services to Medicare beneficiaries. In contrast, other categories of APRNs provide a relatively narrow set of services to Medicare beneficiaries (e.g., CRNAs predominantly provide anesthesia services) or directly bill Medicare for relatively few services (e.g., CNMs predominantly treat non-Medicare patients). (Because of these and other differences in Medicare payment policies, this chapter focuses on NPs and PAs.)

While NPs and PAs have historically been concentrated in primary care, a large share of NPs and PAs do not work in primary care, and more recent patterns suggest that NPs and PAs are increasingly practicing in specialty fields.²¹ One study found that the share of PAs practicing in family medicine (one subcategory of primary care) was approximately 40 percent in 1996 but declined to 27 percent in 2008 (Hooker et al. 2010). As of 2017, about 27 percent of certified PAs work in primary care, defined as family medicine/general practice, general internal medicine, and general pediatrics (National Commission on Certification of Physician Assistants 2017). For NPs, one study found that the share of NPs practicing in primary care fell from 59 percent for those who graduated in 1992 or earlier to 47 percent for those who graduated in 2008 or later (Chattopadhyay et al. 2015). While estimates of the share of NPs working in primary care vary substantially, one national survey and another study that relied on the specialties of the professionals with whom NPs worked found that roughly half of NPs practiced in primary care (Agency for Healthcare Research and Quality 2011, Health Resources & Services Administration 2014).

Medicare's coverage of NP and PA services

Medicare covers services performed by NPs and PAs if the services are:

- considered physician services if performed by a physician;
- performed by a clinician meeting the qualifications of an NP or PA;
- performed in collaboration with a physician (NP requirement) or under the general supervision of a physician (PA requirement);²²
- not otherwise excluded from Medicare coverage; and

- limited to those services an NP or PA is legally authorized to perform in accordance with state law (Centers for Medicare & Medicaid Services 2018a).

In practice, Medicare generally covers all medically necessary services provided by NPs and PAs in accordance with state law. In other words, Medicare generally does not impose additional restrictions beyond state law regarding what services these clinicians can provide. The few restrictions Medicare places on these clinicians involve requiring physicians, as opposed to NPs or PAs, to certify, order, or supervise certain services. For example, only physicians can order home health and hospice services and can certify the need for diabetic shoes (Centers for Medicare & Medicaid Services 2019, 42 CFR §418.22, 42 CFR §424.22).

State scope-of-practice laws

For NPs, scope-of-practice laws vary substantially from state to state. The American Association of Nurse Practitioners (AANP) groups state scope-of-practice laws into three categories: full practice authority, reduced practice authority, and restricted practice authority.²³ AANP includes states in the full practice authority category if they allow NPs to evaluate and diagnose patients, order and interpret diagnostic tests, and initiate and manage treatments—including prescribing medications and controlled substances—under the exclusive licensure authority of the state board of nursing. AANP includes states in the reduced practice authority category if they reduce the ability of NPs to engage in at least one element of NP practice and meet other criteria, such as requiring a career-long regulated collaborative agreement with another health provider. AANP includes states in the restricted practice authority category if they restrict the ability of NPs to engage in at least one element of NP practice and require a career-long supervision, delegation, or team management by another health provider. As of 2018, AANP included 22 states and Washington, DC, in the full practice authority category, 16 states in the reduced practice authority category, and 12 states in the restricted practice authority category (American Association of Nurse Practitioners 2018a).

Because PAs are generally required to have closer working relationships with physicians, PA scope-of-practice laws are often less specific. Most states now allow the details of each PA's scope of practice to be decided at the practice level instead of prescribed by the state (American Academy of Physician Assistants 2018b). In other words,

physicians may use their professional judgment and familiarity with the PA's education and training to delegate work to PAs. When states do restrict PAs' practice, restrictions may include limitations on their prescribing authority (e.g., limiting their ability to prescribe controlled substances) and a cap on the number of PAs who can be supervised by one physician.

Over time, many states have liberalized their scope-of-practice laws, giving NPs and PAs a greater degree of authority and autonomy. One study found that, from 2001 to 2010, 10 states loosened requirements for physician involvement in the diagnosis and treatment of patients treated by NPs. For example, the study found that Arizona, Colorado, Hawaii, Idaho, Michigan, Rhode Island, Washington, and Wyoming went from requiring collaborative relationships between NPs and physicians to requiring no physician involvement at all (Gadbois et al. 2015). Over the same period, the study found that 17 states increased the prescribing authority of PAs (e.g., allowing PAs to prescribe controlled substances or certain types of controlled substances).

Medicare's billing and payment policies for NPs and PAs

Medicare allows NPs and PAs to bill under the NPI of a supervising physician if certain conditions are met, a practice known as "incident to" billing. Medicare's "incident to" rules were likely not designed to cover the breadth of services NPs and PAs currently furnish to Medicare beneficiaries. As the professions have grown in number of clinicians and types of services performed, Medicare has gradually allowed NPs and PAs to bill the program directly in more circumstances. As a result, Medicare currently allows NPs and PAs to bill in two different ways—directly and "incident to," in certain situations.

Development of Medicare billing and payment policies for NPs and PAs

Medicare's "incident to" policies can be traced to the creation of Medicare. The Social Security Amendments of 1965 defined the coverage of medical and other health services to include physician services and services and supplies "furnished as an incident to a physician's professional service, of kinds which are commonly furnished in physicians' offices and are commonly either rendered without charge or included in the physicians' bills" (U.S. House of Representatives

1965). Contemporaneous reports suggest that the “incident to” benefit covered “services of aides,” but neither the legislation nor these reports indicate that NP and PA services were contemplated as being included in the definition of “incident to” services (U.S. Senate Committee on Finance 1965). The first NP and PA programs were not created until 1965, with the first students graduating in the years thereafter (American Academy of Physician Assistants 2018a, American Association of Nurse Practitioners 2018b). Therefore, given the nascence of the professions and the lack of any explicit reference to these clinicians in Medicare’s original authorizing statute or other contemporaneous reports, Medicare’s “incident to” benefit was unlikely to have contemplated covering services provided by NPs or PAs and especially not the type of services furnished by NPs and PAs today.

Nonetheless, NP and PA services were billed “incident to” in the years after Medicare was established because these clinicians could not bill Medicare directly. While NPs and PAs can still bill “incident to” today, Medicare’s billing rules have changed incrementally over time to allow NPs and PAs to be paid directly for their services in more circumstances. For example, in the 1970s, the Congress was concerned with the lack of primary care physicians in rural areas and observed that, in some isolated rural communities, NPs and PAs were the lone source of primary care. However, Medicare often did not reimburse for medical services furnished by NPs and PAs in these rural locations because these clinicians could not bill Medicare directly and the services often did not meet the definition of “incident to” services. At the time, Medicare’s “incident to” requirement had “been interpreted to mean that two requirements must be met. The first is that there must be direct physician supervision of the services provided by the nonphysician personnel. The second is that the services provided by the nonphysician personnel cannot be physician-type services, that is, they cannot be actual medical services” (U.S. House of Representatives Committee on Ways and Means 1977). The services provided by NPs and PAs in some rural communities at the time met neither of these two criteria because the services were of the type normally performed only by physicians and physician supervision of the services was only indirect (U.S. House of Representatives Committee on Ways and Means 1977). To address this issue, the Congress passed the Rural Health Clinic Services Act of 1977, which (among other provisions) provided for cost-based reimbursement for rural health clinic services, the

definition of which included NP and PA services (U.S. House of Representatives 1977).

While a full review of the changes to direct and “incident to” billing for NPs and PAs is beyond the scope of this report, other significant pieces of legislation that expanded billing privileges for NPs and PAs include the Omnibus Budget Reconciliation Act (OBRA) of 1986, OBRA 1987, OBRA 1989, OBRA 1990, and the Balanced Budget Act of 1997. For example, among other changes, OBRA 1989 expanded coverage to include NP services provided in a skilled nursing facility (U.S. House of Representatives 1989). The Balanced Budget Act of 1997 granted NPs and PAs the ability to bill Medicare directly across the entire country and in all practice settings (U.S. House of Representatives 1997).

Current Medicare billing and payment policies for NPs and PAs

Currently, Medicare allows services furnished by NPs and PAs to be billed under their NPIs or a supervising physician’s NPI if certain conditions are met. If billed under an NP or PA’s NPI, Medicare pays 85 percent of the standard physician fee schedule rate, and assignment is mandatory (that is, balance billing is not allowed).²⁴ If the services are instead billed under the physician’s NPI, Medicare pays the full physician fee schedule rate, and assignment is not mandatory. To bill in this manner, Medicare’s “incident to” rules must be followed.

Medicare’s “incident to” rules are complex and apply only to services furnished to certain patients and in certain settings. Under Medicare’s current “incident to” rules, services must be furnished in noninstitutional settings. For example, NPs practicing in a hospital outpatient department cannot bill under Medicare’s “incident to” rules. Other “incident to” requirements include the following provisions:

- The physician must initiate treatment and maintain active involvement in the patient’s case, meaning that “incident to” billing is not allowed for new patients or established patients with new problems; and
- The services must generally be rendered under a physician’s direct supervision. *Direct supervision* means the physician must be present in the office suite and immediately available to furnish assistance and direction (it does not mean that the physician must be present in the room when the service is furnished) (42 CFR §410.26, Noridian Healthcare Solutions 2018).²⁵

In addition to allowing NPs and PAs to bill “incident to” physician services, Medicare also allows other individuals to bill “incident to” NP and PA services (Noridian Healthcare Solutions 2018). For example, a registered nurse could perform a service and bill under an NP’s NPI so long as all of Medicare’s “incident to” rules are met. In this case, the service would be paid at 85 percent of the standard physician fee schedule rate (because the service would be billed as if it were provided by the NP).

Comparing the quality and cost of care provided by NPs and PAs with the care provided by physicians

Services historically delivered by physicians are increasingly being delivered by NPs and PAs. As these shifts have occurred, researchers have studied the effects of NP- and PA-provided care relative to physician-provided care on clinical quality outcomes, patient experience, utilization, spending, and other metrics. Our ability to draw definitive conclusions from the studies in this area, despite it being a well-studied area of health policy, is somewhat constrained by several methodological factors.

Studies may not isolate the effects of clinician type (NP/PA vs. physicians) from other systematic differences

Of the numerous studies in this area, few use a randomized design, assigning each patient to an NP, PA, or physician and then comparing costs, quality, and patient experience.

In lieu of random assignment, many studies use claims data, encounter data, or custom surveys, and they retrospectively adjust for patient severity, practice environment, and clinician mix. Such analyses are valuable and can yield important insights. However, practices that employ both NPs or PAs and physicians might systematically direct lower acuity patients to NPs or PAs. Patients may also choose among physicians, NPs, and PAs based on their preferences or perceived severity of illness. To the extent systematic differences exist in the types of patients treated by physicians compared with those treated by NPs or PAs that are not observable in the data (and thus cannot be adjusted for), these studies may not effectively isolate the effects of clinician type from other confounding factors.²⁶

Many studies are small, lack sufficient statistical power to detect meaningful differences, or are limited in applicability

Of the studies we reviewed for this chapter, many had small sample or case sizes, limiting the ability of the studies to detect smaller differences in outcomes or spending. Other studies were conducted in certain settings that could limit their generalizability (e.g., many studies evaluate care provided by the Veterans Health Administration), studied only certain types of care (e.g., HIV/AIDS treatment or cardiovascular care), or assessed trends in limited settings (e.g., a convenience sample of one large practice). In addition, some studies found statistically significant differences, but the magnitude of the differences was small.

Studies that use Medicare claims are confounded by “incident to” billing

For claims-based studies, Medicare’s and other payers’ “incident to” policies obscure researchers’ ability to determine who actually performed a service because a substantial portion of services performed by NPs and PAs appears in claims data to have been performed by physicians.

Studies can become dated quickly

Rapid changes in this field suggest that analyses may become outdated more quickly than in other fields. The number of clinically active NPs and PAs has expanded rapidly over the last two decades. NPs and PAs graduate from an increasing number of programs from across the country and could be different from prior cohorts of NPs and PAs (e.g., experience, education). Also, NPs’ and PAs’ respective scopes of practice have expanded over time so that a larger number of NPs and PAs are providing a larger array of services with more autonomy. These facts suggest that ongoing research will be needed to assess the effects of NPs and PAs on costs and quality of care.

Findings of existing literature

Notwithstanding these limitations, existing research suggests that NPs and PAs, within the confines of their respective scopes of practice, provide care that is substantially similar to that of physicians in terms of clinical quality outcomes and patient experience. The evidence regarding the impact of NPs and PAs on the cost of care for payers, such as Medicare, is less robust and somewhat mixed, as at least a few studies suggest that NPs

and PAs order more services. These conclusions are based on a high-level review of over 100 peer-reviewed journal articles, including meta-analyses and original research. A few findings from the literature are summarized as follows:

- ***Clinical quality outcomes and patient experience.*** A large body of research, including both randomized clinical trials and retrospective studies using claims and surveys, suggests that care provided by NPs and PAs produces health outcomes that are equivalent to physician-provided care (Kurtzman and Barnow 2017, Naylor and Kurtzman 2010). Many studies focus on certain conditions (e.g., HIV/AIDS and diabetes care) or care provided in certain settings (e.g., the Veterans Health Administration) and find no detectable differences in quality or health outcomes (Faza et al. 2018, Wilson et al. 2005). In addition, a variety of studies have also found that patient experience is comparable when patients are treated by NPs or PAs versus physicians (Hooker et al. 2005, Naylor and Kurtzman 2010, Newhouse et al. 2011). One older study using a randomized design to allocate patients between NPs and physicians showed no difference in patient outcomes, either initially or after a two-year follow-up (Lenz et al. 2004, Mundinger et al. 2000). Another randomized study from England during the same period found no difference in health outcomes but did find that NPs had longer visits and ordered more tests than physicians (Venning et al. 2000).
- ***Cost savings and utilization.*** Cost savings are often discussed in two different contexts: savings for providers that employ NPs or PAs and savings for payers. NPs and PAs nearly always lower costs (and increase profits) for their employers because their salaries are less than half of physician salaries, on average, but their services can be billed at the full physician rate or at a modest discount (e.g., 15 percent discount in Medicare). Whether NPs and PAs generate cost savings for payers such as Medicare is dependent on payment rates and how NPs and PAs affect utilization, including utilization directly controlled by NPs and PAs and downstream utilization. When NPs and PAs bill under their own NPIs, Medicare and beneficiaries save 15 percent up front; when services are billed “incident to,” Medicare receives no such savings. Beyond the

upfront 15 percent savings, some research suggests that NPs and PAs generate additional savings for Medicare and other payers by reducing downstream costs, such as lower inpatient costs or reduced total episode costs (Perloff et al. 2016, Spetz et al. 2013). In contrast, others suggest that NPs and PAs could increase costs, or at least mitigate the savings generated by their lower payment rates, because patients treated by NPs and PAs might need more follow-up visits with other clinicians and because NPs and PAs might have higher prescribing rates (e.g., Part D drugs) and rates of ordering ancillary services (e.g., diagnostic imaging) (Hemani et al. 1999). Evidence to support this hypothesis is mixed. For example, one study using Medicare claims found a higher rate of diagnostic imaging by NPs and PAs compared with physicians in the episode of care after an E&M visit, ordering 0.3 more images per episode (Hughes et al. 2015). Other studies find no detectable differences in ordering or referring patterns among physicians, NPs, and PAs for an episode of care (Begaz et al. 2017, Liu et al. 2017).

Medicare FFS billing trends for APRNs and PAs

Medicare’s “incident to” rules obscure the true breadth and depth of the services APRNs and PAs furnish to Medicare FFS beneficiaries. In other words, the utilization figures we present in this chapter underestimate the actual number of APRNs and PAs who provide care for Medicare beneficiaries, the number of services they perform, and the number of beneficiaries they treat. Notwithstanding this limitation, trends in the number of services, allowed charges, and unique APRNs and PAs who billed Medicare over the last several years indicate that the program is increasingly reliant on these clinicians.

Total Medicare FFS allowed charges billed by APRNs and PAs reached nearly \$7.3 billion in 2017, more than doubling from 2010 to 2017 (Table 5-3, p. 150). NPs accounted for the largest share of these allowed charges in 2017 (about \$3.8 billion). Combined, NPs and PAs accounted for more than 80 percent of APRN and PA billings in 2017. Total allowed charges billed by NPs and PAs also grew rapidly from 2010 to 2017, averaging 17 percent and 14 percent growth per year, respectively. Over the same time, the number of Medicare Part B FFS beneficiaries grew by an average of less than 1 percent per year (data not shown).

**TABLE
5-3****Total allowed charges billed by APRNs and PAs grew rapidly from 2010 to 2017**

Practitioner type	Total allowed charges billed (in millions)		Average annual growth rates, 2010–2017	Total percent growth, 2010–2017
	2010	2017		
Nurse practitioner	\$1,249	\$3,757	17%	201%
Physician assistant	916	2,249	14	145
Certified registered nurse anesthetist	869	1,197	5	38
Clinical nurse specialist	54	72	4	33
Certified nurse midwife	2	5	19	239
Total	3,090	7,281	13	136

Note: APRN (advanced practice registered nurse), PA (physician assistant). There are four categories of APRNs: nurse practitioners, certified registered nurse anesthetists, clinical nurse specialists, and certified nurse midwives. Growth rates are calculated from unrounded numbers. These figures do not account for services billed “incident to.” Components may not sum to totals due to rounding.

Source: MedPAC analysis of the Physician/Supplier Procedure Summary file.

An increasing number of NPs and PAs billing Medicare predominantly drove the rapid growth in total allowed charges. From 2010 to 2017, the total number of NPs and PAs who billed Medicare FFS more than doubled, from roughly 95,000 to 212,000 (Table 5-4). Similar to the trends in allowed charges, the growth in the number of NPs billing Medicare was slightly higher than the growth in the number of PAs billing Medicare—an average annual growth rate of 14 percent for NPs versus 10 percent for PAs.

The rapid growth in the number of NPs and PAs billing Medicare is consistent with the rapid growth in the supply

of these practitioners nationally. For example, the number of new NP graduates in the U.S. nearly tripled between 2003 and 2014, from 6,611 per year to 18,484 per year (Salsberg 2015). Over the same period, the number of newly certified PAs grew from 4,337 per year to 7,578 per year (Salsberg 2015). While NPs and PAs constitute a disproportionate share of clinicians in rural areas, research suggests that growth in the number of NPs and PAs is occurring in both urban and rural areas (Barnes et al. 2018).

The rapid expansion in the supply of NPs and PAs has been met with equally robust demand from hospital

**TABLE
5-4****Total number of nurse practitioners and physician assistants who billed Medicare more than doubled from 2010 to 2017**

Practitioner type	Unique number of practitioners billing FFS Medicare (in thousands)		Average annual growth rates, 2010–2017	Total percent growth, 2010–2017
	2010	2017		
Nurse practitioner	52	130	14%	151%
Physician assistant	43	82	10	91
Total	95	212	12	124

Note: FFS (fee-for-service). Clinicians were assigned to the specialty under which they billed a plurality of allowed charges in 2017. These figures do not account for NPs and PAs who always bill “incident to.”

Source: MedPAC analysis of 100 percent carrier standard analytic files.

**TABLE
5-5**

Number of beneficiaries for whom a nurse practitioner or physician assistant billed at least one service grew rapidly from 2010 to 2017

Category	2010		2017	
	Number of unique beneficiaries (in thousands)	Share of beneficiaries	Number of unique beneficiaries (in thousands)	Share of beneficiaries
Nurse practitioner	5,216	16%	11,317	34%
Physician assistant	4,461	14	8,784	26
Total (nurse practitioner or physician assistant)	8,443	26	16,020	48
Total Part B fee-for-service	32,189	100	33,582	100

Note: The total number of beneficiaries for whom a nurse practitioner (NP) or physician assistant (PA) billed at least one service does not sum to the total because some beneficiaries had a service billed by both an NP and a PA. These figures do not account for “incident to” billing.

Source: MedPAC analysis of 100 percent carrier standard analytic file and the annual reports of the Boards of Trustees of the Medicare trust funds.

systems, physician groups, and other employers (e.g., retail health clinics). The strong demand for NPs and PAs is evidenced by their increasing salaries, which suggest employers are offering higher salaries to recruit them. For example, between 2010 and 2017, PAs’ median annual salary grew from about \$86,000 to \$105,000, an average annual growth rate of 2.8 percent. This salary growth exceeded inflation, which increased at an average annual rate of 1.7 percent over the same period (Bureau of Labor Statistics 2018, Bureau of Labor Statistics 2017a, Bureau of Labor Statistics 2010). Strong demand could be driven by a number of factors, including difficulties recruiting physicians in certain areas (e.g., rural areas) and NPs’ and PAs’ lower relative employment costs. For example, as part of the Commission’s annual focus groups, one primary care physician who owned a practice succinctly summarized the cost advantage of hiring an NP or PA rather than a physician: “You’re billing the same rate but not paying the same amount. As an owner, I want to hire more nurse practitioners.”

As the number of NPs and PAs grows, Medicare beneficiaries are increasingly relying on them. In 2010, approximately 8.4 million beneficiaries had at least one service billed by an NP or PA, constituting roughly 26 percent of Medicare Part B FFS beneficiaries (Table 5-5). By 2017, the numbers increased to 16.0 million beneficiaries and 48 percent of Medicare Part B FFS beneficiaries.

NPs and PAs bill Medicare FFS predominantly for E&M services. In 2017, roughly 80 percent of NPs’ total allowed charges were for E&M services (Table 5-6, p. 152). For PAs, the share was slightly lower at 65 percent. In the E&M services category, office visits represented the largest subcategory of services. For NPs, the next largest E&M subcategory was nursing facility services, and for PAs, the next largest subcategory was emergency department services (data not shown). Beyond E&M services, PAs’ billings were more concentrated than NPs’ billings in the major procedures and other procedures categories. Within procedures, PAs’ billings were concentrated in services involving beneficiaries’ skin or musculoskeletal system (data not shown).

Because E&M office visits constituted the largest subcategory of services billed by both NPs and PAs in 2017, we examined how billing patterns for those services changed over time for all APRNs and PAs relative to specialists and primary care physicians. From 2010 to 2017, the number of E&M office visits billed by APRNs and PAs increased from 11 million to 31 million, an increase of 184 percent (Table 5-7, p. 153). Over the same period, the number of E&M office visits billed by primary care physicians decreased by 16 percent; the number billed by specialists increased by 6 percent. The rapid increase in E&M office visits billed by APRNs and PAs underscores the growing role APRNs and PAs play in providing care to Medicare beneficiaries.

**TABLE
5-6**

Nurse practitioners and physician assistants billed Medicare predominantly for evaluation and management services in 2017

Type of service	Nurse practitioners		Physician assistants	
	Allowed charges, 2017 (in millions)	Share of total	Allowed charges, 2017 (in millions)	Share of total
Evaluation and management	\$3,013	80%	\$1,457	65%
Procedures (other)	228	6	344	15
Procedures (major)	23	1	163	7
Imaging	24	1	38	2
Tests	34	1	16	1
Other	435	12	231	10
Total	3,757	100	2,249	100

Note: "Other" includes laboratory tests, Part B drugs, unclassified services, anesthesia services, and durable medical equipment, prosthetics, orthotics, and supplies. Numbers may not sum to total due to rounding. These figures do not account for "incident to" billing.

Source: MedPAC analysis of the Physician/Supplier Procedure Summary file.

Neither the growing role of APRNs and PAs nor the decline in office visits billed by primary care physicians is unique to the Medicare program. For example, from 2012 to 2016, one analysis of private-payer data found a decline of 18 percent in the number of office visits to primary care physicians and a corresponding increase of 129 percent in office visits to NPs and PAs (Health Care Cost Institute 2018). Similar declines occurring in both the privately insured and Medicare populations suggest that Medicare’s relatively lower payment rates for physician services is unlikely to be driving the decline. Instead, the decline could reflect changes in the broader health care system.

Prevalence of “incident to” billing for NPs and PAs

While these utilization and spending figures illustrate the rapid growth in services billed by NPs and PAs, they undercount the number of services NPs and PAs actually furnished and the number of NPs and PAs who treated Medicare beneficiaries.²⁷ However, the magnitude of the undercount is not known because the existing literature on the prevalence of “incident to” billing is limited.

Specifically, we identified only two estimates of the share of NPs whose services are billed “incident to,” but to our knowledge, no published research has examined the share of NPs’ or PAs’ services that are billed “incident to” or the number of PAs whose services are billed “incident to.” We therefore conducted two original analyses to provide greater insight into the prevalence of “incident to” billing. Our first analysis focused on E&M office visits for established patients in physician offices because NPs and PAs commonly perform these services and “incident to” billing is allowed for established patients in physician offices. For this analysis, we estimate that, in 2016, 43 percent and 31 percent of E&M office visits performed by NPs and PAs, respectively, for established patients in physician offices were billed under a physician’s NPI. Our second analysis looked more broadly at the share of NPs and PAs whose services may be billed “incident to.” We found that at least some of the services provided by 51 percent of NPs and 43 percent of PAs were likely billed “incident to” in 2016.

Review of the literature on “incident to” billing for NPs and PAs

Researchers have typically taken one of two approaches to measure “incident to” billing. The first approach involves

**TABLE
5-7**

Number of E&M office visits billed by APRNs or PAs grew rapidly while the overall number of E&M office visits increased modestly from 2010 to 2017

Practitioner type	Millions of visits								Percent change, 2010-2017
	2010	2011	2012	2013	2014	2015	2016	2017	
APRN or PA	11	13	15	18	20	24	28	31	184%
Primary care physician	97	95	93	91	88	86	84	81	-16
Specialist	133	134	136	142	140	141	143	141	6
Total	241	242	244	251	249	251	255	253	5

Note: E&M (evaluation and management), APRN (advanced practice registered nurses), PA (physician assistant). The primary care physician category includes internal medicine, family medicine, pediatric medicine, geriatric medicine, and (in 2017) hospitalists. Many physicians who previously billed under the internal medicine specialty began billing as hospitalists when Medicare introduced a hospitalist specialty code in April 2017. The change does not affect these results because hospitalists billed relatively few E&M office visits in 2017. "Specialist" is defined as not being a primary care physician, APRN, or PA. Numbers may not sum to totals due to rounding. These figures do not account for "incident to" billing.

Source: MedPAC analysis of the Physician/Supplier Procedure Summary; Healthcare Common Procedure Coding System® codes 99201-99205 and 99211-99215.

using physician time assumptions that underlie Healthcare Common Procedure Coding System (HCPCS) codes in the physician fee schedule to identify outliers. Specifically, researchers search for all claims billed by a physician during a given period, such as a day or week. They then sum all the physician work time that is assumed to be associated with each HCPCS code. If a physician bills for more than a reasonable amount of time, then researchers conclude that the physician may be billing for services other practitioners actually performed. For example, in a 2009 study, the Health and Human Services Office of Inspector General (OIG) determined that when physicians billed for more than 24 hours of services in a day, half of the services were not performed personally by a physician; the report further found that unqualified nonphysicians, such as medical assistants, performed 21 percent of the services that physicians did not perform personally (Office of Inspector General 2009).

While this methodology could be helpful in identifying potential abuses and outliers, its utility is limited with respect to explaining the prevalence of "incident to" billing. First, such methodologies reliably identify only outliers because many other physicians likely employ NPs and PAs but do not bill for 24 hours of services in a day.²⁸ Second, such methodologies are time intensive and cannot be applied broadly. To determine who actually performed the services billed by physicians who billed for more than

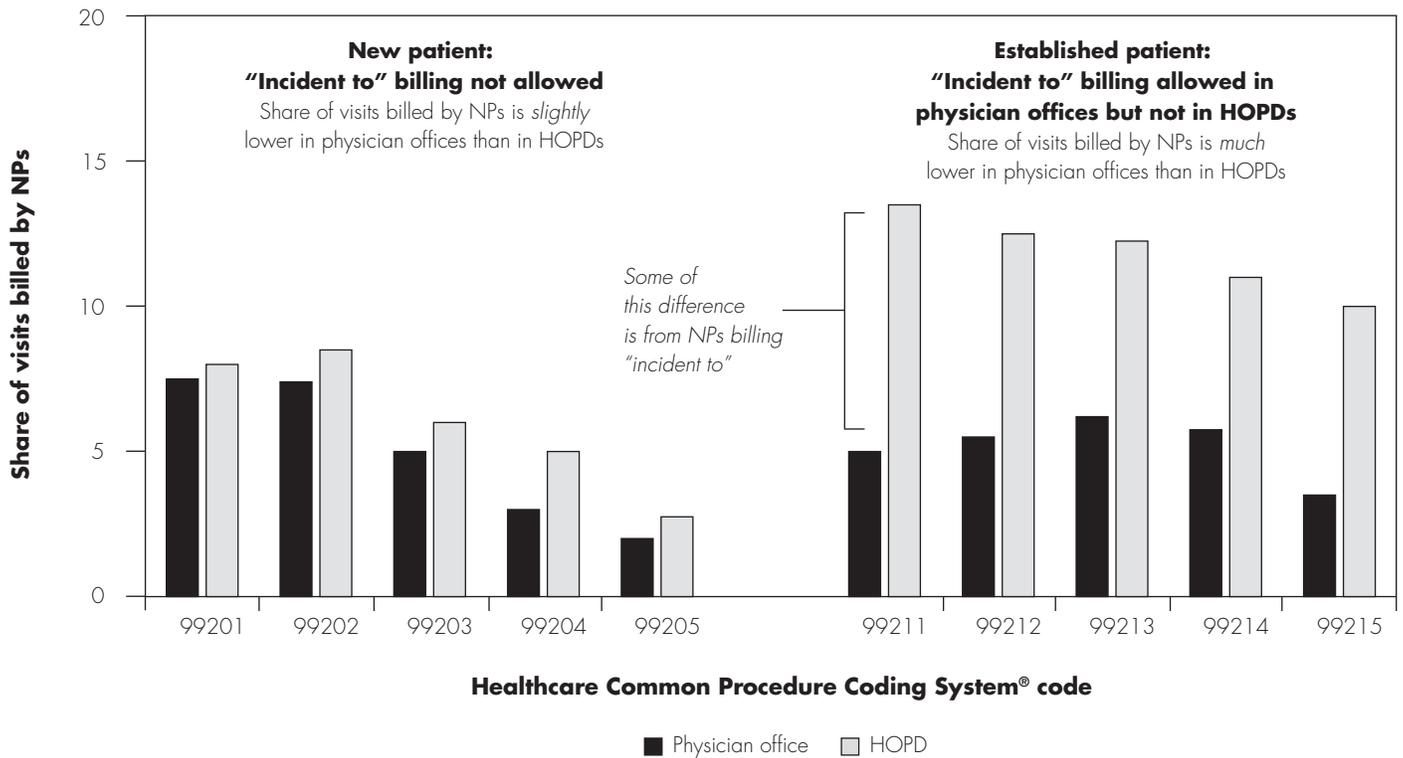
24 hours of services in a day, OIG had to directly solicit information from physicians, after conducting a claims-based analysis.

The second common approach to measuring the prevalence of "incident to" billing is through surveys. We identified two surveys that queried NPs regarding the extent to which they billed under their own NPI or the NPI of their supervising physician. (To our knowledge, no published research has examined the prevalence of "incident to" billing for PAs.) In one survey, 29 percent of primary care NPs who worked with a primary care physician reported that all services they rendered were billed under a physician's NPI, and 24 percent indicated that some of their services were billed under a physician's NPI (Buerhaus et al. 2015). The second survey found that about 63 percent of clinically active NPs with an NPI reported ever using it for billing, which suggests that the remaining 37 percent of NPs could be billing under their supervising physician's NPI (Health Resources & Services Administration 2014).

Both surveys provide useful information regarding the prevalence of "incident to" billing. However, the surveys were fielded in 2011 and 2012, so, given the rapidly expanding number of NPs in practice, the findings could be somewhat dated. Also, surveys might not accurately capture the prevalence of this billing practice because NPs

FIGURE 5-3

Nurse practitioners likely performed a greater share of E&M office visits for established patients in 2016 than Medicare billing data indicate because of “incident to” billing



Note: E&M (evaluation and management), NP (nurse practitioner), HOPD (hospital outpatient department).

Source: MedPAC analysis of 100 percent carrier standard analytic file.

are typically salaried employees for whom their employer bills, and thus they might be unaware how their services are billed.²⁹

Commission analyses of “incident to” billing for NPs and PAs

Given the age, potential shortcomings, and paucity of the existing literature regarding the prevalence of “incident to” billing, we conducted two analyses to better establish the prevalence of such billing in FFS Medicare. Because claims data lack any indication that a particular claim was billed “incident to,” our estimates are intended to provide approximations of the prevalence of “incident to” billing as opposed to precise estimates.

The first analysis capitalizes on differences in Medicare’s “incident to” rules depending on the setting in which a

service is performed and whether a beneficiary is a new or established patient to produce an estimate of the share of E&M office visits for established patients that were billed “incident to” in 2016. Medicare does not permit “incident to” billing for services performed in hospital outpatient departments (HOPDs) but does allow the practice in physician offices. This means that all NPs’ and PAs’ services provided in HOPDs should be billed under their own NPIs, but NPs and PAs may bill under the NPI of a physician in a physician office.³⁰ In addition, Medicare does not permit “incident to” billing for new patients, regardless of the setting in which the service is performed, but does for established patients. Thus, whenever an NP or PA provides a service to a new patient, regardless of the setting, the service should be billed under the NP’s or PA’s own NPI. These different billing rules allow us to compare NPs’ and PAs’ billing patterns in situations in which the

performing NPI field in claims data accurately reflects the clinician who performed the service (i.e., where “incident to” billing is not allowed) to situations where the performing NPI field might not accurately reflect the clinician who performed the service (i.e., situations where such billing is allowed) to produce estimates of “incident to” billing.

In 2016, we found that NPs billed for a substantially higher share of E&M office visits for established patients in HOPDs (where “incident to” billing is not permitted) versus physician offices (where such billing is permitted). For example, for a Level 3 office visit with an established patient (HCPCS code 99213), NPs billed for nearly twice the share of visits in HOPDs that they did in physician offices (12.5 percent vs. 6.4 percent) (Figure 5-3). This finding suggests one of two possibilities: NPs actually furnished a higher share of office visits in HOPDs (compared with physician offices) or a substantial amount of services furnished in physician offices by NPs were billed under a physician’s NPI.

To examine the possibility that NPs actually furnished a higher share of office visits in HOPDs, we examined the share of office visits billed by NPs for new patients (for whom “incident to” billing is not allowed, regardless of setting). In contrast to our findings for established patients, we found that the share of office visits billed by NPs for new patients in HOPDs was only slightly higher than the share NPs billed for in physician offices. For example, for a Level 3 office visit for a new patient (HCPCS code 99203), NPs billed for 6.2 percent of visits in HOPDs compared with 4.9 percent in physician offices, a difference of 1.3 percentage points (Figure 5-3).

The combination of these two findings suggests that NPs might actually perform a slightly higher share of E&M office visits in HOPDs versus physician offices but that the magnitude of this difference is likely too small to account for the large observed differences between settings for established patients. Instead, Medicare’s “incident to” billing policy appears to be the more likely reason for the preponderance of the observed difference.

Based on these data, we can also estimate the share of NPs’ E&M office visits for established patients performed in physician offices that were billed “incident to” in 2016. To do so, we assumed that the relative difference (between HOPDs and physician offices) in the share of office visits performed by NPs was the same for established patients as it was for new patients.³¹ Using this assumption, we estimate that approximately 43 percent of all NPs’ E&M

office visits for established patients performed in physician offices were likely billed “incident to” in 2016 and therefore appear, in the claims data, as though they were performed by a physician. We also conducted this analysis for PAs and estimate that 31 percent of their E&M office visits for established patients performed in physician offices were likely billed “incident to” in 2016 (data not shown).

The second original analysis we conducted estimates the share of NPs and PAs for whom some or all of their services might have been billed “incident to” in 2016.

Because Medicare’s payment rates are higher when fee schedule services are billed under a physician’s NPI, employers of NPs and PAs have a financial incentive to bill for their services under a physician’s NPI. However, no similar financial incentive exists to put a physician’s NPI in the claim field indicating who ordered a service or Part D drug. Therefore, the NPIs of NPs and PAs who treat Medicare beneficiaries might not be used to bill for services but could appear in the referring or prescribing provider fields on claims. For example, an NP might furnish an office visit to a beneficiary, and this service might be billed under a physician’s NPI to receive the higher payment. However, the NP’s NPI might be included in the referring provider field if the NP ordered a laboratory test for the same beneficiary because there is no financial incentive to put a physician’s NPI in that field.

We examined patterns of NPIs appearing in the performing and referring/ordering fields in claims to produce an estimate of the number of NPs and PAs who might have treated Medicare beneficiaries but had some or all of their services billed under a physician’s NPI. To do so, we determined the number of FFS beneficiaries in 2016 for whom services were billed under an NP’s NPI. (We consider a service billed under an NP’s NPI when that NP’s NPI appears in the performing provider field in the carrier file.) For the same year, we also determined the number of FFS beneficiaries for whom each NP ordered any one of several common services or products—a Part D drug; laboratory test; imaging procedure (performed in a physician office or an independent diagnostic testing facility); or durable medical equipment, prosthetics, orthotics, and supplies. We then compared these two lists of NPs and sorted them into three categories based on the number of FFS beneficiaries for whom they appeared in the performing provider field versus the number of FFS beneficiaries for whom they ordered services or drugs (Table 5-8, p. 156).

**TABLE
5-8**

Grouping nurse practitioners into three categories of “incident to” billing based on their billing and referring patterns in 2016

Category	Summary	Definition	Illustrative example
Category 1	All physician fee schedule services likely billed “incident to”	NPs who never appeared in the performing provider field but ordered services/drugs for at least one FFS beneficiary	NP never appeared in the performing provider field but ordered services/drugs for 25 FFS beneficiaries in 2016
Category 2	Some physician fee schedule services likely billed “incident to”	NPs who appeared in the performing provider field for at least one FFS beneficiary but ordered services/drugs for more FFS beneficiaries than they appeared in the performing provider field for	NP appeared in the performing provider field for 50 beneficiaries and ordered services/drugs for 100 beneficiaries in 2016
Category 3	Physician fee schedule services likely not billed “incident to”	NPs who appeared in the performing provider field for the same number or more FFS beneficiaries as they ordered services/drugs for	NP appeared in the performing provider field for 200 beneficiaries and ordered services/drugs for 100 beneficiaries in 2016

Note: NP (nurse practitioner), FFS (fee-for-service). The “performing provider field” refers to the field in carrier file claims data. “Incident to” billing allows NPs (and certain other clinicians) to bill under the national provider identifier of a supervising physician if certain conditions are met.

Source: MedPAC analysis.

In 2016, the total number of NPs who appeared in the performing provider field or ordered a service or drug for at least one FFS beneficiary totaled nearly 138,000 (Figure 5-4). We found that over 23,000 of these NPs (17 percent) never appeared in the performing provider field but ordered services or drugs for at least 1 FFS beneficiary (Category 1). Many of these NPs treated a limited number of Medicare FFS beneficiaries in 2016, but when they did treat Medicare beneficiaries and their services were billed under the fee schedule, the services were presumably billed “incident to.”³² For NPs in Category 2 (some services likely billed “incident to”), we found that over 46,000 NPs appeared in the performing provider field for at least 1 FFS beneficiary but ordered services or drugs for more FFS beneficiaries than they appeared in the performing provider field for. These NPs constitute about 34 percent of our total count of NPs.³³ The remainder of NPs are in Category 3 and appeared in the performing provider field for the same number or more FFS beneficiaries than the number for whom they ordered services or drugs, meaning that their fee schedule services were likely not billed “incident to.” Together, these analyses suggest that some or all of the fee schedule services performed by 51 percent of NPs could have

been billed “incident to” in 2016 and the services of the remaining 49 percent of NPs likely were not billed as such.

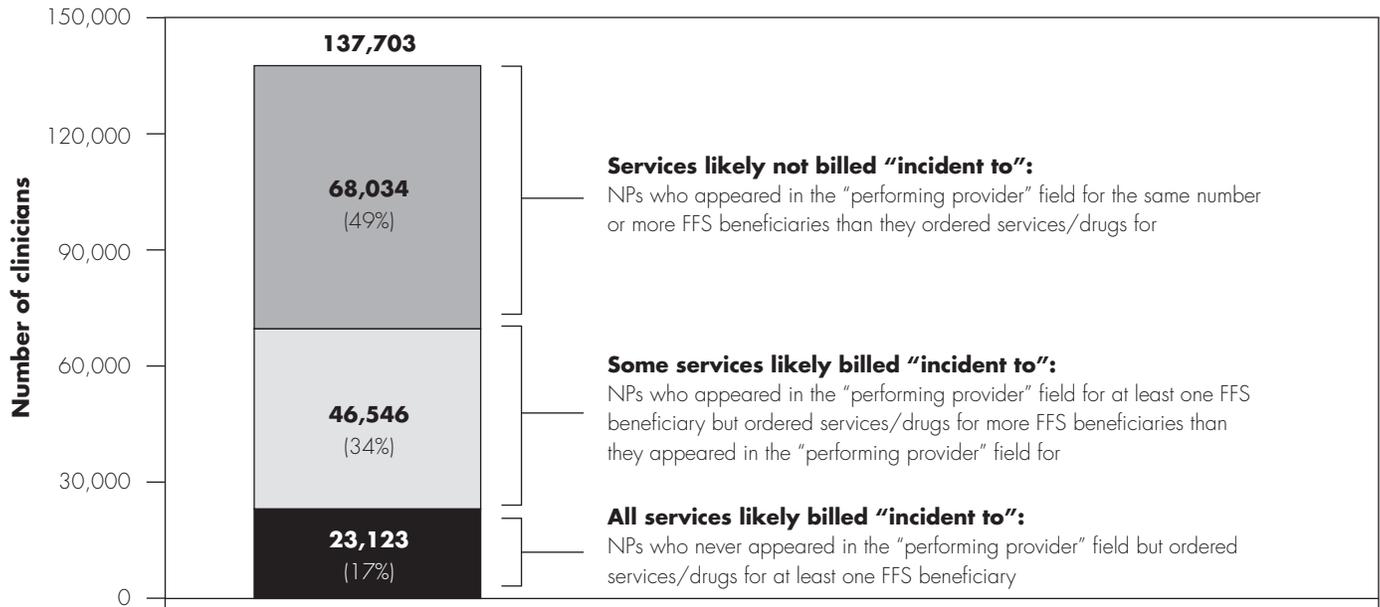
We also performed the same analysis for PAs in 2016 and found that some or all of the services performed by 43 percent of PAs were likely billed “incident to,” while the services performed by 57 percent of PAs likely were not. Specifically, of the total 88,524 PAs, we conclude that all the fee schedule services performed by 13,071 PAs (15 percent) were likely billed “incident to” and that some of the fee schedule services performed by 24,628 PAs (28 percent) were likely billed “incident to” in 2016. The services performed by the remaining 50,825 PAs (57 percent) were likely not billed “incident to” in 2016 (data not shown).

Despite their limitations, both of our original analyses suggest that a substantial share of services performed by NPs and PAs for Medicare beneficiaries are likely billed under the NPI of a physician.

Regarding the analysis of the number of NPs and PAs whose services were billed “incident to” in 2016, our categories are likely somewhat imprecise and capture a

FIGURE 5-4

Half of nurse practitioners likely had some or all of their physician fee schedule services billed “incident to” in 2016



Note: NP (nurse practitioner), FFS (fee-for-service). Analysis includes NPs who billed at least one claim as the performing provider in the carrier file and NPs who ordered at least one clinical laboratory service; imaging service (performed in a physician office or an independent diagnostic testing facility); durable medical equipment, prosthetics, orthotics, and supplies product; or Part D drug in 2016. Analysis was limited to fee-for-service beneficiaries with no months of Medicare Advantage coverage. “Incident to” billing allows NPs (and certain other clinicians) to bill under the national provider identifier of a supervising physician if certain conditions are met.

Source: MedPAC analysis of carrier standard analytic file (SAF), DME SAF, and the Part D drug event file.

multitude of different employment arrangements. For example, our methodology might classify NPs as always billing “incident to” when they are employed by the Department of Veterans Affairs and write prescriptions for Medicare beneficiaries to fill through Part D; in reality, the services performed by such an NP might not be billed under Medicare’s physician fee schedule.³⁴ Having said that, our estimate of the share of NPs whose services are sometimes or always billed “incident to” (51 percent) was only slightly lower than one previous, survey-based estimate from 2012 of primary care NPs (53 percent) (Buerhaus et al. 2015).³⁵

To our knowledge, no existing research has examined the share of NPs’ or PAs’ services billed “incident to” or the share of PAs who bill “incident to.” So, our estimates cannot be directly compared with prior research.

However, two trends are worth noting. First, both of our analyses suggest that services performed by PAs might be less likely to be billed “incident to” compared with NPs’ services. This pattern could be due to PAs performing a higher share of their services in settings where such billing is not allowed (e.g., hospitals), the fact that PAs more commonly work for specialists, or some other reason.³⁶ Second, our analyses suggest that much of the “incident to” billing that occurs is attributable to some of an NP’s or PA’s services being billed “incident to” and others being billed directly. This finding comports with the fact that Medicare allows “incident to” billing only in certain circumstances. It also suggests that many practices should be able to easily transition to direct billing if “incident to” billing were eliminated because they are already billing directly for NP and PA services in many circumstances.

Eliminating “incident to” billing for APRNs and PAs

The rapidly expanding number of APRNs and PAs and states’ decisions to increase their authority and independence means that Medicare’s “incident to” rules increasingly obscure policymakers’ knowledge of who provides care to Medicare beneficiaries. Eliminating this type of billing for APRNs and PAs and requiring these clinicians to bill under their own NPIs would change Medicare’s billing policies so that claims better reflect which clinicians deliver care, thus enhancing transparency and improving program integrity.

Eliminating “incident to” billing for APRNs and PAs would be a change in how services are billed under Medicare, but would not require changes in state supervision requirements or care delivery. First, eliminating “incident to” billing for APRNs and PAs would not change any supervision or collaboration requirements states establish in their scope-of-practice laws. For example, many states allow physicians to use their professional judgment and familiarity with a PA’s education and training to delegate work to them; this process of physicians delegating services based on their clinical expertise would be unaffected by changes in Medicare’s “incident to” billing rules.³⁷ Second, eliminating “incident to” billing would not directly require changes in the way care is provided, including care delivered by a team of clinicians. Many care teams consist of physicians, APRNs/PAs, and other professionals. However, the entire team does not see a beneficiary on every visit. Rather, for some cases, such as a follow-up visit after minor surgery, an APRN or PA might furnish the entire service. For other cases, a beneficiary might see multiple clinicians during one visit. The clinical decision regarding the unique level of care needed by each beneficiary would continue to be the province of the clinical team if “incident to” billing was eliminated, with the main difference being that Medicare claims would more accurately reflect the team member who directly furnished care at a point in time.

Motivations for eliminating “incident to” billing for APRNs and PAs

Medicare’s “incident to” rules were first established roughly 50 years ago, before APRNs’ and PAs’ rapid expansion in number and importance in the health care delivery system. Eliminating “incident to” billing for

APRNs and PAs and instead requiring these clinicians to bill Medicare directly would update Medicare’s payment policies to better reflect current clinical practice. In addition to improving policymakers’ foundational knowledge of who provides care for Medicare beneficiaries, direct billing could create substantial benefits for the Medicare program, beneficiaries, clinicians, and researchers that range from improving the accuracy of the physician fee schedule, reducing expenditures, enhancing program integrity, and allowing for better comparisons between the cost and quality of care provided by physicians and APRNs/PAs.³⁸ More detailed descriptions of potential benefits are summarized in Table 5-9.

While eliminating “incident to” billing for APRNs and PAs could create substantial benefits, some stakeholders have suggested that CMS carefully monitor the implementation of any change for potential unintended consequences and other implementation challenges.

First among issues to monitor is beneficiaries’ access to primary care. Specifically, the concern is that eliminating “incident to” billing could adversely affect beneficiary access to primary care because some services rendered by NPs, PAs, and CNSs that were previously billed under a physician’s NPI (and paid at 100 percent of fee schedule rates) would be billed under their own NPIs (and paid at 85 percent of fee schedule rates). The Commission believes primary care is the foundation of a well-functioning health care delivery system. The Commission annually measures beneficiaries’ access to primary care and has consistently found that Medicare FFS beneficiaries have access as good as or better than commercially insured individuals (Medicare Payment Advisory Commission 2019). Nonetheless, the Commission has proactively recommended several policies to boost primary care and continues to work to ensure Medicare beneficiaries have access to an adequate supply of primary care clinicians.³⁹ While the Commission believes in a robust primary care system, it is not clear that paying for services furnished by NPs, PAs, and CNSs at 85 percent of fee schedule rates would reduce access to primary care. Most of these clinicians’ services are already paid at this lower rate, and yet the supply of these clinicians has increased dramatically over the last several years. Additionally, the salary differential between NPs, PAs, and CNSs versus physicians is large enough that employing them likely would remain attractive even if all of their services were paid at 85 percent of physician fee schedule rates. Median

**TABLE
5-9**

Potential benefits associated with requiring direct billing for APRNs and PAs

Benefit	Description
Fee schedule valuations	<p>A major contributor to Medicare’s payment rates for physician fee schedule services is the amount of physician work time that is assumed to be required for each service. Thus, ensuring the accuracy of time assumptions is critical to an accurate fee schedule. If physicians perform a service faster than what is assumed, the payment rates for those services would be too high (relative to other services).</p> <p>Requiring APRNs and PAs to bill directly could help CMS and other relevant stakeholders identify potentially misvalued Healthcare Common Procedure Coding System® codes. For example, if a physician bills for services with abnormally high time estimates (e.g., 100 hours a week), it could be due to a number of factors, including “incident to” billing, misvalued services, or fraudulent and abusive practices. Requiring APRNs and PAs to bill under their own NPIs would remove one reason for aberrant billing patterns and allow CMS to more accurately identify those services for which time assumptions are potentially inaccurate.</p>
Reducing Medicare spending and beneficiary financial liability	<p>Requiring APRNs and PAs to bill under their own NPIs would produce savings for the Medicare program and beneficiaries because Medicare pays 15 percent below physician fee schedule rates when NPs, clinical nurse specialists, and PAs bill under their own NPIs. (Medicare pays for services performed by certified registered nurse anesthetists and certified nurse midwives at 100 percent of the physician fee schedule rate, regardless of whether the service is billed under their NPI or a physician’s NPI.)</p>
Provider efficiency and beneficiary access	<p>Medicare’s “incident to” rules are numerous and complex. First, complying with these rules likely involves some level of administrative burden. Second, while physician practices might comply with the rules in order to receive higher payments, these billing rules could keep physicians from optimally structuring their practice for efficiency and access. For example, because “incident to” billing applies only to established patients, physician practices have an incentive to use APRNs and PAs to treat established patients (to get the higher payment) when their time might be better spent dealing with new patients with certain injuries or illnesses.</p>
Program integrity	<p>The current “incident to” rules are difficult to enforce. MACs cannot easily identify claims billed under Medicare’s “incident to” rules because of a lack of identifying information on the claims. To the extent a MAC suspects that a practice is not complying with the rules, the MAC would likely be required to review medical records. This process is time intensive and expensive, and even after going through this process, MACs would not necessarily be able to determine whether the billing provider appropriately complied with Medicare’s “incident to” rules. Therefore, requiring APRNs and PAs to bill under their NPIs would narrow a rule that Medicare currently has a limited capacity to enforce but one that involves the distribution of substantial revenues to clinicians.</p> <p>Requiring APRNs and PAs to bill under their own NPIs could also improve CMS’s ability to identify providers who are engaging in fraudulent billing because the billing data would be more accurate.</p>
Comparing the care provided by physicians and NPs/PAs	<p>Many studies that evaluate whether NPs and PAs produce similar health outcomes, order more or fewer diagnostic tests, or save money compared with physicians rely on retrospective claims-based analyses. However, the existing literature and Commission analyses suggest that a substantial share of NP and PA services cannot be identified in claims data because of Medicare’s “incident to” rules. Requiring direct billing would improve the quality of future studies.</p>
Other	<p>Researchers have suggested other benefits associated with eliminating or restricting “incident to” billing, including improved quality measurement under the Medicare Access and CHIP Reauthorization Act of 2015, improved workforce planning, and limiting reputational harm to physicians from the appearance of excessive billing in publicly published physician utilization data (Buerhaus et al. 2018).</p>

Note: APRN (advanced practice registered nurse), PA (physician assistant), NPI (national provider identifier), MAC (Medicare administrative contractor), NP (nurse practitioner).

Source: MedPAC analysis.

annual compensation for NPs and PAs was about \$105,000 in 2017 (Bureau of Labor Statistics 2017b, Bureau of Labor Statistics 2017c). By comparison, in 2017, median annual compensation was \$242,000 for primary care physicians, \$432,000 for dermatologists, \$488,000 for gastroenterologists, and \$570,000 for orthopedic surgeons (Zuckerman et al. 2019).

Further, paying more for services billed “incident to” is an imprecise mechanism to help ensure access to primary care because both primary care and non–primary care services can be billed “incident to.” While NPs and PAs have historically been concentrated in primary care, over time, a large share of NPs and PAs have moved into specialty care. Recent estimates suggest that half of NPs and only 27 percent of PAs work in primary care (Agency for Healthcare Research and Quality 2011, Health Resources & Services Administration 2014, National Commission on Certification of Physician Assistants 2017). Given current specialty distributions and trends in specialty selection, allowing APRNs and PAs to bill “incident to” likely provides substantial and growing amounts of additional revenue for specialty care, such as dermatology and orthopedic surgery, suggesting that policies other than “incident to” billing could likely better target resources toward primary care.

Other concerns regarding the implementation of direct billing for APRNs and PAs are more minor or technical. First, some stakeholders have suggested that some APRNs and PAs do not have NPIs. However, industry stakeholders and survey data indicate that nearly all APRNs and PAs who provide patient care already have NPIs and are permitted by Medicare to bill for their services directly. For example, one survey from 2012 found that about 95 percent of NPs providing patient care reported having an NPI (Health Resources & Services Administration 2014). Second, some have raised concerns regarding how eliminating “incident to” billing would affect care coordination, given that these services are often performed by multiple clinicians. While our conversations with private payers do not suggest that eliminating “incident to” billing would negatively affect care coordination, policymakers could consider exempting certain care coordination codes from a general prohibition on “incident to” billing. Such an exemption would be a narrow one, as all care coordination/management services accounted for less than 1 percent of Medicare physician fee schedule spending in 2017, and could mirror private-payer policies (Medicare Payment Advisory Commission 2019). For example, one private payer generally prohibits NPs and

PAs from billing “incident to” but allows the practice for a small number of HCPCS codes that are considered inherently collaborative, such as certain care coordination services (PacificSource Health Plans 2018).⁴⁰

The third implementation issue involves establishing rules regarding which NPI to include as the performing provider on a claim when an APRN/PA and a physician both see a beneficiary during the same visit in a physician office. Currently, such services, referred to as shared or split visits, can be billed only under the physician’s NPI if they comply with Medicare’s “incident to” rules, which would no longer be applicable if such billing were prohibited for APRNs and PAs. However, beneficiaries see only an APRN or PA (not an APRN/PA plus a physician) during many visits, so this concern is likely not applicable to many visits. In addition, Medicare already does not allow “incident to” billing in institutional settings, such as HOPDs, and we are not aware that hospitals have encountered substantial issues deciding which NPI to include on claims for split visits that occur in HOPDs.⁴¹ In HOPDs, the split visit can be billed under the physician’s NPI if the physician provides any face-to-face portion of the E&M visit with the patient (Centers for Medicare & Medicaid Services 2018b). Therefore, if APRNs and PAs are required to bill with their own NPIs, Medicare could institute a policy for noninstitutional settings similar to the current split visit policy for HOPDs or institute a similar policy (e.g., requiring a service be billed under the clinician who performed most of the service).

Requiring APRNs and PAs to bill Medicare using their own NPIs would eliminate “incident to” billing for these clinicians. The Commission focused on reforming the billing rules for APRNs and PAs because of their rapid growth in recent years, the financial incentive to bill many of their services “incident to,” and Medicare’s growing reliance on such clinicians to deliver primary and specialty care. Medicare also allows services provided by other clinicians, such as registered nurses and physical therapists, to be billed under its “incident to” rules. These clinicians are outside the scope of this report, but the Commission could consider examining them in the future. See the text box on “incident to” billing for clinicians other than APRNs or PAs.

RECOMMENDATION 5 - 1

The Congress should require advanced practice registered nurses and physician assistants to bill the Medicare program directly, eliminating “incident to” billing for services they provide.

“Incident to” billing for clinicians other than APRNs or PAs

In addition to advanced practice registered nurses (APRNs) and physician assistants (PAs), Medicare allows others to bill “incident to,” including individuals who cannot bill Medicare directly and clinicians who can bill directly.

Certain individuals who provide services to Medicare beneficiaries do not have a separate benefit category and therefore cannot bill Medicare directly under the physician fee schedule. Examples of such individuals include registered nurses, licensed practical nurses, and medical assistants. Little systematic information exists regarding how often such individuals provide discrete services to Medicare beneficiaries and the types of services provided. Conversations with experts in the field suggest that these individuals might appropriately perform some services independently; the Health and Human Services Office of Inspector General has also documented that some have inappropriately performed complex services, such as micrographic surgical removal of tumors (Office of Inspector General 2009). Unless multiple new benefit categories were added, continuing to allow physicians (and other clinicians who can directly bill Medicare) to bill for these individuals’ services under Medicare’s “incident to”

rules is the only manner in which the services they provide can be directly paid.

Some private payers require claims modifiers when individuals who cannot bill the payer directly furnish services and bill under the national provider identifier (NPI) of a physician or other clinician. For example, one private payer that generally does not allow “incident to” billing for APRNs and PAs allows such billing for providers that are not eligible to be credentialed by the plan, but claims for services performed by such individuals must include the “SA” modifier (PacificSource Health Plans 2018). Several other private payers use the SA modifier more broadly to identify “incident to” services.

In addition, other types of clinicians, such as physical and occupational therapists, can bill Medicare directly and can bill “incident to.” These clinicians tend to provide a narrow range of services relative to physicians, nurse practitioners, or PAs. In addition, most of these clinicians do not have a financial incentive to bill under a physician’s NPI because Medicare pays 100 percent of the physician fee schedule rate regardless of whether the service is billed under the physician’s or other clinician’s NPI.⁴² ■

RATIONALE 5-1

Medicare beneficiaries increasingly use APRNs and PAs for both primary and specialty care. This increasing reliance is evidenced by the rapid growth in the number of APRNs and PAs billing Medicare and commensurately high growth rates in allowed charges and beneficiaries for whom these clinicians billed services. Concurrent with these rapid increases, states, which are responsible for regulating APRNs’ and PAs’ scopes of practice, have increasingly given these clinicians more authority and autonomy. The result is that, over time, APRNs and PAs are furnishing a larger share and a greater variety of services for Medicare beneficiaries than they did in the past.

Despite this growing reliance, Medicare does not have a full accounting of the services delivered and beneficiaries treated by APRNs and PAs because the program’s “incident to” billing rules allow services delivered by these clinicians to be billed under the NPI of a physician. As the number of APRNs and PAs has grown, the use of “incident to” billing means that the program increasingly lacks information about who is treating beneficiaries. This lack of transparency creates several problems. For example, “incident to” billing may undermine the appropriate valuation of fee schedule services and create a potential program integrity vulnerability because Medicare pays higher rates for services when they are billed “incident to” but has a limited capacity to enforce its “incident to”

rules. Eliminating “incident to” billing for APRNs and PAs and requiring such clinicians to bill under their own NPIs would address these issues. Medicare would then pay NPs, PAs, and CNSs 85 percent of fee schedule rates instead of the full fee schedule rate that is paid when services are billed “incident to.”

IMPLICATIONS 5-1

Spending

- The recommendation is expected to reduce Medicare program spending by \$50 million to \$250 million in the first year and by \$1 billion to \$5 billion over the first five years compared with current law.

Beneficiary and provider

- The recommendation is expected to reduce beneficiaries’ financial liabilities. The recommendation is not expected to adversely affect beneficiaries’ access to care. APRN and PA services would be billed under their own NPIs instead of physicians’ NPIs, thereby improving policymakers’ knowledge of who provides care for Medicare beneficiaries. Some practices that employ NPs, PAs, and CNSs would experience a decline in revenues.⁴³

Medicare’s specialty designations for APRNs and PAs

Medicare has limited data on the specialties in which APRNs and PAs practice. CMS predominantly relies on specialty data from two sources—the National Plan and Provider Enumeration System (NPPES) and the Provider Enrollment, Chain, and Ownership System (PECOS). Providers apply for NPIs through NPPES; as part of that process, providers select a primary specialty and up to two secondary specialties. CMS does not verify the self-selected specialty data (Bindman 2013). Providers enroll in PECOS to be able to bill the Medicare program; when enrolling, providers specify their specialty. The provider specialty that appears on Medicare FFS claims data is pulled from PECOS using providers’ NPIs to link claims to PECOS.

Both of these sources of specialty data have shortcomings. First, the specificity of the data are limited. In PECOS, NPs and PAs select “nurse practitioner” or “physician assistant” as their specialty; no information is reported regarding the specialty in which NPs and PAs actually

practice. In NPPES, the specialty data are more granular, but providers can still select specialties that do not allow CMS to determine the specialty in which NPs or PAs practice. For example, a PA can select a generic taxonomy code (363A00000X) or one indicating that the clinician practices in a medical field (363AM0700X) or surgical field (363AS0400X) (Table 5-10).

Private payers have more information about the specialties in which APRNs and PAs practice compared with Medicare. Some private payers collect specialty information from APRNs and PAs through the credentialing process, allow plan enrollees to designate NPs and PAs as their primary care providers, and allow APRNs and PAs to self-designate a specialty to be included in a plan’s online provider directory. For example, Aetna allows APRNs and PAs to designate a practitioner type (e.g., NP, PA, CNS, CRNA, and CNM), the specific degree obtained, one of three practice types (primary care, OB/GYN, or specialty), and specialty within that practice type (e.g., primary care–geriatrics) (Aetna 2018).

Another issue with APRN and PA specialty data from NPPES is how often the data are updated. While providers are instructed to update their data when a change occurs, there are no regularly scheduled data updates and no explicit penalty for a provider having out-of-date information in NPPES (Bindman 2013). Updating specialty information for APRNs and PAs is particularly important because they have a greater ability to switch specialties compared with physicians. When physicians change specialties, they often must go through an additional residency in the new specialty. In contrast, fewer barriers exist for APRNs and PAs to switch specialties. Accordingly, one study found that 49 percent of clinically active PAs changed specialties sometime in their careers (Hooker et al. 2010).

Motivations for refining Medicare’s specialty designations for APRNs and PAs

The Medicare program often relies on specialty information to target payments, construct alternative payment models, and achieve other goals. In those instances, more refined specialty information on APRNs and PAs could improve the operation of the programs. For example:

- **Targeting payments to primary care.** Medicare’s Primary Care Incentive Payment (PCIP) program lasted from 2011 through 2015 and made an

**TABLE
5-10**

Physician assistant taxonomy codes from the National Plan and Provider Enumeration System

Provider type	National Plan and Provider Enumeration System taxonomy code	Taxonomy code label
Physician assistant	363A00000X	Physician Assistants & Advanced Practice Nursing Providers/Physician Assistant
	363AM0700X	Physician Assistants & Advanced Practice Nursing Providers/Physician Assistant, Medical
	363AS0400X	Physician Assistants & Advanced Practice Nursing Providers/Physician Assistant, Surgical

Source: National Plan and Provider Enumeration System provider taxonomy codes.

additional payment of 10 percent to certain primary care providers for delivering primary care services. NPs, CNSs, and PAs could be considered primary care providers if at least 60 percent of their allowed charges under the physician fee schedule during a specified time period were for certain E&M services (Centers for Medicare & Medicaid Services 2014). However, because NPs and PAs predominantly provide E&M services but many do not work in primary care, these types of payment adjustments are not well targeted. For example, such policies would distribute extra funding to a PA who predominantly conducts office visits in a dermatology practice. While the PCIP is no longer in effect, future efforts to boost payment rates for primary care could suffer from the same flaw.

- **Assessing resource use and quality.** Medicare’s current quality programs use a specialty adjustment for some cost measures to account for a perceived difference in unmeasured patient severity between clinicians in certain specialties. Treating all NPs or PAs as the same specialty, given the diversity of practice environments and types of services provided, is misleading.
- **Attributing beneficiaries to accountable care organizations (ACOs).** CMS’s process to assign beneficiaries to ACOs relies on accurately identifying primary care practitioners. For example, in the Medicare Shared Savings Program, beneficiaries are attributed to ACOs in the first step of the process using primary care physicians plus NPs, PAs, and

CNSs. However, many NPs, PAs, and CNSs do not practice in primary care, so counting them as primary care providers for the purposes of ACO attribution is, in many cases, incorrect (Centers for Medicare & Medicaid Services 2018c).

While the refined specialty designations could help address these issues, more specific categories would likely have some limitations. Similar to physician specialties, the refined specialty categories would be self-reported by APRNs and PAs, which could lead to some designations being inaccurate. In addition, APRNs and PAs might work across specialties, such as an NP who works in a multispecialty practice. In such cases, APRNs and PAs could report the specialty under which they predominantly practice, but the classification would be imperfect.

In addition, more refined specialty codes could increase administrative burden for clinicians (who would need to pick a new specialty designation) and CMS (who would need to create the new specialty codes). However, the added administrative burden should be modest given that APRNs and PAs are already required to select a specialty category when they enroll in Medicare, and while CMS has not refined the categories for APRNs and PAs, the agency has introduced a number of refined specialty codes for physicians in the last several years. For example, a few of the specialties to which CMS has assigned a new specialty code since 2012 include sleep medicine, interventional cardiology, hospitalist, advanced heart failure and transplant cardiology, medical toxicology, and undersea and hyperbaric medicine.

RECOMMENDATION 5-2

The Secretary should refine Medicare’s specialty designations for advanced practice registered nurses and physician assistants.

RATIONALE 5-2

NPs (the largest subset of APRNs) and PAs have historically been concentrated in primary care. More recently, however, greater shares of NPs and PAs are practicing in various specialty fields, with recent estimates suggesting that only half of NPs and 27 percent of PAs work in primary care. For various Medicare programs and policy objectives, such as attributing beneficiaries to ACOs, Medicare often considers all NPs, PAs, and CNSs to be primary care providers because the program has limited details on the specialty in which these clinicians actually practice. Because of the shifts in specialty selection over time for NPs and PAs, this assumption increasingly inhibits Medicare’s efforts to identify and support clinicians furnishing primary care.

Therefore, at a minimum, Medicare’s specialty designations should allow the program to differentiate between NPs, PAs, and CNSs who practice in primary care versus a specialty field.⁴⁴ Because of the career flexibility of APRNs and PAs, the data should be required to be updated on a regular basis. Both of these objectives could be achieved through the PECOS enrollment process because clinicians are already required to designate a specialty when first enrolling in PECOS and PECOS data are already required to be revalidated every five years (42 CFR §424.515).⁴⁵

IMPLICATIONS 5-2

Spending

- The Commission’s recommendation is not expected to affect Medicare program spending in the first year or over five years compared with current law.

Beneficiary and provider

- No changes are expected in beneficiaries’ access to care or financial liabilities. Certain APRNs and PAs would need to select a refined specialty category. Otherwise, this recommendation is not expected to substantially affect providers.

Conclusion

Although Medicare beneficiaries have generally adequate access to clinician services, the Commission is concerned about the pipeline of future primary care physicians and whether beneficiaries will have sufficient access to primary care physicians in the future. It is especially important to ensure an adequate supply of geriatricians. The Commission has made several recommendations to improve payment accuracy for primary care services and increase payments for primary care clinicians. If policymakers want to have a larger, more immediate impact on the supply of primary care physicians, they could consider creating a scholarship or loan repayment program for certain primary care physicians who treat Medicare beneficiaries. To ensure the best use of scarce resources, such a program could target geriatricians because they specialize in managing the unique health needs of elderly individuals. There are several design choices to consider in establishing this program, which we plan to revisit in future work.

Although the Commission has concerns about the supply of primary physicians, the number of APRNs and PAs has increased rapidly and is projected to continue to do so in the future. Medicare beneficiaries rely on APRNs and PAs to provide an increasingly substantial share of their medical services. However, Medicare collects little up-to-date information regarding the specialty in which APRNs and PAs practice, and Medicare’s knowledge regarding who these clinicians treat is obscured by “incident to” billing. Therefore, the Commission recommends that (1) the Congress require APRNs and PAs to bill the Medicare program directly, eliminating “incident to” billing for services they provide, and (2) the Secretary refine Medicare’s specialty designations for APRNs and PAs. These recommendations will give the Medicare program a fuller accounting of the breadth and depth of services provided by APRNs and PAs and improve policymakers’ ability to target resources toward primary care. ■

Endnotes

- 1 Geriatric medicine is a subspecialty of both family medicine and internal medicine.
- 2 The survey was part of the Internal Medicine In-Training Examination[®], which is administered annually at nearly all accredited internal medicine residency programs. The survey results for third-year residents for 2009 through 2011 are based on 16,781 respondents.
- 3 The nonsurgical, procedural specialties in the analysis are cardiology, dermatology, gastroenterology, pulmonary medicine, and hematology/oncology.
- 4 These first-year residents changed their career plans to subspecialties or hospital medicine or were undecided.
- 5 In this study, *lifestyle* was defined as leisure time, opportunities to enjoy life and pursue activities outside of work, predictable work hours, and family time.
- 6 This study used data from the AAMC's Medical School Graduation Questionnaire, which includes information on educational debt, educational experiences, medical schools, and residency programs and data on career specialty and location from the American Medical Association's Physician Masterfile.
- 7 Dollar amounts were adjusted to 2016 dollars using the consumer price index for all urban consumers.
- 8 Between 2010 and 2016, the specialties with the largest absolute increase in the share of graduates with no debt were radiology, dermatology, neurology, obstetrics/gynecology, ophthalmology, and pathology (Grischkan et al. 2017).
- 9 The data from 2018 are based on responses from 16,223 graduates, representing 83 percent of the medical students who graduated from July 1, 2017, through June 30, 2018.
- 10 The estimate assumes that \$156,000 of interest accrues on the loan and that the interest rate ranges from 6.6 percent to 7.6 percent.
- 11 The data are from the Family Medicine National Graduates Survey.
- 12 The military also has other programs that support physician training, such as the Health Professions Loan Repayment Program, which repays educational loans in exchange for an active duty obligation (Government Accountability Office 2018a).
- 13 Educational costs include tuition, books, fees, and other educational expenses. They do not include stipends or allowances, which are funded by the military's personnel accounts.
- 14 Primary care physicians include the following specialties: family medicine, general internal medicine, general pediatrics, obstetrics/gynecology, geriatrics, and psychiatry.
- 15 Eligible provider types include primary care physicians, NPs, certified nurse midwives, PAs, mental and behavioral health professionals, substance use disorder counselors, registered nurses, and pharmacists.
- 16 The interest rate for a Direct Unsubsidized Loan was 6.6 percent and the rate for a Direct PLUS Loan was 7.6 percent. These rates change annually.
- 17 Approved residencies include family medicine, internal medicine, pediatrics, preventive medicine, and general practice. Acceptable practice activities include primary care, preventive medicine, public health, occupational medicine, geriatrics, pediatrics, urgent care, sports medicine, and hospital medicine.
- 18 Active borrowers include those who are enrolled in medical school, in a grace period, in deferment status, and in repayment status.
- 19 Medically underserved areas are designated by HRSA based on the ratio of population to primary care providers, the share of the population below the federal poverty level, the share of the population over age 65, and the infant mortality rate.
- 20 The number of geriatricians treating Medicare beneficiaries includes those with a caseload of more than 15 beneficiaries during the year.
- 21 While the share of NPs and PAs who practice in primary care may have decreased over time, the actual number of these clinicians practicing in primary care may be increasing, given the large increase in the number of such clinicians.
- 22 Collaboration is a process in which an NP works with one or more physicians to deliver health care services, with medical direction and appropriate supervision as required by the law of the state in which the services are furnished. In the absence of state law governing collaboration, collaboration is to be evidenced by NPs documenting their scope of practice and indicating the relationships that they have with physicians to deal with issues outside their scope of practice (Centers for Medicare & Medicaid Services 2018a).

- 23 States' various approaches to regulating NPs can be categorized differently. For example, the National Conference of State Legislatures classifies state scope-of-practice laws based on whether a physician relationship is required, transition to independent practice is allowed, or full independent practice authority is allowed (National Conference of State Legislatures 2018).
- 24 Medicare's payment policies for CNSs are similar, but the policies for CNMs and CRNAs are different. CNMs and CRNAs are paid 100 percent of the physician fee schedule amount when they bill under their own NPI. In addition, CRNAs are paid 100 percent of the anesthesia fee schedule amount if they administer anesthesia without medical direction by an anesthesiologist. If an anesthesiologist provides medical direction or supervision, Medicare pays 50 percent of the fee schedule amount to the CRNA and makes an additional payment to the anesthesiologist, the amount of which varies based on the number of concurrent procedures for which the physician is providing medical direction or supervision (Centers for Medicare & Medicaid Services 2018b).
- 25 There are exceptions to the direct supervision requirements. For example, designated care management services may be furnished under the general supervision of a physician. General supervision means the service is furnished under the physician's overall direction and control, but the physician's presence is not required during the performance of the service.
- 26 In addition to differences between NPs/PAs and physicians, there could also be differences in the care delivered by NPs and PAs. Exploring this hypothesis is constrained by many of the same factors that limit our ability to compare care provided by NPs/PAs relative to physicians, such as "incident to" billing. A further complicating factor is that many studies group NPs and PAs together to compare the care they deliver with care provided by physicians.
- 27 The absolute counts of services billed by NPs and PAs is an undercount of the services they actually furnished. However, it is unclear whether the *growth* in services billed by NPs or PAs is lower than the growth in services actually furnished.
- 28 Also, to the extent the hour threshold is lowered (e.g., 16 hours billed per day) to identify more physicians who bill for services their employees perform, such methodologies are likely to become less precise.
- 29 For example, in the same survey in which 29 percent of primary care NPs who worked with a primary care physician reported always billing under a physician's NPI, only 17 percent of primary care physicians who worked with NPs responded that all of their NPs' services were billed under a physician's NPI. The difference in these two reported numbers could be due to physicians or NPs better understanding how NPs' services are billed, differences in the populations surveyed, random variation, or some other reason.
- 30 In HOPDs, visits in which an NP/PA and physician see the patient (e.g., a split/shared visit) can be billed under the physician's NPI if the physician provides any face-to-face portion of the E&M visit with the patient (Centers for Medicare & Medicaid Services 2018b).
- 31 For example, NPs billed for 1.3 percentage points more Level 3 office visits for new patients (99203) in the HOPD versus the physician office. To estimate the prevalence of "incident to" billing, we assumed NPs performed 1.3 percentage points more Level 3 office visits for established patients (99213) in the HOPD versus the physician office. So, instead of performing 6.4 percent of Level 3 office visits for established patients in physician offices (as the claims data indicate), we assumed NPs provided 11.2 percent of such visits—1.3 percentage points less than the 12.5 percent of Level 3 office visits for established patients who NPs provided in the HOPD.
- 32 We concluded that many of these NPs likely treated a limited number of Medicare FFS beneficiaries based on their referral patterns. For example, 61 percent of these NPs ordered services/drugs for fewer than 10 FFS beneficiaries in 2016.
- 33 Some of an NP's services might be billed "incident to" for several reasons. For example, Medicare does not permit "incident to" billing for new patients or established patients with new problems. This pattern could also be related to Medicare's supervision requirements for "incident to" billing. For example, an NP employed by a gastroenterologist might be unable to bill "incident to" when his or her supervising physician is performing colonoscopies in a facility and therefore cannot provide direct supervision, a requirement to bill "incident to."
- 34 In addition, misclassifications might also occur in the other direction. For example, an NP who does not often order the products and services we examined and bills "incident to" sometimes might be classified as likely not having billed "incident to" in our analysis.
- 35 While our overall estimate is similar to the survey results, our estimates suggest that a lower share of NPs always bill "incident to" and a larger share sometimes bill "incident to." This difference could represent a trend over time toward NPs billing "incident to" sometimes instead of always, or the difference could be an artifact of the different methodologies.
- 36 PAs are more likely to work in specialties outside of primary care relative to NPs. Certain specialists might maximize practice revenue if their employed PAs do not bill "incident to" because being physically present in the office suite with PAs (a requirement for "incident to" billing) could limit the

- specialist’s opportunity to perform more lucrative services outside of the office, such as surgeries or other procedures.
- 37 Eliminating “incident to” billing would eliminate Medicare’s requirement for a physician to be present in the office suite when APRNs or PAs perform services that are billed “incident to.” However, Medicare has a limited ability to enforce this requirement, so it is unclear the extent to which clinicians currently abide by this requirement. Also, to the extent physicians are present in an office suite predominantly to meet “incident to” billing guidelines, it is unclear the extent to which such practices offer a clinical benefit to beneficiaries. Finally, even in the absence of “incident to” billing, we would expect physicians to continue to provide oversight to the extent it is clinically necessary or required by state law.
 - 38 Eliminating “incident to” billing for APRNs and PAs would predominantly affect employers of NPs, PAs, and CNSs. Medicare pays 85 percent of fee schedule rates when services are billed under the NPI of an NP, PA, or CNS and 100 percent when billed under a physician’s NPI. In contrast, no similar payment differential exists for CRNA and CNM services—Medicare pays 100 percent of the physician fee schedule rate for services performed by CRNAs and CNMs, regardless of the NPI under which they are billed.
 - 39 For example, in 2015, the Commission recommended establishing a prospective per beneficiary payment to replace the Primary Care Incentive Payment program (Medicare Payment Advisory Commission 2015).
 - 40 There is already a precedent for CMS exempting some care coordination services from certain Medicare “incident to” rules. For example, physicians are required to provide only general supervision of chronic care management services that are billed “incident to” instead of direct supervision that is required for other services when billed “incident to.”
 - 41 In addition, while Medicare allows APRNs and PAs to bill under a physician’s NPI, some private plans prohibit the practice, and we are unaware that providers who contract with these plans have encountered substantial issues deciding which NPI to include on claims for split visits. For example, as of 2017, BlueCross BlueShield of Montana does not recognize “incident to” billing and, instead, requires claims be billed under the name of the provider who actually rendered the service (BlueCross BlueShield of Montana 2017).
 - 42 While most of these clinicians are paid at 100 percent of fee schedule rates, licensed clinical social workers are paid 75 percent of fee schedule rates when they bill under their own NPI and 100 percent when they bill “incident to.”
 - 43 Revenues for practices that employ CRNAs or CNMs would be unaffected because Medicare pays these clinicians 100 percent of physician fee schedule amounts when they bill under their own NPIs. In addition, CRNAs predominantly bill for anesthesia services. Medicare reimburses anesthesia services differently from physician services. Therefore, this recommendation does not apply to anesthesia services.
 - 44 There is less of a need to refine the specialty categories for the other two types of APRNs—CNMs and CRNAs. CNMs and CRNAs perform a relatively narrow set of services and their current designations might contain sufficient specificity.
 - 45 APRNs and PAs could also be required to update their specialty information in PECOS more frequently than every five years to the extent a change occurs.

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CHAPTER

6

**Assessing the Medicare
Shared Savings Program's
effect on Medicare spending**

Assessing the Medicare Shared Savings Program's effect on Medicare spending

Chapter summary

Organizations of providers that agree to be held accountable for cost and quality of care are called accountable care organizations (ACOs). The Commission has long been interested in ACOs in part to help counter the incentives in fee-for-service Medicare to provide more services so as to increase Medicare payments. About a third of the beneficiaries in the traditional Medicare fee-for-service program are now assigned to ACOs. CMS assigns beneficiaries to ACOs if they have a history of visits to ACO clinicians. Most of these beneficiaries are assigned to ACOs in the Medicare Shared Savings Program (MSSP), a permanent ACO model established in the Patient Protection and Affordable Care Act of 2010 (PPACA). The first MSSP ACO started in April 2012, and the MSSP has grown rapidly. In 2018, there were 561 MSSP ACOs.

The goals for ACOs are to improve coordination and quality of care, maintain beneficiary choice of provider, and reduce unnecessary service use. ACOs may qualify for financial rewards (“shared savings”) if the spending for their assigned patients is lower than the benchmark set by CMS. Thus, an ACO’s performance relative to its benchmark is important to the ACO. In 2017, CMS reported that, on average, spending on ACO beneficiaries was sufficiently below the established benchmarks that many ACOs earned shared savings.

In this chapter

- Introduction
- Estimates of savings from the Medicare Shared Savings Program
- Methods for assigning beneficiaries to ACOs and patient selection issues

CMS’s benchmarks are designed to create incentives for individual ACOs to keep spending on their assigned population low while maintaining or improving quality and fulfilling other policy goals. For example, CMS has modified how benchmarks are rebased to encourage ACOs to continue to participate. Benchmarks, therefore, cannot be taken as estimates of what spending growth would have been if the MSSP did not exist. Instead, estimating the impact of the MSSP on Medicare spending requires the use of a “counterfactual.” A counterfactual analysis uses comparison groups to estimate whether the MSSP as a whole resulted in savings or additional costs for the Medicare program. While benchmarks are set in advance, counterfactual analysis is done after the fact, using spending trends for beneficiaries not in ACOs—that is, using information that was not available when benchmarks were set. When combined with analysis of the MSSP’s effects on other parameters, such as quality, analysis of MSSP spending relative to a counterfactual can help determine the value of the MSSP to the Medicare program and to taxpayers.

To evaluate the effect of the MSSP on Medicare program spending, the Commission estimated spending for beneficiaries assigned to these ACOs and compared that spending with what spending would have been in the absence of the MSSP. We tested several methods of defining a treatment group (those assigned to the ACO) and a counterfactual comparison group (those not assigned to the ACO) and compared spending (or spending growth) between the two groups. We found that decisions about how the treatment and comparison groups are defined can affect the magnitude and validity of estimates of program savings.

A beneficiary’s assignment to an ACO is linked to the beneficiary’s service use history, and a change in health care status that alters a beneficiary’s service use (such as the onset of a disease requiring more visits to a physician or visits to a new physician) can also lead to a change in Medicare’s assignment of the beneficiary either into or out of an ACO. The connection between changes in health status and changes in ACO assignment (which we refer to as “switching”) complicates the estimate of program savings: We found that beneficiaries who are switched into and out of an ACO tend to have high spending. These “switchers” tend to be beneficiaries who have growing risk scores and are more likely to be hospitalized in the year of switching.

Because current methods of risk adjustment are not complete enough to account for the higher costs of switchers, how these beneficiaries are included in the treatment and comparison groups has implications for savings estimates. For example, when researchers compare beneficiaries who were ever assigned to an ACO with those who were never assigned to an ACO, the treatment group (“ever assigned”) can include a large number of switchers. That is, along with beneficiaries who have

been continuously assigned to the same ACO, the treatment group includes all beneficiaries who were switched into or out of any ACO during the observation period. Because switchers tend to have high spending growth, a study in which the treatment group includes a disproportionately large number of switchers will be unlikely to find savings from ACOs. Conversely, if researchers define the treatment group as beneficiaries continuously assigned to ACOs over time, the study would be biased toward finding large savings from ACOs because all switchers would be included in the control group. A study that defines the treatment group as those in an ACO in a recent year (for example, in the ACO in 2016) also may overstate savings, in part because of “survivor bias.” In this case, beneficiaries who may have been assigned to an ACO in previous years but have been switched out are likely to have higher spending growth on average than those who stayed assigned to ACOs (“survivors”). Those beneficiaries with high spending growth would be excluded from the treatment group.

Analyses of the impact of the MSSP on Medicare program spending thus must be carefully designed. The Commission evaluated the performance of ACOs using an intent-to-treat approach that mitigates the effects of beneficiaries being switched into or out of ACOs as well as movement of physicians into and out of ACOs, which otherwise can complicate the analysis. To account for beneficiaries who were switched into or out of ACOs, we defined a treatment group as beneficiaries who were assigned to an ACO in 2013 and a comparison group as those beneficiaries who, though eligible for assignment, were not assigned to an ACO in 2013. This approach includes future switchers in both the treatment group (some beneficiaries in an ACO in 2013 may have been switched out subsequently) and the comparison group (some beneficiaries not enrolled in an ACO in 2013 may subsequently have been switched into one).

Using this approach, we found that the ACO treatment group had slightly slower spending growth from 2012 to 2016 than the comparison group. For the sample of beneficiaries we examined, we estimate that, by 2016, Medicare spending growth for beneficiaries in our MSSP treatment group was 1 percentage point to 2 percentage points lower than it would have been without the MSSP. The savings were somewhat larger for beneficiaries assigned to physician-only ACOs compared with beneficiaries assigned to ACOs with physicians and hospitals as members. Note that our estimate does not include any shared savings payments that were made to ACOs during that period. The MSSP can generate net savings for Medicare only if MSSP bonus payments (shared savings) are less than spending reductions resulting from lower service use.

If the effect of the MSSP on Medicare spending growth continues to be small, unintended consequences will need to be carefully monitored. For example, any favorable or unfavorable distribution of patients to individual ACOs could result in unwarranted shared savings or unwarranted shared losses for an individual ACO. Although it appears that patient selection was not a significant issue in the early years of the MSSP, there is now a potential for it to arise. Under recent changes to the MSSP, ACOs are all given the option of retrospective assignment of beneficiaries, which could allow for more effective patient selection. For example, as we discuss later in the chapter, annual wellness visits could result in a favorable selection of patients among ACOs opting for retrospective assignment.

To limit the potential for patient selection, CMS could require a system of prospective assignment and not allow any choice of retrospective assignment. Our data suggest this strategy would limit the effect of wellness visits on favorable selection of patients because a patient's future growth in spending is less predictable than current year spending growth. Prospective assignment would also give ACOs a greater incentive to keep patients assigned to their providers satisfied with their care as they become ill. Finally, prospective assignment may provide some protection for ACOs from adverse selection. Under prospective assignment, ACOs would be accountable only for spending in the year after one of their physicians has seen the patient. ■

Introduction

The Commission has long been interested in Medicare providers taking on responsibility for the costs (that is, spending in Medicare Part A and Part B) and quality of care for a defined group of Medicare beneficiaries, in part, to help counter the incentive in traditional fee-for-service (FFS) Medicare to increase the volume of services so as to increase Medicare payments. In fact, the term *accountable care organization* (ACO) was coined in a Commission meeting in November 2006 when leading health policy researcher Elliot Fisher was describing his concept of an enhanced hospital medical staff model. Under that model, all physicians associated with a hospital and all physicians who commonly referred their patients to that hospital were combined and held responsible for the Medicare spending for those patients.

Over the past decade, the Commission has weighed in on a range of ACO topics, such as whether ACOs should be mandatory or voluntary, whether they should include only clinicians or also hospitals, whether beneficiaries should enroll in ACOs or be passively assigned, and how benchmarks for determining “shared savings” should be set. The Commission has communicated its position on these topics to the Congress and to CMS in reports and comment letters.

Today in Medicare, ACOs are groups of health care providers that have volunteered to be held accountable for the cost and quality of care for a group of beneficiaries. ACOs may qualify for shared savings payments if the spending for their assigned patients is lower than expected, and they may be required to make payments to CMS if the spending is higher than expected. The goals for ACOs are to improve coordination and quality of care, maintain beneficiary choice of provider, and reduce unnecessary service use. Given the growing number of ACOs, described below, policymakers increasingly are interested in determining the value of ACOs to the Medicare program and to taxpayers.

Beneficiaries do not enroll in ACOs; instead, Medicare assigns them to ACOs based on their Medicare claims history. Although the method is somewhat complicated, the intent is to assign beneficiaries with a history of visits to an ACO’s clinicians to that ACO.¹ The beneficiary is still free to use providers outside of the ACO. Medicare provides ACOs with claims data for assignable beneficiaries—those with a qualifying primary care visit within the previous 12 months—to help the ACOs

coordinate care. This design avoids some of the overhead costs associated with Medicare Advantage (MA) plans, such as marketing, enrollment, creating networks, and paying claims. Three key terms associated with ACO design are used in this chapter: *assignment*, *composition of the ACO*, and *benchmarks*. (See text box (pp. 182–183) for definitions.)

The first Medicare ACOs began at the start of 2012 as part of the Pioneer ACO Model, a demonstration that ended in 2016. The Pioneer ACOs were larger organizations that had experience taking on risk. The program had 32 ACOs at its peak. The CMS Office of the Actuary reported that the Pioneer demonstration succeeded in modestly lowering costs for its beneficiaries (Office of the Actuary 2015). Lessons learned from the Pioneer demonstration were used in developing Track 3 of Medicare’s subsequent program, discussed below.

The Medicare Shared Savings Program has grown

The Medicare Shared Savings Program (MSSP), the focus of this chapter, was established by the Patient Protection and Affordable Care Act of 2010 (PPACA) and is a permanent part of the Medicare program. The first cohort of ACOs in the MSSP started operation midway through 2012. Since then, the program has grown considerably and, by 2016 (the end of our analysis period), had 432 ACOs with 7.9 million assigned beneficiaries. Table 6-1 (p. 184) shows the continued entry of new ACOs and an increasing exit of ACOs from the program each year. For example, 100 new ACOs entered in 2016, while 60 ACOs that were in the MSSP in 2015 exited and did not continue in 2016. Because ACOs that leave may do so because they have not been successful, entry and exit of ACOs can affect the analysis of savings. Our work examines savings from ACOs from 2012 through 2016.

Beginning in 2016, ACOs could choose from three tracks (or models) in the MSSP (Table 6-2, p. 184). Track 1 was a one-sided-risk model with retrospective assignment that had a maximum shared savings rate of 50 percent. Through 2016, almost all ACOs in the MSSP were in Track 1. A few ACOs chose Track 2, a two-sided-risk model with retrospective assignment and a shared savings rate of 60 percent; in 2016, 16 ACOs chose Track 3, a prospective two-sided-risk model with a maximum shared savings rate of 75 percent.

Key terms used in accountable care organization programs

Assignment: Beneficiaries are primarily assigned to accountable care organizations (ACOs) based on which clinicians they use for a subset of primary care evaluation and management codes. In the first step of the assignment algorithm, those services must be provided by a primary care clinician. In a subsequent step, the services can be provided by certain specialty physicians. Assignment as a process is largely invisible to the beneficiary; instead, its purpose is to allow Medicare to define a population of beneficiaries and track their health care spending. Beneficiaries assigned to ACOs can use any providers they choose within or outside of an ACO.

- **Prospective** assignment occurs when beneficiaries are assigned to an ACO at the start of the performance year (based on the beneficiaries' prior year use or voluntary designation of a primary care clinician). Under prospective assignment, if assigned beneficiaries choose to go to a provider

outside of the ACO, the ACO remains responsible for that spending. This system creates a stronger incentive for the ACO providers to satisfy their patients and have them continue to choose providers in the ACO.

- **Retrospective** assignment occurs when beneficiaries are assigned at the end of the year (based on their current year usage). Under retrospective assignment, beneficiaries can lose assignment if they choose providers outside the ACO. The ACO will not be accountable for beneficiaries who lose assignment because they were unsatisfied with their care.
- **Computing “shared savings” with retrospective and prospective assignment.** When CMS estimates shared savings, it is important that benchmarks incorporate spending trends for comparable assignable beneficiaries. For ACOs

(continued next page)

Beneficiary assignment is dynamic

As shown in Table 6-1 (p. 184), between 2012 and 2016, the number of beneficiaries assigned to MSSP ACOs increased from 2.1 million to 7.9 million. However, there was considerable “churn” in the individual beneficiaries assigned over time. That is, CMS moved individual beneficiaries into and out of assignment to ACOs during that period. Because Medicare assigns beneficiaries to ACOs based on their Medicare claims history, when beneficiaries see different clinicians, they can gain or lose assignment to an ACO. The method used for assignment in the MSSP is somewhat complicated, and has changed over time. The method used in the time period of interest is described in more detail in the text box on beneficiary assignment (pp. 186–187). Throughout, the intent has been to assign beneficiaries with a history of visits to an ACO's clinicians to that ACO.

To illustrate the dynamics of assignment in the MSSP, Table 6-3 (p. 185) shows the share of beneficiaries who remained continuously assigned to an ACO over time. For example, for ACOs that entered the MSSP in 2013, only 59 percent of the originally assigned beneficiaries remained assigned in 2016. (We include in this figure only beneficiaries who were alive in all years examined, resided in the same county, and remained eligible for assignment by having a qualifying visit with a physician.) These figures seem to trend slightly lower for later ACO entrants. In addition, we found that retention was consistently somewhat lower (4 percentage points to 7 percentage points) for physician-only ACOs compared with ACOs with hospitals (data not shown). For example, among ACOs that entered the MSSP in 2013, physician-only ACOs retained 57 percent of the originally assigned beneficiaries through 2016 compared with 61 percent retention for ACOs with hospitals.

Key terms used in accountable care organization programs (cont.)

with retrospective assignment, the comparison group also qualifies for retrospective assignment by having a qualifying physician encounter in the assignment year, which is also the performance year. With prospective assignment, the comparison group will be beneficiaries with a qualifying physician encounter in the assignment year, which is the year before the performance year. Consequently, some patients at the end of life will be assignable in the year before death, but not in the year of death. Therefore, one effect of prospective assignment will be to direct greater rewards to those providers that can manage end-of-life costs in accordance with beneficiaries' preferences.

Composition of the ACO: ACOs can be clinician-only ACOs or can include providers such as hospitals and skilled nursing facilities. An ACO's providers do not have to provide all services for a beneficiary, although they are accountable for a beneficiary's total Part A and Part B spending. The essential requirement is that

the providers as a group have enough beneficiaries assigned to them to meet the minimum requirement for their model (e.g., 5,000 beneficiaries).

Benchmarks: ACO performance is assessed using a set of quality measures and spending benchmarks. (Quality performance is not discussed in this chapter; see our June 2018 report to the Congress.) The spending benchmark is an estimate of Part A and Part B spending for an ACO's beneficiaries in a given year. If spending for an ACO's beneficiaries—including health care services provided outside the ACO—is below the benchmark, the ACO is eligible to earn a shared savings payment. If spending is above the benchmark, the ACO may be financially liable for shared losses. One-sided-risk arrangements are ones in which ACOs can earn shared savings but are not responsible for losses; two-sided-risk arrangements are ones in which ACOs can earn savings and are responsible for shared losses. The amount of shared savings an ACO is eligible to earn varies by model. ■

Over the same time, some beneficiaries were newly assigned to these ACOs.² Beneficiaries whom Medicare switches into and out of ACOs and beneficiaries continuously assigned to the same ACOs have very different spending patterns. In Table 6-4 (p. 185), we report the change in spending for a cohort of beneficiaries over two periods. The first period, from 2014 to 2015, is the year before being switched. The second period, from 2015 to 2016, is the year of the switch. (Spending in each period is standardized as if beneficiaries had an average hierarchical condition category (HCC) risk score of 1.0) Spending growth for beneficiaries who were switched was higher from 2015 to 2016 compared with beneficiaries assigned continuously. (Spending for those assigned continuously actually decreased 3 percent from 2014 to 2015 and increased only 2 percent from 2015 to 2016.) In addition, the switched beneficiaries had higher growth in spending during the year they were switched (2016) than the year before. Notably, spending growth for those no longer assigned to an ACO in 2016 (the last two

rows) tended to be substantial from 2015 to 2016. Thus, being switched into or out of an ACO was associated with higher growth in spending.

Estimates of savings from the Medicare Shared Savings Program

The movement of beneficiaries into and out of ACOs and the higher spending associated with those beneficiaries has profound implications for estimates of savings from the MSSP.

Our analysis therefore raised several methodological issues in determining whether the MSSP produced savings for the Medicare program through 2016. In the literature, this question is approached by analyzing how much was spent on beneficiaries in MSSP ACOs relative

**TABLE
6-1****Number of MSSP ACOs and assigned beneficiaries, 2012–2016**

	2012	2013	2014	2015	2016
MSSP ACOs					
Total number at beginning of performance year	114	220	333	392	432
New to program	114	106	119	89	100
Continuing from previous year	0	114	214	303	332
Total number at beginning of previous year	N/A	114	220	333	392
Exited previous year	N/A	0	6	30	60
Number of beneficiaries (in millions)					
	2.1	3.7	5.3	7.3	7.9

Note: MSSP (Medicare Shared Savings Program), ACO (accountable care organization), N/A (not applicable).

Source: MedPAC analysis of CMS MSSP data.

to what would have been spent for these beneficiaries in the absence of the MSSP ACOs—that is, relative to a counterfactual. Our efforts to produce a counterfactual examined differences in beneficiaries’ Medicare spending growth as a function of the beneficiaries’ assignment to MSSP ACOs. This approach required us to determine to what extent beneficiaries who are switched into and out of ACOs should be included in the ACO treatment group or the comparison group used to construct the counterfactual.

A very different question is MSSP ACOs’ performance relative to the benchmarks set by CMS. According to statute, CMS has to set benchmarks to evaluate the MSSP

ACOs’ performance. For each ACO, CMS sets an initial benchmark, updates that benchmark each year, and rebases the benchmark at the beginning of each subsequent agreement period (every three years for the years included in this analysis). If actual spending for an ACO’s assigned beneficiaries is below this benchmark, the ACO may be eligible for a bonus called “shared savings.”

Savings relative to CMS-constructed benchmarks and other estimates of ACO savings can differ because CMS constructs benchmarks in advance and to fulfill policy goals such as encouraging ACO participation. Instead of using benchmarks, researchers have used different

**TABLE
6-2****Almost all ACOs were in Track 1, 2012–2016**

	2012	2013	2014	2015	2016
Track 1	110	215	330	389	410
Track 2	4	5	3	3	6
Track 3	0	0	0	0	16
Total	114	220	333	392	432

Note: ACO (accountable care organization). Track 1 was a one-sided-risk model with retrospective assignment that had a maximum shared savings rate of 50 percent. Track 2 was a two-sided-risk model with retrospective assignment and a shared savings rate of 60 percent. Track 3 was a two-sided-risk model with prospective assignment and a maximum shared savings rate of 75 percent.

Source: MedPAC analysis of CMS Medicare Shared Savings Program data.

**TABLE
6-3**

Share of MSSP beneficiaries who were continuously assigned to the same ACO, by entry year

ACO entry year	Number of beneficiaries who were originally assigned	Share of beneficiaries who remained assigned to same ACO in:		
		Year 2	Year 3	Year 4
2013	715,241	83%	72%	59%
2014	760,388	82	66	
2015	909,940	79		

Note: MSSP (Medicare Shared Savings Program), ACO (accountable care organization). Analysis includes only beneficiaries who, for the entire 2012 to 2016 period, (1) were alive, (2) were enrolled in fee-for-service Medicare, (3) had an evaluation and management visit in every year, (4) resided in the same county, and (5) were assigned to an ACO that had an MSSP contract in 2016.

Source: MedPAC analysis of CMS MSSP data and Chronic Conditions Data Warehouse.

methods to assess whether ACOs save Medicare money. These alternative assessments construct a counterfactual—that is, what spending on the beneficiaries in the ACO would have been in the absence of the ACO—to estimate savings for the Medicare program and evaluate the impact of the MSSP. Those estimates are made using data on actual spending, unlike benchmarks, which must be prospectively calculated using data from a period before the performance year. The counterfactual also does not reflect any efforts to attain policy goals embedded in the benchmarks. Thus, one should not confuse savings relative to benchmarks (which determine bonus payments) with

program savings estimated by counterfactual analysis (which help evaluate the effectiveness of the MSSP). The rest of this chapter explains how different methodological approaches of arriving at a counterfactual yield different estimates of savings.

The importance of defining the treatment group and the comparison group when estimating savings from the MSSP

When estimating savings from the MSSP, researchers define a comparison group to develop a counterfactual against which to compare spending growth for the

**TABLE
6-4**

Change in HCC-standardized spending by change in ACO-assignment status

2015–2016 ACO assignment	Yearly change in HCC-standardized spending	
	From 2014 to 2015	From 2015 to 2016
Continuously assigned beneficiaries (in the same ACO in 2015 and 2016)	–3%	2%
Beneficiaries newly assigned to an existing ACO in 2016	6	7
Beneficiaries no longer assigned to existing ACO in 2016	2	20
Beneficiaries switched from existing ACO to different ACO in 2016	5	23

Note: HCC (hierarchical condition category), ACO (accountable care organization). ACO assignment in 2015–2016 was based on utilization during the 2015–2016 period. This analysis includes only beneficiaries who, for the entire 2012 to 2016 period, (1) were alive, (2) were enrolled in fee-for-service Medicare, (3) had an evaluation and management visit in every year, (4) resided in the same county, and (5) either were assigned in the prior year to an ACO that did not leave the MSSP or were newly assigned to an ACO that was in the MSSP in the prior year.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

Beneficiary assignment in the MSSP

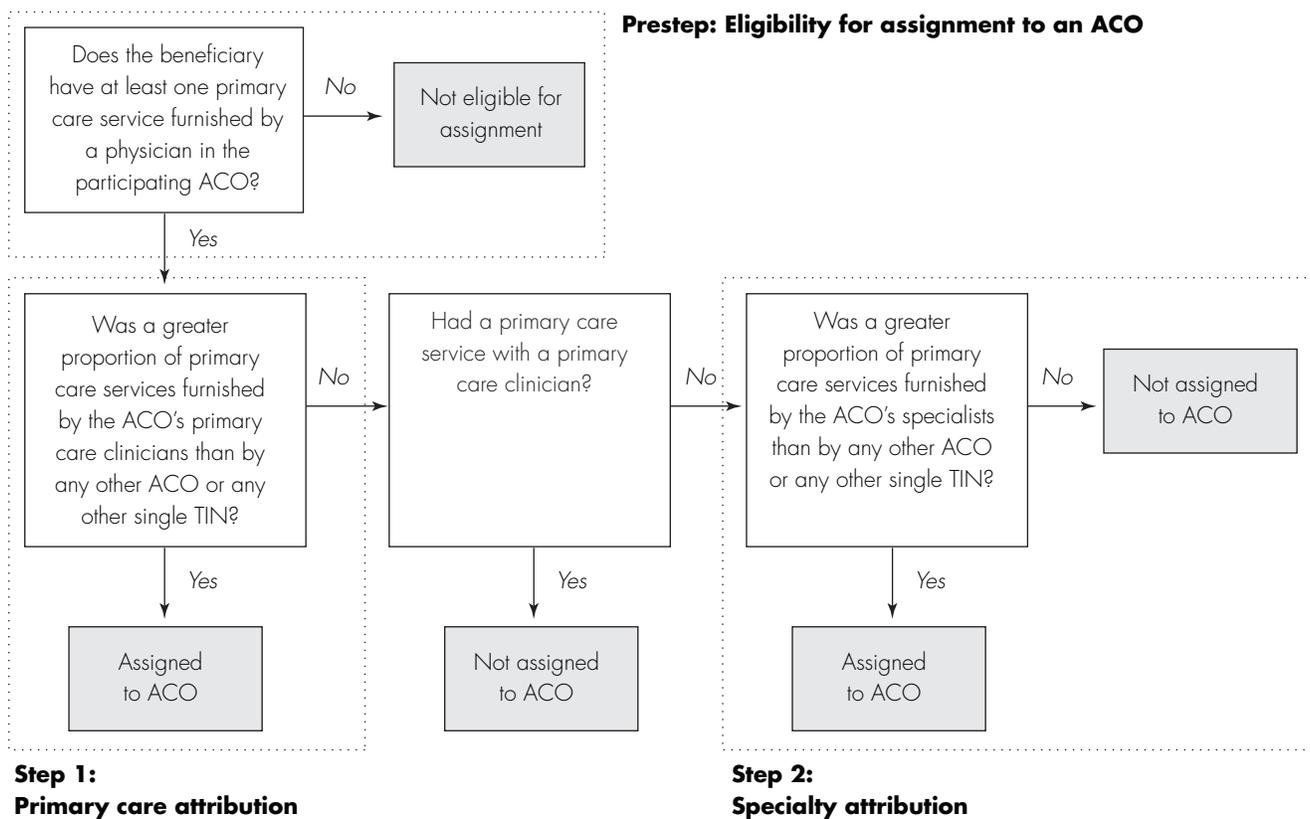
In the Medicare Shared Savings Program (MSSP), beneficiaries are assigned to MSSP accountable care organizations (ACOs) in a multistep process as shown in Figure 6-1.

In general, the claims history of beneficiaries who are eligible for ACO assignment is reviewed. Beneficiaries are eligible for assignment if they meet certain criteria, including having been in Part A and Part B of Medicare

(continued next page)

FIGURE 6-1

ACO assignment in the Medicare Shared Savings Program



Note: ACO (accountable care organization), TIN (taxpayer identification number). According to regulations found in 42 CFR §425.20, an ACO is identified by a Medicare-enrolled TIN that alone or together with one or more other ACO participants constitutes the ACO. The proportion of primary care services is measured by Medicare-allowed charges. Specialty attribution occurs only for beneficiaries who did not have a primary care service with a primary care clinician but did have a service with an ACO specialist.

Source: Centers for Medicare & Medicaid Services. Financial and beneficiary assignment specifications Versions 3–6. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/program-guidance-and-specifications.html>.

treatment group. The assumption is that the comparison group is a proxy for how fast costs would have grown in the treatment group (the MSSP group) if those Medicare beneficiaries' physicians had not formed an MSSP ACO and been given the incentives in the MSSP.

Our analysis shows that estimated savings can vary depending on how the treatment group and comparison group are defined. As shown in Table 6-5 (p. 188), the treatment group most likely to show MSSP savings includes only individuals in the MSSP in 2016. This

Beneficiary assignment in the MSSP (cont.)

for 12 months (so that they have a claims history) and not having been enrolled in Medicare Advantage during that time.

First, to be assigned to an MSSP ACO, a beneficiary must have at least one primary care (PC) service furnished by a physician in the participating ACO. Services are designated *primary care services* by regulation. In this prestep, the services must be furnished by an ACO physician of any specialty but not by a nonphysician. (More detail on definitions of primary care services and ACO physicians and nonphysicians can be found in online-only Appendix 6-A, available at <http://www.medpac.gov>.)

The remaining steps for assignment are described below:

Step 1: PC attribution

- The beneficiary must receive at least one PC service from a PC clinician at the participating ACO and more PC services furnished by PC clinicians at the participating ACO than from PC clinicians at (1) any other ACO or (2) PC clinicians in any single taxpayer identification number (TIN) (clinicians in the same practice often bill Medicare

under a single TIN. Thus, Medicare uses TINs to define which clinicians are in an ACO. TINs were not designed for this purpose and can vary widely in the number of clinicians included in them.)

- Services/clinicians: Primary care services, primary care clinicians at the ACO, and primary care clinicians at any other TIN (see online-only Appendix 6-A for descriptions of these categories).

Step 2: Specialty attribution (only for beneficiaries who did not have a primary care service with a primary care clinician)

- The beneficiary must receive at least one PC service from a specialist physician at the participating ACO and more PC services from ACO specialist physicians than from specialist physicians in (1) any other ACO or (2) a non-ACO TIN.
- Services/clinicians: Primary care services, physicians in a certain set of specialties at the ACO, and physicians in a certain set of specialties at any other TIN (see online-only Appendix 6-A for descriptions of these categories). ■

method is biased toward finding additional savings because beneficiaries who were dropped from ACO assignment had higher spending growth than those who were continuously assigned, and ACOs that were not successful (possibly due to random variation that gave them a low benchmark) may have been more likely to drop out of the MSSP. (Indeed, researchers from the University of Michigan found that high-risk beneficiaries and physicians with higher risk beneficiaries were disproportionately likely to be dropped from or exit MSSP ACOs (Markovitz et al. 2019).) Under this approach, beneficiaries with relatively high spending growth disproportionately end up in the comparison group (e.g., not in an ACO in 2016), while the treatment group is more likely to include beneficiaries who maintained their health status and ACOs that have been successful enough to stay in business through 2016 (we refer to these two phenomena together as “survivor bias”).

Another method defines the treatment group as those who were ever assigned to an ACO and the comparison group as those never assigned to an ACO. However, this method is biased against finding savings. Under this approach, beneficiaries who are switched into and out of an ACO are all assigned to the treatment group. We have shown that these “switchers” tend to have high spending, possibly due to changes in health status causing them to switch clinicians. This method will result in low estimated savings. A group of National Institutes of Health (NIH) researchers using this method found no savings from the MSSP (Kury et al. 2016).

An intent-to-treat model will include switchers in both the treatment group and the comparison group and thus has less potential for bias. For example, the intent-to-treat model in a recent Harvard study, shown in the

**TABLE
6-5**

Definitions of treatment and comparison groups influence findings of savings from the MSSP

Treatment group	Comparison group	Potential bias	Findings
Beneficiaries in an ACO in 2016	Beneficiaries not in an ACO in 2016	<i>Survivor bias:</i> High spending growth beneficiaries are dropped from ACO, or ACO exits the program and beneficiaries end up in the comparison group	Finds modest savings
Beneficiaries ever in an ACO	Beneficiaries never in an ACO	<i>Switcher bias:</i> Those who switch clinicians tend to have rising costs and are more likely to be in the ever-in-an-ACO group	Finds no savings
<i>Intent-to-treat model:</i> Physician practices that were in an ACO in a particular year (e.g., 2013) continue to be considered ACOs even if they drop out of the program	Beneficiaries treated by physician groups that were not in the MSSP in 2013 (but physician groups could participate in the MSSP later)	Less potential for bias (no survivor bias or switcher bias)	Finds some savings for physician-only ACOs
<i>Initially assigned to an ACO:</i> Beneficiaries assigned to an ACO in 2013 are tracked through to 2016 even if they were subsequently dropped from the ACO	Beneficiaries not in the ACO in 2013 (but could be assigned to an ACO later)	Less potential for bias (no survivor or switcher bias)	Finds some savings for physician-only ACOs

Note: MSSP (Medicare Shared Savings Program), ACO (accountable care organization).

Source: MedPAC literature review and analysis of Medicare claims.

third row of Table 6-5, illustrates this point. The study’s researchers defined the treatment group as including those patients seen by a physician practice that participated in an ACO in 2013. If the practice was in an ACO in 2013 and then dropped out, the researchers still considered that group’s patients to be in the treatment group. The Harvard researchers found small savings using this method (McWilliams et al. 2018). We tested an alternative intent-to-treat model described in the bottom row of the table. We examined whether beneficiaries who were assigned to an ACO in 2013 had lower spending growth through 2016 than beneficiaries who were not assigned to an ACO in 2013. Even if the ACO dropped out of the MSSP or the patient switched doctors, we viewed those patients as being in the treatment group, meaning they were put on

an ACO path in 2013. We found savings similar to those found by the Harvard researchers, as seen in Table 6-5.

Analytic approach

Our analyses show that the definitions of treatment group and comparison group appear to matter more than other methodological decisions in estimating the magnitude of ACO savings. We arrived at this conclusion by examining changes in spending for a constant cohort of 2.8 million beneficiaries who were assigned to ACOs at any time, from 2013 to 2016. We compared their changes in spending with changes for 3.8 million beneficiaries who were never assigned to an ACO from 2013 to 2016 but lived in the same market as those beneficiaries in the ACO cohort.³

To help ensure that the ACO beneficiaries were comparable with the non-ACO beneficiaries, we required that both groups of beneficiaries be continuously in FFS Medicare from 2012 through 2016 and be alive through 2016.⁴ We also limited our analysis to beneficiaries with an evaluation and management (E&M) visit during 2013, 2014, 2015, and 2016 to reflect that they were potentially eligible for MSSP assignment each year and were continuously engaged in the health care system. We excluded beneficiaries who were in the Pioneer ACO Model or in the MSSP only in 2012.

Next, we examined whether moving into or out of an ACO from 2013 to 2016 was associated with higher or lower growth in spending from 2012 to 2016. We tracked individuals over time to mitigate results that stem from changes in ACO markets, changes in ACO providers, and changes in risk scores resulting from coding differences rather than health status differences.

To analyze MSSP savings using a counterfactual model, we used a descriptive statistical approach to determine whether spending growth from 2012 to 2016 was affected by changes in ACO assignment. We calculated spending growth for beneficiaries relative to the market average. To calculate growth rates, we used average spending in the market rather than an individual's starting level of spending to avoid the influence of outliers who start at low spending levels and grow to a high level of spending. For example, in a market with average monthly spending of \$1,000, someone who starts at \$10 per month and ends at \$20,010 per month in 2016 would have their spending growth measured as \$20,000/\$1,000 rather than \$20,000/\$10).

A key problem in evaluating savings is that health status changes (which are not completely controlled for with risk adjusters) can lead beneficiaries to change physicians, which may in turn trigger changes in whether the patient is assigned to an ACO. In the MSSP, CMS assigns beneficiaries to MSSP ACOs retrospectively.⁵ Thus, a change in a beneficiary's health status in 2016 could cause both a change in the beneficiary's ACO assignment (into or out of an ACO) in 2016 and a change in the beneficiary's Medicare spending in 2016. The effect of these changes in health status and resulting changes in assignment highlights both the difficulty in evaluating ACOs' savings for the Medicare program and the importance of a beneficiary's assignment (or not) to an ACO based on service use in the MSSP.

In an analysis to explore why assignment switching occurs, we excluded beneficiaries from the analysis who were switched due to Medicare enrollment (i.e., Medicare Part A, Part B, or Part C status), death, change of residence, or lack of an E&M visit. These exclusions allowed us to observe whether assignment switching corresponded with health status changes, such as increases in risk scores, new hospitalizations, and new home health visits.

Using our cohort of FFS beneficiaries who were alive and eligible for ACO assignment from 2012 to 2016, we estimated the effects of MSSP assignment on savings from 2012 to 2016 as the difference between the change in spending for ACO-assigned beneficiaries and the change in spending for a comparison group of assignable beneficiaries in the same market. We found that estimated savings differ depending on the definition of ACO treatment and comparison groups. The three definitions of treatment and control groups we examined are: (1) beneficiaries ever assigned to an ACO compared with those never assigned to an ACO, (2) beneficiaries assigned to an ACO in 2013 compared with those not assigned to an ACO in 2013, and (3) beneficiaries assigned to an ACO in 2016 compared with those not assigned to an ACO in 2016.⁶

For each of these three scenarios, we first examined descriptive statistics on changes in spending between the treatment and comparison groups before any risk adjustment or propensity weighting. Next, we compared growth in spending for the treatment group with a control group whose beneficiaries were weighted by their similarity to the treatment group using market-level propensity scores (based on the likelihood of matching ACO beneficiary characteristics in a market defined as the metropolitan statistical area (MSA) within a state). Finally, using a linear regression difference-in-difference model, we tested whether and how estimated MSSP savings changed after controlling for a series of beneficiary characteristics.

Changes in ACO assignment are related to spending growth

In Table 6-6 (p. 190) and Table 6-7 (p. 191), we examine relationships among changes in ACO assignment, changes in spending levels, and market characteristics. The objective is to show the problematic connection between changes in beneficiaries' ACO assignment and changes in beneficiary spending. Under this approach, we find the following:

**TABLE
6-6**

Beneficiaries who were switched into or out of an MSSP ACO had higher than average spending growth, 2012–2016

Beneficiary assignment	Percentage point difference in spending growth relative to the market average, 2012–2016	Number of beneficiaries in category
Assigned to the same physician-only ACO in 2013, 2014, and 2015	-5.6	216,143
Assigned to the same hospital ACO in 2013, 2014, and 2015	-2.3	341,576
Switched into or out of an ACO in 2013, 2014, or 2015 or into an ACO in 2016	3.1	2,247,568
Never assigned to an ACO (2013–2016)	-1.3	3,838,089

Note: MSSP (Medicare Shared Savings Program), ACO (accountable care organization). A “hospital ACO” is an ACO with a participating hospital(s) as well as physicians. Beneficiaries were tracked over time to eliminate the need to adjust for coding. “Percentage point difference in spending growth” is the change in spending for the beneficiary from 2012 to 2016 minus the average for the market. These are initial descriptive statistics without any propensity score matching of individuals.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

- Beneficiaries who stayed assigned to the same ACO from 2013 to 2016 had low spending growth relative to their market. These beneficiaries may disproportionately have been individuals without major changes in health status.
- Beneficiaries who were switched from non-ACO clinicians to ACO clinicians in 2016 tended to have high spending growth from 2012 to 2016.
- Beneficiaries who were switched from ACO clinicians to non-ACO clinicians in 2016 also tended to have high spending growth from 2012 to 2016.
- Beneficiaries who were never assigned to an ACO (though they may have switched among non-ACO clinicians) tended to have slightly lower than average spending growth relative to their market.

Specifically, Table 6-6 examines the relationship between our measure of spending growth and (1) physician and hospital participation in an ACO and (2) consistency of ACO assignment. The findings are presented as the percentage point difference between the percentage point change in spending from 2012 to 2016 for the specified population relative to the average percentage point change in spending in its market.

Table 6-6 shows that beneficiaries assigned to a physician-only ACO in all three years had spending growth 5.6 percentage points below their market average.⁷ The difference in spending growth for beneficiaries assigned to physician-only ACOs is greater than for beneficiaries consistently assigned to ACOs with hospitals (2.3 percentage points below market average). (In part, this greater difference is because physician-only ACOs tend to be in markets with higher initial service use than ACOs with hospitals, as shown in the text box (pp. 192–193) on initial service use as a predictor of savings performance.)

Beneficiaries in the same markets who were never assigned to an ACO also had lower than average spending growth overall. However, beneficiaries who were either switched into or out of an ACO had above-average growth. This group encompasses most beneficiaries who had ever been assigned to an ACO; their spending grew at a higher rate than the market average in all market areas.

In Table 6-7, we more closely examine beneficiaries who were switched into or out of ACOs. To do so, we look first at beneficiaries assigned to the same ACO from 2013 through 2016 and then at those who were assigned to the same ACO from 2013 through 2015, but were switched

**TABLE
6-7****Changes in beneficiaries' spending growth and assignment are related**

Beneficiary assignment with an ACO	Percentage point difference in spending growth relative to the market average, 2012–2016	Number of beneficiaries in category
Assigned to same ACO in 2013, 2014, 2015, and 2016	-10.0	408,292
Assigned to same ACO from 2013 to 2015, but dropped in 2016	13.8	149,427
Switched from one ACO to another ACO during 2013, 2014, or 2015	1.2	1,777,369
First ACO assignment in 2016 to an ACO that was newly formed in 2016	2.1	183,615
First ACO assignment in 2016 to an existing ACO (started before 2016)	16.0	281,300
Never assigned to an ACO (2013–2016)	-1.3	3,838,089

Note: ACO (accountable care organization). Analysis included beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse for 10 million Medicare beneficiaries who were either continuously assigned to a Medicare Shared Savings Program ACO or never assigned to an ACO. Individuals were tracked over time to eliminate the need to adjust for coding. Relative percentage change in spending is the individual's change in spending from 2012 to 2016 minus the average for the market. These are initial descriptive statistics without any propensity score matching.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

out in 2016. (These two groups combined comprise the beneficiaries shown in the first two rows of Table 6-6). We see that the patterns of spending growth are very different for those two groups. Those beneficiaries who maintained their ACO assignment in 2016 had spending growth from 2012 to 2016 that was 10 percentage points lower than their market average. Those beneficiaries who had been assigned to the same ACO for three years and then were dropped in 2016 had spending growth from 2012 to 2016 that was 13.8 percentage points above average. This difference likely was due to a significant health status change in 2016 because the “dropped” group’s growth from 2012 to 2015 was 3 percentage points below the market average (not shown in table).

Spending growth was slightly higher than average for those who were switched among ACOs in 2013, 2014, or 2015 and for those who were first assigned in 2016 to a new ACO. However, those who were first assigned to an existing ACO in 2016 had much higher growth than

average, 16 percentage points above the average for their market. Finally, those beneficiaries never assigned to an ACO had slightly lower growth overall.

What explains these findings? Changes in health status may be associated with (and indeed may cause) changes in ACO assignment, which is most clearly illustrated by the contrast between beneficiaries whose first assignment was to a new ACO versus an existing ACO in 2016. To be first assigned to an ACO that formed in 2016, a beneficiary did not need to experience any change in care patterns or health care use. The beneficiary’s assignment to the ACO may have been triggered solely by his or her physician’s decision to join an ACO. By contrast, to be assigned to an existing ACO in 2016 after not being assigned for the three previous years, a beneficiary likely experienced a change in health status that affected his or her care patterns enough to affect assignment. Most likely, the beneficiary started to use more services from ACO clinicians. Overall spending growth for this group was 16 percentage points

Initial service use in market is an important predictor of performance

In Table 6-8, we present the findings for accountable care organizations (ACOs) in three different sets of markets: those with service use that is more than 10 percent below the national average (low-use areas), those in the middle (medium-use areas), and those with service use that is more than 10 percent above the

average (high-use areas). The findings are presented as the percentage point difference between the percent change in spending from 2012 to 2016 for the specified population relative to the average percent change in spending in its market.

(continued next page)

**TABLE
6-8**

ACOs tended to have a larger impact on spending in areas that previously had high use

Percentage point difference in spending growth relative to the average growth in the market, 2012-2016 (number of beneficiaries in category)

Beneficiary assignment with an ACO	Low-use areas	Medium-use areas	High-use areas	Overall average
Assigned to the same physician-only ACO in 2013, 2014, and 2015	-4.6 (12,989)	-5.5 (155,264)	-6.3 (47,890)	-5.6 (216,143)
Assigned to the same hospital ACO in 2013, 2014, and 2015	-0.6 (39,937)	-2.4 (287,395)	-6.4 (14,244)	-2.3 (341,576)
Switched into or out of an ACO in 2013, 2014, 2015 or into an ACO in 2016	3.8 (174,555)	3.5 (1,765,948)	1.0 (307,065)	3.1 (2,247,568)
Never assigned to an ACO (2013-2016)	-1.0 (559,777)	-1.6 (2,813,296)	0.2 (465,016)	-1.3 (3,838,089)

Note: ACO (accountable care organization). Individuals were tracked over time to eliminate the need to adjust for coding. Historical service use in an area was computed by adjusting 2010 to 2012 spending for regional prices and beneficiary hierarchical condition category score. Low-use areas have risk-adjusted service use per beneficiary that is more than 10 percent below the national average; high-use areas have service use more than 10 percent above the national average. "Percentage point difference in spending growth" is the individual's change in spending from 2012 to 2016 minus the average for the market. These are initial descriptive statistics without any propensity score matching of individuals.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

higher than average spending growth in the related markets.

Similarly, beneficiaries who were switched out of an ACO in 2016 had high spending growth (13.8 percentage points higher than their market average) and presumably a change in physicians. Several types of health status changes could trigger a change in ACO assignment in 2016. For example, if beneficiaries were hospitalized, they

could have been referred to the hospital's physician group for further treatment or to a skilled nursing facility (SNF). In the SNF, they could have been seen by physicians not in the ACO and been assigned to new physicians as a result. (In 2017, CMS removed E&M visits in SNFs from the ACO assignment algorithm.)

The continuously assigned beneficiaries had 10 percent lower growth, potentially for three reasons. First,

Initial service use in market is an important predictor of performance (cont.)

Table 6-8 shows that beneficiaries assigned to a physician-only ACO in all three years had spending growth below their market average. The effect was –4.6 percentage points in the low-use areas and grew further below market average as market-area service use increased. The effect was similar for beneficiaries assigned to hospital ACOs, with small differences in the low-use areas and larger differences in the high-use areas. The overall growth difference for beneficiaries assigned to physician-only ACOs (–5.6 percentage points) is greater than for beneficiaries consistently assigned to hospital ACOs (–2.3 percentage points) in

part because a much higher share of the beneficiaries in the physician-only ACOs are in high-use markets compared with beneficiaries in hospital ACOs, and ACO savings tended to be higher in markets with high starting levels of service use. These findings are similar to those in other analyses and consistent with our earlier findings that ACOs are more likely to earn shared savings in high-use markets because it is easier to reduce wasteful spending in those markets. The higher relative savings in these markets are consistent with the literature and consistent with the ACOs that CMS reports receiving shared savings. ■

beneficiaries who did not have a major change in their health status may have been less likely to have changed providers and thus less likely to have been shifted into or out of an ACO. Second, ACOs with high cost growth were more likely to leave the program (due to not generating savings), so that beneficiaries in those ACOs would not have been able to be assigned continuously to the same ACO through 2016. Third, beneficiaries assigned to the same physician for an extended period of time could have experienced better continuity of care resulting in lower spending growth. However, the data suggest that continuity of care was not a major factor explaining the differences in growth rates in Table 6-7 (p. 191). If care coordination in the ACO generated large savings by keeping people healthy, one would expect relatively low spending growth for beneficiaries who were in the ACO from 2013 to 2015, even if they were not assigned to the ACO in 2016. In contrast to this expectation, those beneficiaries who were switched out of the ACO in 2016 had very high spending growth—13.8 percentage points above the average in their market.

The most plausible explanation for these findings appears to be that changes in health status may cause both a change in physicians seen by the beneficiary (hence a change in ACO assignment) and an increase in health care spending. Because assignment and service use are related, the determination of whether MSSP ACOs produce Medicare

savings will be sensitive to the number of beneficiaries initially assigned to ACOs when their health status declines relative to the number of beneficiaries who lose assignment to an ACO when their health status declines.

Changes in health care use and changes in assignment

To better understand why assignment switching occurs, we examined the association between specific changes in health care use and assignment switching. We found that switching is partially explained by new hospitalizations, new home health use, a higher frequency of E&M visits in a SNF, and new assignment to a specialist (Table 6-9, p. 194). For example, among beneficiaries who were dropped from an existing ACO in 2016, 9 percent were assigned based on specialist use, a much higher share than among beneficiaries who were continuously assigned. However, these utilization changes did not account for most of the switchers. For example, 28 percent of the beneficiaries who were dropped from an existing ACO in 2016 had one of the selected health care changes while the rest did not. Other reasons for assignment switching could include beneficiaries seeing—by choice or by need—other clinicians, annual changes to ACOs’ provider-participant taxpayer identification numbers (TINs), clinicians moving into and out of existing TINs, and ACO patient selection toward beneficiaries with lower increases in spending.

**TABLE
6-9**

Share of switchers with a specified change in use, 2016

Selected change in health care use (use occurred in 2016 but not in 2015)

2015–2016 ACO assignment	Specialist assignment	Plurality of E&M visits in SNF	Hospitalization	Home health use	Total: New use of one or more of four types of services	No change in use of selected services
Continuous assignment	2%	1%	11%	7%	16%	84%
Assigned to existing ACO in 2016	4	3	13	8	22	78
Dropped from existing ACO in 2016	9	6	14	9	28	72

Note: ACO (accountable care organization), E&M (evaluation and management), SNF (skilled nursing facility). This analysis includes only beneficiaries who, for the entire 2012 to 2016 period, (1) were alive, (2) were enrolled in fee-for-service Medicare, (3) had an E&M visit in every year, (4) resided in the same county, and (5) either were assigned to an ACO in 2015 that did not leave the MSSP or were newly assigned to an ACO in 2016 that was in the MSSP in the prior year.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

Estimates of Medicare savings from the MSSP are of modest magnitude and can be biased depending on how ACO “switchers” are distributed to treatment or comparison groups

Our analyses show that estimates of Medicare savings from MSSP are of modest magnitude and sensitive to how switchers are distributed to treatment or comparison groups.

Using our cohort of FFS beneficiaries who were alive and eligible for ACO assignment from 2012 to 2016, we estimated the effect of MSSP assignment on savings between 2012 and 2016 under different definitions of ACO treatment and comparison groups (Table 6-10). These analyses did not account for shared savings or other administrative costs of MSSP. Our goal was to understand the magnitude of potential savings and how sensitive estimates of savings are to assignment switching.

Each row in Table 6-10 represents a different definition of the treatment group and the comparison group. For example, in row 1, the MSSP treatment group consists of beneficiaries who were ever assigned to an ACO from 2013 to 2016 compared with beneficiaries who were never assigned to an ACO from 2013 to 2016. Under this potentially biased definition of treatment group, the data suggested that the treatment group had Medicare spending growth that was 2.0 percentage points to 3.6 percentage points higher than the comparison group from 2012

to 2016. The range represents differences in statistical methods, namely:

- mean percentage point difference in the 2012 to 2016 spending growth for the ACO group versus the comparison group;
- mean percentage point difference in the 2012 to 2016 spending growth for the ACO group versus the comparison group after weighting beneficiary spending in the comparison group by market-level propensity scores based on ACO-assigned beneficiary characteristics in 2012 (e.g., age, sex, institutional status, disability, Medicaid eligibility, HCC score); and
- the percentage point difference in spending growth derived from a difference-in-difference regression model estimating the average differential change in spending from 2012 to 2016 (ACO group vs. comparison group) after propensity weighting and controlling for changes in beneficiary characteristics from 2012 to 2016 (e.g., institutional status, Medicaid eligibility, dialysis status, HCC score).

While the definition of who is in the treatment and comparison groups affected whether we found savings or not, the three methods of statistical testing did not materially affect our findings. In particular, our descriptive statistics were generally similar to results that incorporated

**TABLE
6-10**

Estimated MSSP effect on Medicare spending growth between 2012 and 2016

Percentage point difference in spending growth for the MSSP treatment group relative to the comparison group

MSSP treatment group	Comparison group	Mean	Propensity-weighted mean	Propensity-weighted regression results
Beneficiaries ever in an ACO	Never in an ACO	2.0	3.6	2.5
Beneficiaries in an ACO in 2013	Not in an ACO in 2013	-2.0	-1.3	-1.7
Beneficiaries in an ACO in 2016	Not in an ACO in 2016	-4.8	-4.3	-3.8

Note: MSSP (Medicare Shared Savings Program), ACO (accountable care organization). Analysis is of Medicare claims and CMS ACO assignment from 2012 to 2016. This analysis includes only beneficiaries who, for the entire 2012 to 2016 period, (1) were alive, (2) were enrolled in fee-for-service, (3) had an evaluation and management visit in every year, and (4) were in the same market in 2012 and 2016. Positive rates indicate higher MSSP spending relative to the comparison group. Negative rates indicate lower MSSP spending relative to the comparison group. Range of results indicates sensitivity analyses for different statistical comparisons and weighting. Propensity weighting is based on the likelihood of matching ACO beneficiary characteristics in a market (defined as the metropolitan statistical area within a state). All results were significant at the 95 percent confidence interval level. Savings and losses did not account for shared savings payments or other costs from administering the Medicare Shared Savings Program. For all treatment and comparison groups, pre-trend changes in spending from 2011 to 2012 were not significantly different at the 95 percent confidence interval level.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

either propensity weighting or regression modeling. (A more detailed description of these methods is in online-only Appendix 6-B, available at <http://www.medpac.gov>.)

Under the first definition, we looked at the effect of ever being in an ACO compared with never being in an ACO. This comparison is similar to an MSSP study conducted by NIH researchers that found that the MSSP resulted in modest costs to the Medicare program from 2012 to 2014 (Kury et al. 2016). Similarly, we found that the treatment effect of ever being in an ACO does not show savings. In fact, ACO treatment showed higher spending growth of 2.0 percentage points to 3.6 percentage points over four years relative to the comparison group (never in an ACO). This method may be biased toward not finding savings because all assignment switchers are in the ACO treatment group and none are in the comparison group.

Next, we use an intent-to-treat model that has less potential bias, comparing beneficiaries in an ACO in 2013 with beneficiaries not in an ACO in 2013. This counterfactual method defines the treatment group as being assigned to an ACO in 2013 and thus includes some switchers, namely beneficiaries who later were switched out of the ACO after 2013. It defines the comparison group as assignable beneficiaries not assigned to an ACO

in 2013, a group that thus includes all other assignment switchers. The switchers are then more balanced in this model. This intent-to-treat model showed modest savings of 1.3 percentage points to 2.0 percentage points over four years.

This model is most similar to the Harvard study’s intent-to-treat model that also found modest savings to the Medicare program from 2009 to 2015 for ACOs that entered the program in 2012 and 2013 (McWilliams et al. 2018). That study found that savings were higher for physician-only ACOs compared with ACOs with hospitals. We also found in our model that physician-only ACOs had higher savings (1.5 percentage points to 3.0 percentage points over four years) than ACOs with hospitals (data not shown). As previously noted, some of the additional savings by physician-only ACOs may have been influenced by higher rates of assignment leavers (and by being in high-use markets).

Third, we use an as-treated model that has the potential for overestimating savings. That model compared beneficiaries in an ACO in 2016 with beneficiaries not in an ACO in 2016. This as-treated model implies the most optimistic MSSP savings of 3.8 percentage points to 4.8 percentage points relative to the comparison group

over four years. This counterfactual method is the most optimistic about savings because all beneficiaries who were dropped from ACO assignment at any point from 2013 to 2016 and remained unassigned to an ACO in 2016 are removed from the treatment group and placed in the comparison group. Further, this method also removes the effect of high-spending ACOs that left the MSSP before 2016. Therefore, this model likely overestimates program savings. Using a different as-treated model, a National Association of ACOs–sponsored study found savings to the Medicare program from 2013 to 2016 of about 1 percent (Dobson DaVanzo and Associates LLC 2018).⁸

Overall, after examining the effect on savings of allocation of switchers to a treatment or control group and examining the literature, it appears that spending growth was slightly slower for the ACO population on average across the nation. This finding means that in some markets, ACO savings may have been material (e.g., 5 percent), but in other markets, there may have been no savings. On average, our estimates of savings—which do not account for shared savings payments—have been generally modest. Given the beneficiary dynamics observed from the MSSP’s retrospective assignment and the modest level of savings, there is a need to avoid ACOs having particularly favorable or unfavorable selections of patients.

Limitations

There are several limitations to our methodology for examining savings from ACOs operating in 2013. First, we examine only beneficiaries who were alive through 2016. However, sensitivity analysis that included decedents in the model did not show materially different results. Second, our comparison group includes beneficiaries who were assigned to ACOs after 2013. To the extent that those beneficiaries’ spending was also reduced by ACOs (or that ACO care patterns “spilled over” into those patterns for non-ACO beneficiaries), our difference-in-difference estimates could underestimate the effect of ACOs. None of our analyses evaluate the effect of ACOs on new Medicare beneficiaries and beneficiaries who received care from ACO providers but were not always eligible for ACO assignment. It is also possible that ACOs could have improved their ability to manage care since 2016. In addition, CMS changed ACO rules substantially in 2019. Therefore, savings through 2016 could differ materially from savings in 2019 and future years.

Methods for assigning beneficiaries to ACOs and patient selection issues

Estimates of ACO savings by Commission staff, in the literature, and by the CMS Office of the Actuary all suggest ACOs have generated small savings before accounting for shared savings payments. However, because the efficiency gains have been small, any favorable or unfavorable distribution of patients to individual ACOs could result in unwarranted shared savings or unwarranted shared losses for an individual ACO. For example, if patients who have low spending relative to their HCC score—in the absence of ACO interventions—are assigned to the ACO, the ACO could receive unwarranted shared savings. In contrast, if the ACO is assigned patients who have greater health needs than their HCC scores suggest, the ACO could face unwarranted shared losses. The method used to assign beneficiaries to ACOs is, therefore, important.

In light of these issues, we explored how retrospective assignment allows for annual wellness visits (AWVs) to potentially result in a favorable selection of patients and how retrospective assignment could also create unfavorable selection for providers that have ill patients being switched into their ACO.

The use of wellness visits can result in ACOs gaining and maintaining assignment of low-risk beneficiaries

ACOs can use AWVs to help ensure that beneficiaries remain assigned to the ACO. The ACO has access to beneficiaries’ claims history if they are provisionally assigned to the ACO. Thus, the ACO can see whether a beneficiary has had any qualifying E&M visits that year. If not, the ACO can schedule a wellness visit with the beneficiary. Because there is no cost sharing for the AWV, the beneficiary may be willing to participate in a wellness visit. ACOs have several reasons to encourage AWVs. In addition to retaining assignment of a beneficiary (particularly those with low spending relative to their HCC score), AWVs can also help improve the ACO’s performance on the MSSP quality metrics (e.g., document counseling on smoking cessation, screening for clinical depression). AWVs also provide additional revenue to the practice and may be performed in tandem with other E&M services during the same visit. Thus, ACOs have several reasons to encourage the use of AWVs. However, the effect of AWVs on patient

outcomes is more controversial (Mehrotra and Prochazka 2015). Further, the Commission has noted the propensity of health risk assessments—an essential element of AWVs—to result in upcoding of HCC scores and has recommended that these services be excluded from risk score calculations both in FFS and in MA (Medicare Payment Advisory Commission 2016).

In 2016, the rates of AWVs for ACO beneficiaries were 33 per 100 compared with 18 per 100 for other assignment-eligible beneficiaries who were not in an ACO. In other comparisons regarding the use of AWVs, we found the following:

- The share of beneficiaries with an AWV was much higher among physician-led ACOs (40 percent) compared with ACOs that included a hospital (24 percent).
- ACOs were more likely to have the AWV scheduled in the last quarter. In 2016, 32 percent of ACO AWVs were performed in the last quarter compared with 25 percent for other assignment-eligible beneficiaries who were not in an ACO.
- AWVs were less prevalent among beneficiaries who were dropped from assignment to an ACO in 2016 (21 percent) compared with beneficiaries who were continuously assigned (38 percent).

These findings could reflect ACOs' increasing use of AWVs to maintain assignment of beneficiaries or to improve care coordination and planning. It could also reflect ACOs' attempts to achieve favorable selection by bringing patients in for wellness visits to keep the relatively healthy beneficiaries assigned to the ACO. In a survey of the 15 Next Generation ACOs, all said they encourage providers to schedule annual wellness visits and told researchers that promoting AWVs was “a unique chance to engage the large population of lower risk (e.g., non-hospitalized) Medicare beneficiaries” (NORC at the University of Chicago 2018). It is an empirical question as to whether those with wellness visits were indeed relatively low-cost patients before the wellness visit.

Annual wellness visits are associated with low spending levels in years before the visit, but have a weaker association with spending after the visit

One hypothesis is that AWVs improve beneficiaries' health in future years. An additional hypothesis is that

AWVs are indicators of past and current health needs, meaning that well people are more likely to get AWVs. To test whether AWVs have stronger associations with past spending or with future spending growth, we examined whether changes in HCC-standardized spending from 2015 to 2016 were associated with AWVs in 2015. If AWVs are a mechanism for keeping people healthy in the near term, we would expect those with AWVs in 2015 to have lower spending growth from 2015 to 2016 and relatively low risk-adjusted spending in 2016. To gain more insight into the potential financial ramifications of bringing patients in for a wellness visit at the end of the year, we also broke down AWVs by the calendar quarter in which they occurred. If AWVs keep people healthy in the near term, then (on average) a wellness visit during the first quarter of 2015 should do more to reduce 2015 spending than a wellness visit in the fourth quarter of 2015. In contrast, if AWVs result in an effective selection mechanism indicating that a person has historically been relatively healthy (even after adjusting for his or her HCC score), we should see that beneficiaries who have a wellness visit in the fourth quarter of 2015 had relatively low spending in 2015. (ACOs disproportionately brought patients in for AWVs in the fourth quarter of 2015.)

We find that AWVs have the potential to result in patient selection because they are stronger indicators of low spending at the time of the visit rather than low spending after the visit. Among ACO beneficiaries, those with a wellness visit in the first quarter of 2015 tended to have the lowest HCC-adjusted spending in 2014 (\$8,659) and the highest growth (6 percent) in HCC-adjusted spending from 2014 to 2015 (Table 6-11, p. 198). In contrast, patients with a wellness visit in the last quarter of 2015 had both relatively lower HCC-adjusted spending in 2014 (\$8,805) and lower spending growth (–5 percent) from 2014 to 2015. In addition, patients with a wellness visit in the last quarter of 2015 had the highest relative growth in HCC-adjusted spending from 2015 to 2016 (12 percent), although risk-adjusted spending was still the lowest (\$9,361). Taken together, these findings suggest that because beneficiaries with lower spending are more likely to receive AWVs, these services can result in favorable patient selection for ACOs in the MSSP. This consequence will be especially important in 2019 when the MSSP moves toward using HCC-adjusted regional benchmarks rather than basing benchmarks purely on historical spending. Notably, the timing of a wellness visit was a strong predictor of spending before the wellness visit for the ACO and non-ACO groups. While the spending

**TABLE
6-11**

Annual wellness visits have stronger associations with past spending than with future spending growth

Beneficiary category	Number of beneficiaries in category	HCC-adjusted spending (average per beneficiary)			HCC-adjusted spending growth	
		2014	2015	2016	2014–2015	2015–2016
Assigned to ACO						
No annual wellness visit in 2015	3,476,301	\$9,854	\$10,357	\$10,161	5%	–2%
Annual wellness visit in first quarter 2015	289,528	8,659	9,186	9,615	6	5
Annual wellness visit in last quarter 2015	384,250	8,805	8,380	9,361	–5	12
Not assigned to ACO						
No annual wellness visit in 2015	12,292,960	9,728	10,272	10,171	6	–1
Annual wellness visit in first quarter 2015	584,379	8,530	9,429	9,627	11	2
Annual wellness visit in last quarter 2015	698,656	8,628	8,327	9,377	–3	13

Note: HCC (hierarchical condition category), ACO (accountable care organization). Analysis of Medicare claims and CMS ACO assignment from 2012 to 2016. This analysis includes only beneficiaries who (1) were alive and enrolled in fee-for-service from 2012 to 2016, (2) had an evaluation and management visit in 2015, and (3) were in a market with ACOs. The table omits the beneficiaries with a wellness visit in the second or third quarter of the year.

Source: MedPAC analysis of beneficiary-level spending data from the CMS Chronic Conditions Data Warehouse.

differentials on beneficiaries with versus without visits were large, the ACO/non-ACO differentials were smaller.

The risk of unfavorable selection under retrospective assignment

ACOs also face a risk of unfavorable selection if patients who develop new health care needs are switched to the ACO to see ACO physicians. For example, if a patient who has developed a costly illness sees an ACO physician at the end of 2015 and the patient becomes assigned to that physician, the ACO is responsible for all of the beneficiary’s spending during the year, even for the part of the year that occurred before the beneficiary visited the ACO physician. This consequence makes retrospective assignment risky for ACO physicians who tend to attract the sickest patients. In contrast, under prospective assignment, the ACO would not be responsible for the cost and quality of care of the patient until the year after the patient’s initial visit with one of the ACO’s physicians.

Policy implications of assignment methods

Our best estimate is that the MSSP generated some modest savings, 1 percentage points to 2 percentage points by

2016 before shared savings payments. Therefore, any opportunities for ACOs to increase their shared savings payments through patient selection could put net program savings at risk. An ACO could also be at risk and face adverse selection if patients with newly acquired expensive illnesses are switched into the ACO.

ACOs’ use of AWVs could result in favorable selection in a two-step process. First, they could identify patients who have had little or no health care spending during the year. Second, they could target those patients for AWVs, offering them incentives to come in for a visit at the end of the year. For providers with retrospective assignment, this strategy has the potential to (directly or indirectly) generate favorable selection. For those with prospective assignment, the potential for selection may be less because ACOs are held responsible for the next year’s spending, which is less predictable than current year spending that is adjusted for HCC scores based on diagnoses from the prior year. The potential benefits for the ACO are enhanced with the introduction of benchmarks based on regional spending rather than on beneficiaries’ individual spending history. Even if a beneficiary has been healthy and his or her history shows little spending over the

years, the ACO's spending performance will be measured against a benchmark based in part on regional spending and its beneficiary's HCC score. This change creates more profit potential than if benchmarks were set based on the low-cost beneficiary's prior years' spending. In sum, the combination of retrospective assignment, use of regional benchmarks, and AWWs creates opportunities for patient selection.

To protect the taxpayer and limit the potential for patient selection, CMS could use a system of prospective assignment for all MSSP ACOs, as is done in the Next Generation model.⁹ ACOs could still use AWWs to manage care, meet quality metrics, and fully document patients' diagnoses. They would also still benefit from any reductions in future medical spending due to current year AWWs. While the potential for promoting wellness would not be reduced, the potential for patient selection would.

Prospective assignment may also better align provider incentives with patient satisfaction compared with retrospective assignment. For example, under retrospective

assignment, if a patient becomes dissatisfied with care given by an ACO physician in 2015 and sees a new physician in 2016, the ACO is not accountable for 2016 spending. If beneficiaries develop some expensive care needs and are dropped from the ACO, the ACO will not be harmed. In contrast, under prospective assignment, if a beneficiary becomes dissatisfied with his or her care and changes physicians, the ACO remains accountable for the beneficiary's care, giving ACO physicians extra incentives to maintain the loyalty of patients, especially as they become ill.

Prospective assignment can also protect ACOs against adverse selection if severely ill patients are assigned to or are switched to another ACO. The fundamental principle is that under retrospective assignment, the ACO can be responsible for the cost of care that occurs before and after ACO physicians see the patient during the current year. In contrast, under prospective assignment, the ACO is responsible only for the cost of care that occurs in the year after an ACO physician sees the patient. ■

Endnotes

- 1 Beneficiaries now have the option of designating their primary clinician, which will govern their ACO assignment. Thus far, few beneficiaries have done so.
- 2 Beneficiaries do not choose to switch into or out of an ACO. They are assigned by CMS to an ACO or not based on their claims. Thus, when we say a beneficiary was switched out of an ACO, we mean that CMS stopped assigning the beneficiary to the ACO. The assignment algorithm is complicated and has changed over the years. It is summarized in online-only Appendix 6-A, available at <http://www.medpac.gov>.
- 3 We define our markets as metropolitan statistical areas (MSAs) except when an MSA crosses state lines. In that case, we divide each multistate MSA into separate markets by state.
- 4 Decedents were excluded from our analysis, which was not true for the other studies. In separate work using the same analytic approach, we did not find savings for ACOs relative to non-ACOs for decedents.
- 5 The exception is Track 3 MSSP ACOs, which existed only in 2016.
- 6 We compared beneficiaries assigned to an ACO in 2016 with those not assigned to an ACO in 2016 to demonstrate an approach that would likely be the most optimistic estimate of MSSP savings through 2016.
- 7 For example, if in a market the average growth rate was 35 percent for our constant cohort of beneficiaries as they aged from 2012 to 2016 and the growth rate for beneficiaries in physician-only ACOs was 30 percent, the difference in growth rates would be 5 percentage points.
- 8 That study compared beneficiaries assigned to ACOs with those assignable but not assigned to ACOs in the same market in any year. It also used HCCs to risk adjust spending before arriving at their estimate.
- 9 Such a system could also allow the beneficiary to designate a primary care clinician. If that clinician were in an ACO, the beneficiary would then be assigned to that ACO regardless of claims history. This option already exists but thus far is seldom used.

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CHAPTER

7

**Ensuring the accuracy and
completeness of Medicare
Advantage encounter data**

R E C O M M E N D A T I O N

- 7** The Congress should direct the Secretary to establish thresholds for the completeness and accuracy of Medicare Advantage (MA) encounter data and:
- rigorously evaluate MA organizations' submitted data and provide robust feedback;
 - concurrently apply a payment withhold and provide refunds to MA organizations that meet thresholds; and
 - institute a mechanism for direct submission of provider claims to Medicare Administrative Contractors
 - as a voluntary option for all MA organizations that prefer this method
 - starting in 2024, for MA organizations that fail to meet thresholds or for all MA organizations if program-wide thresholds are not achieved.

COMMISSIONER VOTES: YES 16 • NO 1 • NOT VOTING 0 • ABSENT 0

Ensuring the accuracy and completeness of Medicare Advantage encounter data

Chapter summary

Across all areas of the Medicare program, the Commission encounters situations in which data on Medicare Advantage (MA) plan practices could be used to assess or inform both fee-for-service (FFS) and MA payment policies. Analysis of MA encounter data could inform improvements to MA payment policy, provide a useful comparator with the FFS Medicare program, and generate new policy ideas that could be applied more broadly to the Medicare program.

Through rulemaking, CMS has enumerated 10 uses to which the agency can apply MA encounter data, such as determining the risk adjustment factors used to adjust payments to plans and conducting quality review and improvement activities. This chapter describes these uses and expands on how MA encounter data could be used to improve the administration of the MA program and inform potential refinements to the traditional FFS Medicare program. However, the ultimate utility of encounter data depends on their accuracy and completeness.

MA encounter data for 2012, 2013, and 2014 and preliminary data for 2015 were available in time to be included in this chapter. For 2014 and preliminary 2015 data, we assessed the face validity and completeness of the data by counting the number of unique MA plans and unique MA enrollees and comparing the MA encounter data with other Medicare data sets, including

In this chapter

- Introduction
- Encounter data history
- Encounter data submission and screening process
- Uses of MA encounter data
- MA encounter data validation
- Outlook for encounter data accuracy and completeness
- Ensuring the robustness of encounter data

those with information about MA plan offerings, enrollment, and utilization. We conclude, based on our evaluation of the 2014 and 2015 MA encounter data, that these data are a promising source of information and should continue to be collected. We believe there is significant value for policymakers and researchers in having complete, detailed encounter data about the one-third of Medicare beneficiaries enrolled in MA and the \$233 billion that Medicare spends on those services. CMS has released the preliminary 2015 encounter data to researchers for specified analyses. However, given the data errors and omissions that we found, the Commission does not currently support using the data to compare MA and FFS utilization.

Given the value of complete encounter data for the Medicare program and the significant gaps we found in the available encounter data, we propose a phased rollout to improve CMS's MA encounter data collection. Certain steps—included in the Commission's recommendation to the Congress—could be implemented immediately, such as the application of accuracy and completeness metrics that assess plans' compliance with these metrics and the use of payment incentives to drive better encounter data submissions. More specifically, these steps include:

- adding encounter data submission to CMS's MA plan performance metrics, providing robust feedback to plans, and implementing stricter penalties for plans with poor performance;
- implementing a payment withhold to introduce a direct financial incentive for plans to submit complete and accurate data; and
- requiring submission of providers' claims directly to Medicare Administrative Contractors (for some or all MA organizations).

Together these policy changes are designed to improve the completeness and accuracy of encounter data so that they can be used for program oversight; for performance comparisons across FFS, MA, and accountable care organizations; and for additional policy priorities. The recommendation would decrease Medicare spending by less than \$50 million per year and by less than \$1 billion over five years.

While these steps are underway, we envision additional analytic work on subsequent steps for assessing data completeness and accuracy where current comparison data-source gaps exist and for determining that incentives for improved reporting have their intended effect. ■

Introduction

The Medicare Advantage (MA) program gives Medicare beneficiaries the option of receiving benefits from private plans rather than through the traditional fee-for-service (FFS) Medicare program. The Commission strongly supports the inclusion of private plans in the Medicare program; beneficiaries should be able to choose between the traditional FFS Medicare program and alternative delivery systems that private plans can provide. Because Medicare pays private plans a risk-adjusted per person predetermined rate rather than paying for individual services, plans have greater incentives than FFS providers to innovate and use care-management techniques to deliver more efficient care. Plans often have flexibility in payment methods, including the ability to negotiate payment rates with individual providers, care-management techniques that fill potential gaps in care delivery (e.g., programs focused on preventing avoidable hospital readmissions), and robust information systems that can provide timely feedback to providers. Plans also can reward beneficiaries for seeking care from more efficient providers and give beneficiaries more predictable cost sharing.

To administer benefits through the MA program, CMS collects a large amount of information in many forms from plans, providers, and other sources to support particular program functions. MA plans submit detailed bid information based on their own health care encounter and expenditure data; diagnostic information for risk adjustment based on encounter data; and quality data summarized from encounters, medical record reviews (as part of the Healthcare Effectiveness Data and Information Set[®] (HEDIS[®])), and member surveys (as in the Consumer Assessment of Healthcare Providers and Systems[®] (CAHPS[®])).¹ In addition, FFS claims are used to develop MA risk adjustment models; “information-only” claims submitted by hospitals for MA enrollee inpatient stays are used to help calculate disproportionate share hospital (DSH) and medical education payments; and information-only claims from both hospitals and skilled nursing facilities (SNFs) are used to track limits on the Medicare benefit.

Currently, MA program policies rely on discrete sets of limited information often summarized from plans’ internal utilization data (e.g., spending information for bids, diagnosis codes for risk adjustment, and HEDIS data for quality measurement). These information sources are often summarized in a way that is specific to a particular

purpose such that CMS cannot link the data sources to generate a complete picture of how plans administer the Medicare benefit. For example, plans attest that diagnostic information meets risk adjustment rules, and CMS ensures that plan bids reflect patterns of prior spending in the aggregate, but robust encounter data could fulfill both functions while also offering an opportunity to address other program goals, such as calculating quality measures and tracking changes in care patterns. Complete and accurate encounter data could replace several data summarization and submission tasks currently conducted separately by each plan and would allow for more rigorous program oversight. Using encounter data would provide more consistency in the preparation of the submitted data and ensure that program rules are followed consistently and correctly. Most important, complete and accurate encounter data could be used to ensure that MA enrollees receive the full Medicare benefit as entitled and that the \$233 billion of taxpayer money paid to MA plans is spent appropriately. Detailed encounter data are the best vehicle for learning about how, and how much, care is provided to the one-third of Medicare beneficiaries who receive their benefit through an MA plan. In this chapter, we expand on how MA encounter data could be used to improve various program functions necessary for administering the MA program.

In addition to program administration and oversight uses, MA encounter data can be used to gather information about MA plan practices and utilization that can then be used to inform Medicare policies more broadly. Policymakers regularly highlight situations in which analysis of MA encounter data could inform improvements to MA payment policy, provide a useful comparator with the FFS Medicare program, or generate new policy ideas that could be applied across the entire Medicare program.

Encounter data history

The Balanced Budget Act of 1997 permitted CMS to collect encounter data from MA organizations on hospital inpatient stays and other service use—for example, in physician offices, hospital outpatient departments, SNFs, and home health agencies. In 1998, CMS began collecting encounter data and intended to use the diagnoses reported in the data to develop indicators of beneficiary health status for use in risk adjustment.

Plans argued that collecting and submitting encounter data for all items and services provided to MA enrollees would be an excessive burden and inconsistent with the goal of giving responsibility for the management of patients' care to plans. In response, CMS opted to reduce this burden by requiring plans to submit only the data elements necessary to run a risk adjustment model. These elements, known as the Risk Adjustment Processing System (RAPS) data, include a beneficiary identifier, diagnoses, provider type, and dates of service.

In our March 2008 report, the Commission discussed the value of resuming encounter data collection. Commissioners noted that encounter data could provide more detailed information than was currently available about the amount, cost, and quality of services delivered to plan enrollees. Later that year, CMS notified MA organizations of the requirement to submit detailed information about each encounter an enrollee has with a health care provider (Centers for Medicare & Medicaid Services 2008). The encounter data are now used for risk adjustment and other purposes and include many more data elements than found in RAPS: the specific provider of a service, date of service, diagnoses identified, procedures conducted and items provided, the cost of the services provided (when a capitated arrangement is not in place), and others. In 2012, CMS began collecting such data from most MA organizations through the Encounter Data System (EDS).

Encounter data submission and screening process

In general, MA organizations submit encounter data electronically to CMS weekly, biweekly, or monthly, depending on the number of enrollees in a plan. The data are submitted using a standard claim format and, with a few exceptions, include the same information as traditional Medicare's FFS claims. When encounter data are submitted, CMS performs automated front-end checks to verify data quality—such as missing elements, incorrect format, and inconsistent values—before accepting the encounter record. If there are errors or problems, the EDS may reject the submission. These checks focus on data quality for a submitted encounter record and do not evaluate whether all encounters are being submitted to the system (i.e., whether an encounter data record is submitted for all items and services provided to enrollees). If the

system rejects a data submission during these front-end checks, no record of the encounter will appear in the encounter data files unless the plan corrects and resubmits the data.

MA plans submit two types of records: (1) encounter records of health care items and services provided to enrollees and (2) chart review records for information collected during a review of a patient's medical record or chart. Plans can opt to change accepted encounter records at a later date. All encounter records that pass the front-end checks are preserved in the encounter data files, even if they are subsequently edited. The edit process allows plans to void existing records and, if necessary, submit a replacement record that includes corrected or updated information. The system uses unique control numbers to link records for a specific encounter. Chart review records often document additional diagnostic information for risk adjustment. A chart review record may be linked or unlinked to a specific encounter. Plans must keep track of the sequence of submissions, revisions, and linked chart review records to ensure that all records are ultimately accepted by CMS. CMS developed an algorithm over the past few years to assess the submission, deletion, replacement, and linking of records and to determine which record represents an encounter's "final action." Final encounter data files include all accepted encounter records and have an indicator to differentiate final action encounter records from records that were accepted but subsequently replaced by an updated encounter record. CMS finalized the algorithm that determines final action encounters and chart reviews and, in April 2018, sent plans updated versions of encounter data reports (called the MAO-004 report) for 2015 and subsequent years. These reports continue to be improved to address outstanding issues.

For the first few years that CMS collected encounter data, the agency asked plans to submit the data within 13 months of the end of the data collection year, the same deadline used for RAPS risk adjustment data submissions. To accommodate the revision of the final action algorithm and of the feedback reports that CMS sends to plans, the agency extended the deadlines for submitting encounter data for 2015 and 2016 dates of service multiple times to allow plans more time to reconcile their data submissions for those years. The extension gave plans until September 2018 to submit or edit 2015 and 2016 encounter data (Centers for Medicare & Medicaid Services 2019, Centers for Medicare & Medicaid Services 2018d, Centers for

Medicare & Medicaid Services 2018f). For 2017 dates of service, all risk adjustment data, both RAPS and encounter data, were required to be submitted within 13 months of the end of the data collection year, by January 31, 2019 (Centers for Medicare & Medicaid Services 2018a).

In addition to reports documenting plans' submission of encounter records at various points in the process (e.g., acceptance or rejection status after front-end edits, errors related to replacement or linking of records, and disposition of diagnostic data with respect to their use for risk adjustment), CMS provides each plan with a quarterly report card that documents a limited set of metrics, including:

- the total number of records submitted, by service category, with regional and national totals for FFS and MA plans in its region;
- the total number of records accepted, by service category, as well as a breakdown of rejection rates of all attempted submissions;
- one outcome measure comparing inpatient encounter records with information-only claims that hospitals submit to CMS for admissions of MA enrollees.²

Numbers of submitted and accepted records may show changes in plan submissions over time, but only the comparison of inpatient encounter records with hospitals' information-only claims uses an external data source to assess whether encounter data include all records that should be present.

In August 2018, CMS finalized a performance metric framework that includes seven encounter data performance metrics on which MA contracts will be assessed. CMS applied these metrics to encounter data reported for 2015 (Table 7-1, p. 210) (Centers for Medicare & Medicaid Services 2018e). CMS states that the threshold for each metric is designed to identify performance that is substantially below reasonable expectations for submissions, and plans falling below the threshold will be subject to compliance action (i.e., outreach, technical assistance, warning letters, and corrective action) on an annual basis.³ We estimate that about 730 contracts should have submitted encounter records for 2015 dates of service; however, some contracts are excluded from certain metrics listed in Table 7-1 (e.g., cost plans may not be required to submit inpatient encounters; the Program of All-Inclusive Care for the Elderly (PACE), cost, and

Medicare–Medicaid Plans are excluded from some low-volume metrics).

These performance metrics provide a very limited assessment of encounter data and do not assess data completeness. Some of these measures are nearly topped out (e.g., O1: Failure to complete end-to-end testing and certification, O2: Failure to submit any accepted records to the Encounter Data System). These measures may have been appropriate for use as a de minimis threshold in the first few years of the encounter data collection program, but they lack the rigor expected for assessing data collection in the program's sixth year. Other measures compare encounter data with plan-submitted RAPS data but set expected thresholds far too low to be of use: Established thresholds permit plans to report inpatient encounter data for just 41 percent of the enrollees for which they reported inpatient RAPS data and to report outpatient encounter data for just 71 percent of outpatient RAPS data. CMS sets a higher threshold for professional services, which nearly every Medicare beneficiary receives, but does not assess the number of services reported.

Furthermore, we evaluated whether RAPS data are an appropriate benchmark for encounter data completeness and concluded that the provider type indicator (i.e., identifying the encounter as an inpatient hospital, outpatient hospital, or physician/professional visit) does not accurately identify the provider type for an encounter (Medicare Payment Advisory Commission 2019a). Specifically, we found that of the 6.4 million inpatient stays reported in RAPS data, about 1.5 million indicated admission and discharge on the same date and had a physician or outpatient hospital encounter record that matched the date and beneficiary identifier of the RAPS record. We concluded that some of these records were likely to have been outpatient or professional visits that were inaccurately identified as inpatient stays in RAPS data. The inaccuracy of the provider type indicator in RAPS data causes a particular problem for the three performance metrics (C2, C3, and C4) that use RAPS data for a specific provider type as the comparison for encounter data completeness. For example, if 1.5 million of the 6.4 million inpatient stays reported in RAPS data are actually physician or outpatient visits, then the number of enrollees with an inpatient encounter record could never match the number of enrollees with an inpatient RAPS record, creating a downward bias in this comparison. Conversely, the number of enrollees with a professional or outpatient RAPS record would be too low, making the

**TABLE
7-1**

**CMS assessment of encounter data performance
for MA contracts, 2015 dates of service**

Performance metric	Performance threshold	Number of contracts not meeting performance threshold
O1: Failure to complete end-to-end testing and certification	Completed end-to-end testing and certification for a contract within four months of the beginning of operations.	1
O2: Failure to submit any accepted records to the Encounter Data System	Submitted and had at least one record accepted during the calendar year.	4
O3: Excessive submission of encounter data records at end of risk adjustment submission window	Less than 27 percent of encounter data and chart review records for the applicable calendar year were submitted in the last two months before the risk adjustment deadline (to ensure that CMS systems are not overloaded and that plans are regularly submitting data over time).	14
C1: Extremely low volume of overall encounter data records	Submitted a number of encounter data records per enrollee that is above the 80% confidence interval around the mean number of records per enrollee, within each peer group (MSAs, local or regional PPOs and HMOs, PFFS).	8
C2: Extremely low volume of inpatient encounter data records	The number of enrollees with an accepted inpatient record in EDS is at least 40% of the number of enrollees with an inpatient RAPS record (encounter record must be for same enrollee as RAPS record).	21
C3: Extremely low volume of professional encounter data records	The number of enrollees with an accepted professional record in EDS is at least 90% of the number of enrollees with a professional RAPS record (encounter record must be for same enrollee as RAPS record).	29
C4: Extremely low volume of outpatient encounter data records	The number of enrollees with an outpatient record in EDS is at least 70% of the number of enrollees with an outpatient RAPS record (encounter record must be for same enrollee as RAPS record).	17

Note: MA (Medicare Advantage), MSA (medical savings account), PPO (preferred provider organization), PFFS (private fee-for-service), EDS (Encounter Data System), RAPS (Risk Adjustment Processing System). Excludes cost plans, Program of All-Inclusive Care for the Elderly, and Medicare–Medicaid demonstration plans.

Source: MedPAC summary of CMS’s August 20, 2018, memorandum from the deputy director of the Medicare Plan Payment Group regarding CMS monitoring and compliance of encounter data.

comparison of encounter data for those provider types biased in the other direction.

Despite the flaws in comparing encounter data with RAPS data, these seven measures are not rigorous enough to ensure that the data collected are complete and accurate enough for their uses in a mature program. Together, the metrics used in the quarterly report cards and the seven performance metrics are insufficient for assessing the completeness and accuracy of reported encounter data.

Uses of MA encounter data

Through rulemaking from 2008 to 2018, CMS has clarified that it plans to use encounter data for specified purposes (Centers for Medicare & Medicaid Services 2008). In response to industry concerns about the agency’s authority to use encounter data for applications beyond risk adjustment, CMS announced in 2008 and 2014 that it would expressly limit the use of encounter

data to the following purposes (Centers for Medicare & Medicaid Services 2014, Centers for Medicare & Medicaid Services 2008):

- determine the risk adjustment factors used to adjust payments, as required;
- update risk adjustment models;
- calculate Medicare disproportionate share percentages;
- conduct quality review and improvement activities;
- determine Medicare coverage questions;
- conduct evaluations and other analyses to support the Medicare program (including demonstrations), public health initiatives, and other health care–related research;
- support activities related to Medicare program administration;
- support program integrity activities;
- support activities authorized by other applicable laws; and
- inform patient utilization scenarios, which help identify MA plan cost-sharing standards and thresholds that are not discriminatory (Centers for Medicare & Medicaid Services 2018c, Centers for Medicare & Medicaid Services 2012b).

MA encounter data for calculating enrollees' risk scores

Medicare payments to MA plans are adjusted to account for differences in expected spending among enrollees through the CMS hierarchical condition categories (CMS–HCC) model. The model uses enrollee health status (diagnostic data) and demographic characteristics (e.g., age, sex, Medicaid status, and whether the original reason for Medicare entitlement was disability) to calculate a risk score that predicts an individual beneficiary's health care expenditures relative to the average beneficiary. Higher risk scores indicate higher expected use of services and higher expenditures, and thus they generate higher payments to MA plans. To be used in calculating risk scores, diagnoses must result from an encounter with an eligible provider: in a hospital inpatient stay, hospital outpatient visit, or a face-to-face visit with a physician or other health care professional.⁴ Diagnoses supporting each

HCC need to be submitted only once per calendar year, but must also be supported by evidence in the patient's medical record. The diagnostic data used by the CMS–HCC model to calculate risk scores are identified by information that plans submit to CMS, currently through two systems. Between 2004 and 2014, CMS relied solely on RAPS data for risk adjustment diagnoses; starting in 2015, CMS also began using encounter data to identify HCCs for payments to plans.

Through RAPS, plans submit a limited set of data that includes only the minimum information and diagnoses needed to calculate risk scores.⁵ These data are essentially a subset of plans' internal utilization data that has been identified as meeting all criteria for risk adjustment (i.e., diagnoses must map to an HCC used in the risk model, must result from an encounter with an eligible provider, and must be supported by evidence in the patient's medical record). When plans submit RAPS data, plan officers attest that the submitted data are complete, accurate, and meet the risk adjustment criteria. Independent assessment of RAPS data accuracy has been extremely limited, and no such assessment is conducted before payment reconciliation is completed for the plan (see text box, pp. 212–213, on risk adjustment data validation (RADV) audits).

Plan officers also attest that encounter data are complete, accurate, and meet the risk adjustment criteria, but the EDS submission process differs from RAPS in that CMS has developed a system of error and duplicate checks to ensure that when updated records are submitted, individual encounters are counted only once and that data elements are in a valid format and are within a logical range of values. CMS is currently refining this process to address shortcomings identified by plans, the Government Accountability Office (GAO), and Office of Inspector General (OIG). (See text box (p. 219) on GAO and OIG evaluations of MA encounter data.) In addition, when using encounter data for risk adjustment, CMS ensures that diagnoses result from an encounter with an eligible provider before finalizing payment to a plan.

Medicare first used encounter data for payment in 2015 by adding all diagnoses from RAPS and encounter data together to generate a single risk score so HCCs could be identified by RAPS, EDS, or both data sources. For 2016 payment, CMS generated two risk scores, one based on RAPS data and one based on EDS data, and then combined the risk scores using a 10 percent EDS/90 percent RAPS blend. For 2017 payment, CMS increased the EDS portion of the blend to 25 percent and announced

Risk adjustment data validation audits

Risk adjustment data validation (RADV) audits are an independent review of risk adjustment data. Each beneficiary's risk score is made up of a demographic component, supported by data that CMS gathers, and a CMS-hierarchical condition category (CMS-HCC) component supported by the Risk Adjustment Processing System (RAPS) or encounter data submitted by plans. RADV audits address the diagnostic data underlying the HCC component of a risk score and do not address the data underlying the demographic components. RADV audits of all risk adjustment data (RAPS and encounter data) must check whether there is evidence of each diagnosis in a beneficiary's medical records. In addition, plans apply filtering logic to RAPS data to ensure that diagnostic data submitted came from an eligible provider. Plans attest that this filtering logic was applied correctly, but RADV audits of RAPS data must confirm that beneficiaries were diagnosed by an eligible provider. For encounter data, CMS applies the filtering logic ensuring that beneficiaries were diagnosed by an eligible provider, and therefore audits of encounter data need to check only whether diagnoses are documented in medical records.

For each payment year, CMS plans to audit approximately 5 percent of all Medicare Advantage (MA) contracts (contracts include one or more plans).⁶ However, RADV audits have been limited and have yet to be conducted on payment years that use encounter data for risk adjustment. Early audits of RAPS data found diagnoses that did not meet risk adjustment criteria, resulting in significant overpayments to plans. So far, CMS has completed audits of 2007 RAPS data for 37 MA contracts. For each of the 37 audited contracts, a sample of 201 beneficiaries with at least

one submitted HCC was drawn, including an equal number of enrollees with low, medium, and high risk scores. A total of 7,437 beneficiaries were included in the audit samples for contracts with a total enrollment of about 2.3 million beneficiaries. Figure 7-1 shows the share of HCC-based (or diagnosis-based) payments that were found to be invalid for risk adjustment, and therefore were considered an overpayment, for each contract in the 2007 RADV audit. Two contracts did not have a net overpayment because they submitted medical records supporting enough diagnoses not reported in RAPS data to offset any diagnoses reported in RAPS data that were not supported by medical records.⁷ For the other 35 contracts, the net overpayment rate for unsupported RAPS data was 2 percent for one contract, between 10 percent and 30 percent for 20 contracts, and between 30 percent and 80 percent for the remaining 14 contracts (Schulte 2016). For the 2007 payment year, CMS recouped overpayments of \$13.7 million for the sampled beneficiaries, or an average of about \$1,850 per sampled beneficiary.

For the 2011 to 2013 audits, CMS is proposing to recoup overpayments for the full enrollment of the contract by extrapolating payment error rates for the 201 sampled enrollees in the audit. For extrapolation, a contract's payment error rate would be set at the lower 99th percent confidence interval of beneficiary-level error rates in the sample. If the contract payment error rate is greater than zero, the overpayment recovery amount would be the payment error rate at the confidence interval multiplied by the total HCC-based payment for the contract. CMS estimates that completed audits of payment years 2011, 2012, and 2013 identified \$650 million in improper payments,

(continued next page)

plans to continue to increase the EDS portion until encounter data become the sole data source for payment in 2020.⁸ However, in 2018, CMS instead opted to decrease the EDS portion of the blend to 15 percent. In 2019, CMS combined EDS and RAPS inpatient diagnoses, even when there were no supporting encounter data, in one risk score weighted at 25 percent blended with a second

risk score based on all RAPS data weighted at 75 percent. For 2020, CMS will combine EDS and RAPS inpatient diagnoses in one risk score weighted at 50 percent and use a second risk score based on RAPS data weighted at 50 percent. The Commission's comment letter on the advance notice of MA plan payments for 2020 highlighted our analysis finding significant inaccuracies with the inpatient

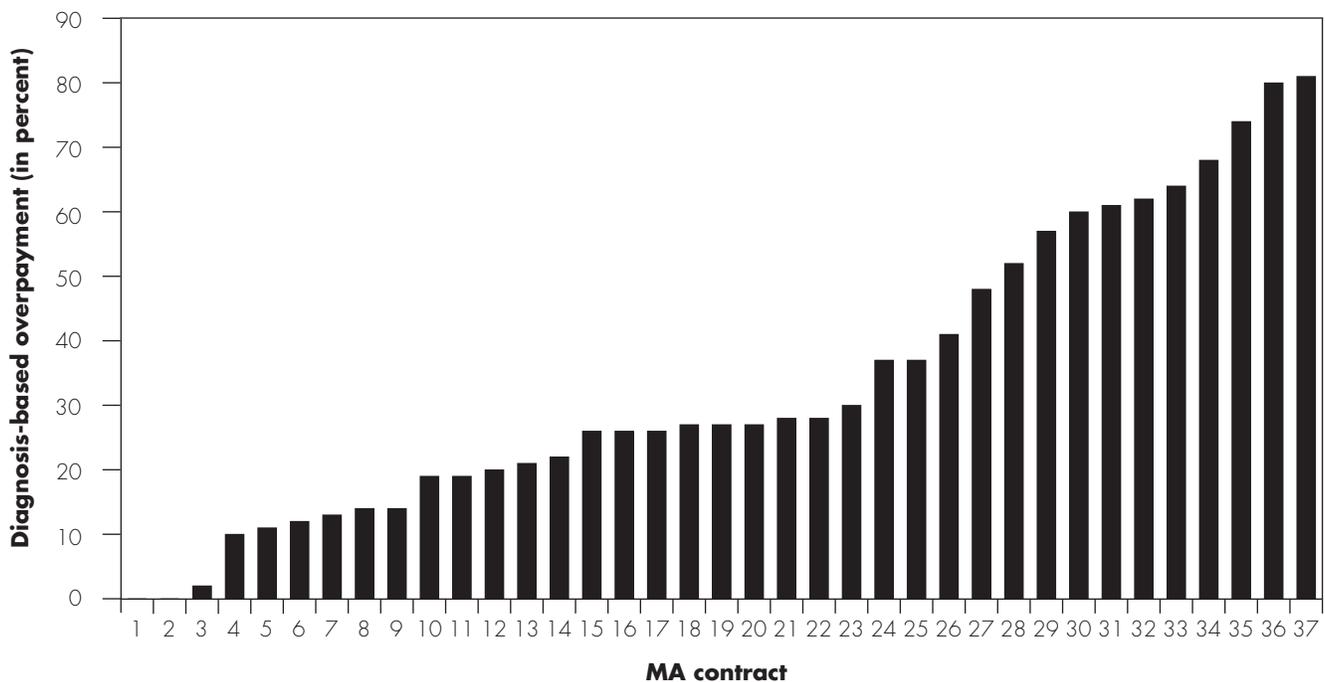
Risk adjustment data validation audits (cont.)

although the results of individual contracts are not publicly known (Centers for Medicare & Medicaid Services 2018b). Audits of payment years 2014 and 2015 are expected to begin in fiscal year 2019 (Department of Health and Human Services 2018). In reviewing the RADV audit process, the Government Accountability Office noted that RADV audits are

tasked with recouping billions of dollars in improper payments to MA plans based on RAPS data, but that significant improvements in the audit process are needed for the audits to actually identify and recoup those overpayments (Government Accountability Office 2016). ■

FIGURE 7-1

RADV audits found some MA contracts had a large share of diagnosis-based payments that were overpayments, 2007



Note: RADV (risk adjustment data validation), MA (Medicare Advantage). RADV audits address only the portion of a risk score based on diagnoses. The figure excludes the share of total payments based on demographic information.

Source: MedPAC analysis of CMS data.

RAPS data and our opposition to combining EDS and inpatient RAPS diagnoses (Medicare Payment Advisory Commission 2019a).

Our analysis of risk score data based on preliminary encounter records (those submitted as of the original deadline, May 1, 2017) for 2015 dates of service shows

little difference from RAPS data based on the risk scores used for 2016 payments.⁹ We found that risk scores based on encounter data were about 2.3 percent lower on average than risk scores based on RAPS data. For 2016 dates of service (submitted as of the original deadline, February 1, 2018), we found that this difference decreased for 2017 payments; that is, encounter-based risk scores were about

1.7 percent lower than RAPS-based risk scores. However, we expect that both of these estimates of difference may shrink as more encounters are submitted before the final deadlines. Looking at individual risk scores used for 2017 payment, we found that 93.3 percent of MA enrollees had exactly the same RAPS-based and encounter-based risk score, while 5.4 percent had lower encounter-based scores and about 1.3 percent had higher encounter-based scores.

Given the differences in submission processes, one might expect larger differences between RAPS and encounter risk scores. However, in recent years, CMS has placed significant emphasis on deleting diagnoses from RAPS data that are ineligible for risk adjustment. Deleting such RAPS data may result from two actions. CMS has been ramping up work on RADV audits for payment years 2011 through 2014. In advance of gathering RAPS data to audit for each year, CMS has opened a window allowing plans to delete RAPS diagnoses for that audit period. CMS believes that RADV audits create a “sentinel” effect which, along with a requirement to report and repay overpayments to plans, has resulted in plans returning \$2 billion in overpayments for payment years 2006 through 2014 (Morse 2017).¹⁰ In addition, as CMS extended deadlines for encounter data submission for payment years 2016 and 2017, the agency also extended deadlines for deletions from RAPS data (RAPS submission deadlines were not extended). A large difference in HCCs reported through RAPS and encounter data would be a flag for CMS to investigate or audit; therefore, a similar sentinel effect may be acting to limit differences between data submitted through RAPS and EDS. Several plans told us that they compare RAPS risk scores with encounter risk scores to ensure consistency of payment across data sources. Given the amount of RAPS-based payments returned to CMS, one may conclude that the comparison with encounter data has encouraged the deletion of RAPS diagnoses that were found invalid for payment. Such invalid codes contribute to the differences in coding intensity between MA and FFS; therefore, the greater reliance on encounter data would narrow the coding intensity differences.

While current data reflect a relatively small difference between HCC scores derived from RAPS and encounter data, the Commission continues to support collecting encounter data from MA plans and using these data for risk adjusting plan payments. The use of encounter data allows CMS to ensure that each diagnosis results from an encounter with an eligible provider before payment adjustments are made to plans, provides an opportunity for

a more substantial check on the submission of inaccurate or erroneous data, and may already be improving the accuracy of RAPS data. Some have found shortcomings with CMS’s validation of encounter data, and—after reports that encounter data have yet to undergo complete validation, including RADV audits—suggest that CMS slow the transition from RAPS to encounter data. However, slowing that transition means continuing to rely more heavily on RAPS data. The problem is that RAPS data receive relatively little scrutiny because they undergo fewer front-end checks; contain a small number of data elements, which limits validation efforts; and are audited for only a small number of contracts. We believe CMS should increase the use of encounter data as expeditiously as possible until they are the sole source of diagnoses for risk adjustment. Furthermore, increasing the use of encounter data for plan payments is currently one of the only tools CMS has to encourage submission of encounter data. However, this incentive is limited to records that include new diagnosis codes for inpatient and outpatient hospital services and physician visits. In other words, increasing the use of encounter data for plan payments may increase the completeness of only the share of encounter data that contributes to higher plan payments. Given the lack of other incentives for complete submission, maintaining financial pressure on plans by using encounters as the basis for identifying diagnosis codes is an important step in ensuring that encounter data are submitted completely and accurately.

MA encounter data for estimating risk model coefficients

Under the CMS–HCC risk adjustment model, which uses plan-submitted diagnostic information to calculate each enrollee’s risk score, each demographic and diagnostic (that is, HCC) component in the model has a coefficient that represents expected medical expenditures associated with that component relative to the beneficiary with average spending. Each risk score is the sum of these coefficients for a given beneficiary.

Currently, CMS uses FFS Medicare claims data to estimate the size of the model coefficients, a process that is called “calibrating the model.” As a result, the model coefficients represent expected spending based on FFS costs and diagnostic coding patterns. Over the past several years, our analyses have shown that diagnoses are documented more completely through MA coding (used to calculate MA risk scores) than through FFS coding practices (used to calibrate the model). As a result, MA

risk scores, and the payments to plans based on those risk scores, are higher than intended. The impact on payment due to differences in MA and FFS coding is partially addressed with a coding intensity adjustment that reduces MA risk scores by 5.9 percent in 2019 (Medicare Payment Advisory Commission 2019b).

FFS claims are used to calibrate the risk model because FFS claims are the only complete source of diagnostic and spending information for Medicare beneficiaries. MA encounter data include diagnostic information, but spending information is included in encounter data only for services in which the plan pays the provider on a per service basis. MA encounter data do not contain spending information for services for which the plan pays the provider a capitated amount. In addition, included spending information for services paid on an FFS basis likely reflects contractual payment amounts that may not include non-service-based payments or adjustments, such as quality incentives, bonuses, or gain-sharing agreements. If MA encounter data were to be used to calibrate the risk model, it would be necessary to better understand what types of payments are included in the spending information in encounter data, and missing and inaccurate data would need to be addressed.¹¹ There are three ways to address the lack of spending data for encounters provided through a capitated arrangement, each of which has pros and cons: FFS prices could be attached to MA encounter data for all encounters; MA plans with capitated provider arrangements could be excluded; or CMS could provide guidance to plans about how to allocate all plan expenditures to individual enrollees (a process intended to be simpler than estimating spending for all capitated encounters, but serving the same purpose) (Medicare Payment Advisory Commission 2016).

Using MA encounter data to calibrate the risk model would generate risk scores that would more accurately predict MA plan spending. As CMS notes: “having the MA program’s relative cost patterns is essential to CMS in order to improve the accuracy of payment to MA plans: these program-specific cost patterns will allow CMS to reflect appropriate relative costs in the risk adjustment model by calculating MA-specific risk adjustment factors” (Centers for Medicare & Medicaid Services 2008). Using a risk model that is calibrated with MA encounter data would also alleviate the need for a coding intensity adjustment because a normalization factor would account for all year-to-year MA coding changes and would keep the average MA risk score stable over time. Instead, the model would be calibrated using the same data to

calculate risk scores, and there would be no differences in coding intensity between calibration and calculation in the model.¹² Implementation of MA encounter-calibrated risk scores would need to consider how to link them to benchmarks based on FFS spending.

A second issue regarding the use of MA encounter data to calibrate the risk model is that this computation could change the amount the program would spend on an individual beneficiary enrolling in MA relative to FFS. Under the current framework, which uses a risk model calibrated on FFS data, program policies are designed to pay MA plans an amount equal to the expected program spending if the beneficiary enrolled in FFS. However, MA risk scores from an MA encounter-calibrated risk model could result in program spending that is higher or lower than the expected FFS spending for that beneficiary. As a result, the program spending for a beneficiary could be higher or lower if the beneficiary enrolls in MA or FFS. In aggregate, these enrollment decisions could affect overall program spending.

Furthermore, whether to use FFS claims or MA encounter data depends on one’s view of how the risk adjustment system should balance payment accuracy with creating appropriate incentives for plans (Skopec et al. 2019). The Commission has long held that Medicare should not favor MA or FFS by paying more when a beneficiary enrolls in either program. This principle could be maintained if CMS implemented an MA encounter-calibrated risk model in a way that guarantees financial neutrality for the average-risk beneficiary. The Commission will continue to track this issue.

MA encounter data for calculating Medicare disproportionate share and indirect medical education payments

Hospitals that treat a disproportionate share of certain low-income patients receive additional payments intended to offset the higher costs such hospitals incur when treating these patients, all else being equal. Disproportionate share hospital (DSH) payments provide for a percentage increase in Medicare payment for hospitals that qualify under either of two statutory formulas designed to identify hospitals that serve a disproportionate share of low-income patients. For qualifying hospitals, the amount of this adjustment varies based on the outcome of the statutory calculation. Both formulas take into account the total number of inpatient days of care provided to Medicare patients eligible for Supplemental Security

Income benefits. CMS incorporates the number of hospital days for MA enrollees along with FFS beneficiaries in its calculation. The number of hospital days for MA enrollees is based on information-only claims that hospitals submit to CMS for each MA-enrolled inpatient. (Before the collection of encounter data, the agency generally did not receive information on individual services provided to MA enrollees, in contrast to FFS. DSH-related information is one exception.¹³)

CMS also uses information-only claims to make indirect medical education (IME) payments to teaching hospitals. IME payments to hospitals are made on a per stay basis with an amount added to Medicare's payment for every FFS discharge. To make IME payments for MA hospital patients, with the exception of a few states, CMS calculates the aggregate IME amount for MA discharges (using the information-only claims) and then carves out the aggregate IME amount from the payment to the MA plan and instead makes a lump sum payment directly to the hospital based on the number of MA patients treated. Medicare also makes a payment to teaching hospitals for graduate medical education (GME) that is affected by MA patient stay data.

The information-only claims are included in the Medicare Provider Analysis and Review (MedPAR) file, which consolidates inpatient hospital and SNF claims data from the National Claims History files into stay-level records. MA encounter data could be used to cross-check, supplement, or—eventually—replace the MedPAR information for MA enrollees.

MA encounter data for quality review and improvement activities

The Commission has suggested that Medicare use a small set of population-based measures to compare the quality of care across its three payment models—FFS Medicare, MA, and accountable care organizations—in a local market area (Medicare Payment Advisory Commission 2015, Medicare Payment Advisory Commission 2010). Medicare's use of the same set of measures across payment models could also promote multipayer alignment, which can reduce the burden providers face in tracking a number of diverse quality measures across payers.

In our March 2010 mandated report to the Congress (required under the Medicare Improvements for Patients and Providers Act of 2008), the Commission made a set of interconnected recommendations about how Medicare

could compare quality across FFS Medicare and MA in a defined geographic area. The report acknowledged that the lack of claims (or encounter) data for MA enrollees was a major limitation on calculating outcome measures such as potentially preventable admissions and readmission rates for MA plans. The Commission recommended that CMS move as quickly as feasible to gather the data needed to calculate a set of population-based outcome measures (Medicare Payment Advisory Commission 2010).

MA plans have been reporting encounter data to CMS since 2012. Once the data are complete, there will be opportunities for Medicare to calculate and compare quality results—for example, of low-value care—across MA plans and FFS in local areas. Some measures, however, may not be entirely comparable between the two sectors. For example, the vast majority of MA plans waive Medicare's three-day hospital stay requirement for SNF admissions, which can affect an FFS-to-MA comparison of hospital admission and readmission rates. In addition, for many measures, risk adjustment will be necessary. However, risk adjustment can be complicated by differences in coding practices between the two sectors. Despite these challenges, encounter data provide the most direct path for comparing quality across sectors, at a local level, and based on a small set of outcomes.

For 2020, CMS has proposed using encounter data as part of the calculation for certain quality measures. CMS evaluated the use of encounter data to establish the number of days an MA enrollee was an inpatient in a hospital or SNF in order to exclude those days from the Part D medication adherence star measures. CMS uses hospital and SNF stay information from the Common Working File (CWF) for the calculation and proposes to supplement CWF data with encounter data for future calculations. In addition, CMS has proposed using encounter data to identify diagnosis codes, which in turn are used to exclude certain groups from quality measurement. Specifically, CMS tested using encounter data to identify end-stage renal disease cases for exclusion from the diabetes and hypertension adherence measures. CMS found that the encounter data yielded similar results to the RAPS results for MA prescription drug plans and stated that the agency will continue to test using encounter data as the source of diagnoses for additional measures in Part D beyond the adherence measures.

The Commission is pursuing a redesign of the MA quality bonus program in which encounter data would be the basis for the primary set of outcome measures (e.g., hospital

admissions, hospital readmissions, preventable emergency department visits) (see Chapter 8 of this report). As part of this work, it will be important to consider the completeness and accuracy of each plan’s encounter data. For example, under this scenario, plans that did not submit complete and accurate encounter data would be ineligible to receive bonuses under the redesigned bonus program.

MA encounter data for Medicare coverage purposes

MA plans have a yearly limit on enrollees’ out-of-pocket (OOP) costs. CMS could use encounter data to track whether MA enrollees reach the maximum OOP cost-sharing limit each year. Beneficiaries in FFS Medicare who use inpatient hospital and SNF services are subject to different coinsurance amounts depending on the length of stay in a defined “benefit period.” Once all of the days in these benefit periods plus 60 “hospital lifetime reserve days” are used, Medicare beneficiaries pay all costs for continued days in the hospital or SNF. Many plans cover additional hospital inpatient days beyond the FFS benefit limit as a supplemental benefit, and therefore tracking how much the plan spends on Medicare-covered days versus supplemental-covered days is necessary for submitting accurate spending information on MA plan bids. Furthermore, information-only claims submitted by hospitals and SNFs must be complete to accurately track benefit limits for beneficiaries who switch among plans or FFS Medicare. Information-only claims from hospitals are used to calculate DSH and IME payments, which affect most hospitals, but such claims from SNFs are used only to track the Medicare benefit. CMS could use encounter data to track MA enrollees’ use of these benefits as it pertains to spending data for MA bids or the potential for a beneficiary to reach the lifetime days limit or benefit period limits based on coverage in multiple MA plans or Medicare FFS. Medicare also has a 190-day lifetime limit on inpatient psychiatric care, which applies whether a person is in MA or FFS. Beneficiaries moving among MA plans could have their inpatient psychiatric days tracked across plans and FFS through the encounter data.

Other potential uses for MA encounter data

CMS has noted that encounter data “will enable CMS to generate improved data analyses that could support Medicare program evaluations, demonstration designs, and CMS’ effective and efficient operational management of the Medicare program. Risk adjustment data also could be

useful to support public health initiatives by governmental entities and to advance health care–related research by universities and other research organizations” (Centers for Medicare & Medicaid Services 2014).

In rulemaking, CMS has also argued that encounter data could be useful in supporting the agency’s administration of MA (e.g., review of the validity of bid and medical loss ratio (MLR) data submitted by MA plans). The agency noted, “while we recognize that many MA organizations have alternative arrangements other than [FFS] payments, we believe that encounter data will be useful for understanding patterns of beneficiary utilization and aspects of MA organizations’ expenditures, as reported in bid and MLR submissions” (Centers for Medicare & Medicaid Services 2014). Currently, plan officials attest to the accuracy of bid and MLR data, but use of encounter data can enhance any independent evaluation of these key MA program components.

In addition, CMS has observed that risk adjustment data could be valuable for program integrity purposes, including audits, evaluations, and investigations by OIG as well as CMS’s own efforts. CMS noted that “encounter data could be used to compare MA and FFS billing to identify aberrant patterns, which may inform efforts to combat fraud, waste, and abuse” (Centers for Medicare & Medicaid Services 2014).

CMS plans to use encounter data to augment Medicare FFS data when reviewing MA plans’ proposed benefits and cost sharing to ensure that cost sharing is not discriminatory. The agency has issued guidance that cost sharing for services cannot exceed 50 percent of the total MA plan financial liability for the benefit to keep cost sharing for such services nondiscriminatory (Centers for Medicare & Medicaid Services 2012a). The addition of MA encounter data to support the creation of utilization scenarios will allow CMS “use of the most relevant and appropriate information in determining cost sharing standards and thresholds” (Centers for Medicare & Medicaid Services 2018c).

MA encounter data validation

To determine whether MA encounter data are ready for multiple planned uses, especially comparing MA and the FFS program, we first assessed the validity and completeness of encounter data by determining the share

of plans that successfully submitted encounter records for different types of providers and by comparing encounter data with other data sources that include enrollment and utilization information.

Data validation methodology

We applied data validation checks to MA encounter data for 2014 dates of service (based on plans' final submission deadline of January 31, 2016) and for 2015 dates of service (based on plans' preliminary deadline, those submitted as of May 1, 2017).¹⁴ (We expect to gain access to final 2015 and 2016 data in 2019.) We assessed the face validity and completeness of the data for plan types that are required to submit encounter data by performing several analyses. For the first, we checked whether MA contracts successfully submitted any records for each type of service:¹⁵

- inpatient hospital
- outpatient hospital
- physician/supplier Part B
- skilled nursing facility
- home health
- durable medical equipment

When plans submit encounter data, CMS's EDS performs automated front-end checks before accepting each record. Errors or problems cause the system to reject the submission, which means no record will appear in the encounter data files unless the plan resubmits the data. In other words, if encounters are not present in the data files, we are unable to tell whether that is a result of the plan not submitting or the system not accepting the record.

Next, we checked whether the encounter data's beneficiary identifier submitted by an MA contract matched Medicare's enrollment databases. In addition, we checked whether the plan identifier (MA contracts can offer one or more plans)—a data field completed by CMS rather than submitted by MA organizations—matched Medicare's enrollment databases. Finally, we compared encounter data for certain service types with external sources of MA service use:

- inpatient stays—MedPAR
- dialysis services—risk adjustment indicator

- home health services—Outcome and Assessment Information Set (OASIS)
- skilled nursing stays—Minimum Data Set (MDS) and MedPAR

This information is collected from sources other than MA plans. MedPAR data on inpatient stays are collected from information-only claims that hospitals and SNFs are required to submit for MA enrollee stays. The dialysis risk adjustment indicator is triggered by a dialysis facility submitting a medical evidence form to CMS when any patient begins dialysis. OASIS assessment data are collected for all Medicare beneficiaries and submitted to CMS by home health agencies at the start of an episode and at several points afterward. MDS assessment data are collected and submitted to CMS by SNFs within 14 days of admission for MA enrollees.¹⁶

While some of these data sources are themselves incomplete, and this incompleteness limits how comprehensively we can assess encounter data, it does not diminish findings that records are missing from encounter data. Each comparison data source provides some evidence of services that were provided to MA enrollees, and for these enrollees and services we expect to find an encounter record. In other words, we can identify records that appear in the comparison data and *should* be included in the encounter data but are not. To the extent that the comparison data source is itself incomplete (i.e., missing records that should be included), these records either may appear only in the encounter data or may be missing from both the encounter and comparison data. When comparing two incomplete data sets, one can identify lack of completeness in both that is a lower bound on the actual incompleteness of each. We are not able to determine whether encounter data are 100 percent complete because of the limitations in comparison data. Our comparisons test only whether there are encounter data corresponding to the MA services identified in external data sources. It is worth noting that we could not compare the majority of physician and outpatient hospital encounter data with an external data source because there is no available alternative source of physician and outpatient hospital utilization for MA enrollees.

We conducted a similar comparison analysis of inpatient stays, emergency department visits, and physician office visits using the Healthcare Effectiveness Data and Information Set[®] (HEDIS[®]). HEDIS consists of plan-generated data and is based on a plan's summarization of

Government Accountability Office and Office of Inspector General evaluations of Medicare Advantage encounter data

The Government Accountability Office (GAO) issued two reports, in 2014 and 2017, on Medicare Advantage (MA) encounter data, concluding that CMS needed to do more to ensure the data's validity (Government Accountability Office 2017, Government Accountability Office 2014). GAO compared CMS's MA encounter data validation efforts with those identified in its 2012 protocol for assessing the completeness and accuracy of encounter data that *Medicaid* managed care organizations must report to state agencies.¹⁷ In the more recent report, GAO found that CMS had not made progress in implementing several steps included in the protocol, including comparing encounter data with plan financial data and with a sample of medical records.

In January 2018, the Office of Inspector General (OIG) published an evaluation of MA encounter data for the

first quarter of 2014 (Office of Inspector General 2018). The study found that 28 percent of records "had at least 1 potential error related to the completeness or validity of a required data element or a potential duplication of services." These errors identify issues with data elements included in encounter data that we have yet to investigate, such as missing or invalid provider identifiers; duplicated services; and inappropriate codes for discharge status, procedures, and revenue. CMS informed OIG that the agency had taken steps to resolve these errors; OIG did not retest the data and has not evaluated data for more recent years. Their findings raise concerns about the accuracy of data elements included in encounter data that would be important for multiple intended uses, including comparisons of MA and FFS. We plan to investigate these concerns further once encounter data files are more complete. ■

its own encounter data. Because HEDIS is not based on an independent external data source, its relevance is in showing how uniformly MA contracts summarize their internal utilization data under HEDIS specifications and to what extent their reported encounter data are complete. Similarly, we compared inpatient stays reported in RAPS data with inpatient encounter data. RAPS data are plan generated and based on a plan's summarization of its own encounter data. The purpose of RAPS data is to identify diagnoses from inpatient hospital, outpatient hospital, and physician encounters, not to document all encounters in these three settings.

For all of the comparisons with external and HEDIS data sources, we began by determining whether the same enrollee appears in the encounter data and comparison data set. For some, we also matched by date of service. We took another step to account for the two types of encounter data: a provider's claims data, or "encounter records," and plans' chart or medical record reviews, which can report additional diagnostic data used for risk adjustment

that were not included in encounter records. Specifically, we differentiated our results for 2015 when comparing all encounter data (encounter records and chart review records) or only encounter records. These comparisons addressed first-order and second-order matching questions and were not an exhaustive comparison. Because of the results, we did not proceed to analyze subsequent questions, such as whether the records matched in terms of performing physician and procedure codes, among other included data elements. To ensure that encounter data are sufficiently complete and accurate to compare MA with FFS, a full validation analysis would need to assess additional important data elements. These elements would be important data validation questions to investigate once encounter data are complete enough that they compare favorably with comparison data in terms of individuals included and (approximate) dates of service. Other groups have undertaken these types of studies: OIG and GAO have raised concerns about the completeness and validity of encounter data (see text box on GAO and OIG evaluations of MA encounter data).

**TABLE
7-2**

Some contracts did not submit any encounter data for certain types of service, 2014–2015

Share of contracts with at least one data record

Encounter data file	2014	2015
Physician	97%	99%
Inpatient	96	98
Outpatient	95	98
Skilled nursing facility	89	95
Home health	78	82
Durable medical equipment	91	96
In each of the six settings	74	80

Note: Excludes contracts not required to submit encounter data.

Source: MedPAC analysis of CMS data.

On the basis of our data validation, the Commission concluded that encounter data are promising and their value to the program, once complete, will be significant; thus, they should continue to be collected. However, at their current level of completeness, we could not use the available data sets for comparing MA with FFS utilization given the data errors and omissions that we found. We assessed whether a subset of plans appeared to submit complete enough data to allow credible comparisons with FFS. Using the preliminary 2015 data, we conducted our comparative analyses at the contract level and assessed whether any contracts had positive results across all assessments.

In addition to our data analyses, we spoke with CMS’s encounter data group and the Office of the Actuary to get feedback on our validation approach and ideas for next steps. We also interviewed several MA plans to learn about their encounter data processing, the extent to which plans conducted their own assessments of data completeness, and their ideas of ways to improve the process and the collection of more complete data.

Data validation findings

Our validation analyses identified three broad categories of encounter data issues: Some MA contracts did not successfully submit encounters for all settings, MA encounter data include a few records that attribute

enrollees to the wrong plan, and encounter data differ substantially across some comparison data sources.

Some MA contracts did not successfully submit encounters for all settings

For both 2014 and 2015 dates of service, some contracts did not successfully submit any encounter data for certain settings or types of service. Table 7-2 shows the share of contracts that successfully submitted at least one record for each type of service. We found that most contracts submitted at least some encounter data for each service type, with the exception of skilled nursing and home health care, for which some contracts did not successfully submit any encounter data. The share of contracts submitting encounter records improved from 2014 to 2015 for all types of services, but only 80 percent of MA contracts submitted at least one record for all six service types in 2015.

MA encounter data include a few records that attribute enrollees to the wrong plan

Some encounter records attribute enrollees to the wrong plan because encounter data are not required to be revised when there are subsequent changes to enrollment. When MA plans submit data through the EDS, one of the system’s front-end edits is to confirm that CMS’s information on enrollment indicates that the beneficiary is in fact a plan member. However, Medicare sometimes changes a

**TABLE
7-3**

Not all MA inpatient stays and unique inpatient users were reported in encounter data, per comparison with MedPAR inpatient stay data, 2014-2015

Year	Unit of analysis	Encounter data*				
		MedPAR	Encounter records plus chart review records		Encounter records only	
		Number	Number	Share of MedPAR stays or enrollees with a matching record in encounter data	Number	Share of MedPAR stays or enrollees with a matching encounter record
2014	MA inpatient stays	3.5M	3.4M	73%	N/A	N/A
2015	MA inpatient stays	3.8M	4.1M	78	3.6M	72%
2014	Unique MA enrollees	2.3M	2.2M	84	N/A	N/A
2015	Unique MA enrollees	2.5M	2.5M	90	2.4M	84

Note: MA (Medicare Advantage), MedPAR (Medicare Provider Analysis and Review), M (million), N/A (not applicable). Inpatient stay is defined as unique beneficiary identification number (or identifier), admission date, and discharge date combination. Data exclude contracts not required to submit encounter data. Some units of analysis in the encounter data column do not match MedPAR data and are not included in the numerators used to calculate the share of MedPAR-recorded stays columns, which include only encounter records that had a match in MedPAR data.

*Encounter data include both encounter records and chart review records. Chart review records can either be associated with and provide additional information about an encounter record or be unlinked to any encounter records.

Source: MedPAC analysis of CMS data.

beneficiary’s enrollment retroactively for various reasons. The beneficiary can be moved between plans and contracts or back to traditional FFS Medicare. EDS does not have a process for modifying encounter records in these cases, and, therefore, final encounter data files do not reflect retroactive enrollment changes. In other words, a plan can submit a valid encounter record for an enrollee who is subsequently disenrolled from the plan, retroactively for the period including the date of the encounter, but whether the plan deletes the encounter record is unknown. When retroactive enrollment changes take place, Medicare enrollment data are modified and a payment reconciliation should take place, but EDS does not monitor or reconcile retroactive enrollment changes. These retroactive enrollment changes are rare and affect a small number of encounter data records, but unlike other issues with the encounter data, such as underreporting, this issue will not solve itself, even as plans gain more experience with reporting.

Encounter data differ substantially from some other data sources

We compared encounter data on inpatient stays with MedPAR and RAPS; on outpatient dialysis use with the dialysis risk adjustment indicator; on home health use with

OASIS assessments; on skilled nursing use with MDS assessments and MedPAR; and on office visits, emergency department visits, and inpatient admissions with HEDIS. We found that few MA contracts report relatively complete encounter data for multiple services.

Comparison of inpatient stay MedPAR and RAPS The MedPAR file contains information about inpatient hospital stays and is used to calculate DSH and GME payments. Hospitals are required to submit information-only claims records to Medicare Administrative Contractors (MACs) for all MA inpatient stays so CMS can include these records in the MedPAR file. Hospitals that receive these payments have a financial incentive to submit complete information about MA enrollees. The only incentive for other hospitals to submit information-only claims is to meet program requirements. Table 7-3 shows that, in 2014, slightly fewer inpatient stays were reported in encounter data than in MedPAR, but for 2015, more inpatient stays were reported in encounter data than were reported in MedPAR.

When comparing individual stays based on beneficiary identifier, admission date, and discharge date, we found that the proportion of MedPAR-recorded stays with a

**TABLE
7-4**

Inpatient stays reported in encounter, MedPAR, and RAPS data, 2015

Inpatient stays reported in:		MedPAR	Encounter data*	RAPS
All 3 data sets	MedPAR, encounter, and RAPS	2.9M	2.9M	2.9M
Only 2 data sets	MedPAR and encounter	0.1M	0.1M	
	MedPAR and RAPS	0.6M		0.6M
	Encounter and RAPS		0.8M	0.8M
Only 1 data set	Only MedPAR	0.3M		
	Only encounter		0.3M	
	Only RAPS			2.1M
Total		3.8M	4.1M	6.4M

Note: MedPAR (Medicare Provider Analysis and Review), RAPS (Risk Adjustment Processing System), M (million). An “inpatient stay” is defined as a unique beneficiary identification number, admission date, and discharge date combination. Excludes contracts not required to submit encounter data. Totals may not sum due to rounding.

*Encounter data include encounter records and chart review records. Chart review records can either be associated with and provide additional information about an encounter record or be unlinked to any encounter records.

Source: MedPAC analysis of CMS data.

matching record in encounter data was 73 percent in 2014 and 78 percent in 2015. Similarly, when we compared unique MA enrollees with any inpatient stay (assessing only whether a beneficiary identifier was found in both data sources), we found that the proportion of unique beneficiaries in MedPAR data with an encounter data match increased from 84 percent in 2014 to 90 percent in 2015.

Although we found improvement from 2014 to 2015, we also found that some inpatient stays are reported only in chart review records. Generally, we would expect to find an encounter record for the inpatient stay if a chart review record was submitted; however, we found that some inpatient stays were documented only in chart review records. Table 7-3 (p. 221) shows that for 2015, fewer inpatient stays and unique MA inpatient users were reported on encounter records (excluding chart review records) than in MedPAR data, such that match rates with MedPAR decreased from 78 percent to 72 percent for inpatient stays and from 90 percent to 84 percent for enrollee matching.

MA plans submit RAPS data to document diagnoses identified during inpatient hospital, outpatient hospital, and physician encounters. The purpose of RAPS data

is to identify diagnoses, not to document all encounters in these three settings. Using 2015 data, we compared inpatient stays (defined by unique combinations of beneficiary ID, admission date, and discharge date) across the three data sets to identify consistency and differences among them. Table 7-4 shows the number of inpatient stays found in all three data sets, only two of the data sets, or only one data set.

Overall, 6.4 million inpatient stays were reported in RAPS data, and about 5 million unique inpatient stays were found in either encounter or MedPAR data (i.e., the sum of stays reported in both encounter and MedPAR data and stays reported in only one of the data sources). In a separate analysis, we found that a large share of RAPS inpatient stays had the same admission and discharge date. To investigate this finding, we compared the 2.1 million inpatient stays reported only in RAPS with encounter data for outpatient hospital and physician visits and found about 1.5 million matches (data not shown), leading us to conclude that the RAPS data likely have the incorrect provider type indicated. MedPAR and encounter data include data elements similar to full claims data, making them less likely to be faulty or to represent encounters with other provider types. Assuming MedPAR and

**TABLE
7-5**

Not all unique MA dialysis users were reported in encounter data, per comparison with dialysis risk adjustment indicator, 2014–2015

Year	Unit of analysis	Number of MA enrollees with:		Share of MA enrollees with a dialysis indicator who also had a record in encounter data
		Dialysis risk adjustment indicator	Dialysis encounter data*	
2014	Unique MA enrollees	86,000	80,000	86%
2015	Unique MA enrollees	99,000	95,000	89%

Note: MA (Medicare Advantage). Utilization numbers are rounded to nearest thousand. Data exclude contracts not required to submit encounter data. Some units of analysis in the encounter data column do not match dialysis risk adjustment indicator data and are not included in the numerators used to calculate the share of MA enrollees with a dialysis indicator column, which includes only encounter records that had a match in dialysis risk adjustment indicator data.

*Encounter data include encounter records and chart review records. Chart review records can either be associated with and provide additional information about an encounter record or be unlinked to any encounter records. Excluding chart review records from 2015 encounter data did not affect 2015 results shown in the table.

Source: MedPAC analysis of CMS data.

encounter data together represent all MA inpatient stays, there were about 5 million inpatient stays provided to MA enrollees in 2015. If this figure is accurate, then encounter data are missing about 0.9 million inpatient stays, or about 18 percent of all MA inpatient stays.

Comparison of outpatient dialysis use with the dialysis risk adjustment indicator Dialysis facilities submit a medical evidence form to CMS when a patient with end-stage renal disease begins dialysis. The form triggers an indicator, which, for MA enrollees, results in Medicare’s payment being based on the dialysis risk adjustment model. We compared MA enrollees with the dialysis indicator during the year to MA enrollees with a dialysis encounter record during the calendar year. This analysis assesses only whether a beneficiary identifier was found in both data sources for the year. Table 7-5 shows that the proportion of MA enrollees with the dialysis indicator (i.e., a dialysis medical evidence form submitted to CMS) who also had at least one dialysis encounter grew between 2014 and 2015 from 86 percent to 89 percent, which is similar to the 2015 match rate of 91 percent (data not shown) found in FFS Medicare.

Comparison of home health use with OASIS assessments Home health agencies are required to submit an OASIS assessment for all Medicare beneficiaries at the start of a home health episode and at several points thereafter; however, submission of OASIS assessments to CMS generally does not affect payment from the MA plan. We compared MA enrollees with an OASIS assessment to

MA enrollees with a home health encounter record during the calendar year. This analysis assesses only whether a beneficiary identifier was found in both data sources for the year. Table 7-6 (p. 224) shows that for both years, a home health encounter record was missing for many MA enrollees who used home health services and received an OASIS assessment. In 2015, however, the number of enrollees with a home health encounter record increased by about 30 percent over 2014 and was much closer to the number of MA enrollees with an OASIS assessment. Consistent with the low number of enrollees with an encounter record, we found that the proportion of MA enrollees with an OASIS assessment who also had a home health encounter record was below 50 percent in both years. These results indicate that many home health encounter records are missing, although submission of these records improved.

Comparison of skilled nursing use with MDS assessments and MedPAR An MDS assessment is required for all Medicare beneficiaries within the first 14 days of a SNF stay and—for beneficiaries with SNF episodes that are of sufficient duration—quarterly and annual assessments are also required.¹⁸ However, submission of MDS assessments to CMS generally does not affect payment from the MA plan. We compared MA enrollees who had an MDS assessment with enrollees who had a SNF encounter record during the calendar year. This analysis assesses only whether a beneficiary identifier was found in both data sources for the year and excludes MA enrollees who are eligible for full Medicaid benefits.¹⁹ We would expect

**TABLE
7-6**

Less than half of unique MA home health users were reported in encounter data, per comparison with OASIS assessment data, 2014-2015

Year	Unit of analysis	Number of MA enrollees with:		Share of MA enrollees with an OASIS assessment who also had a record in encounter data
		OASIS assessment	Home health encounter data*	
2014	Unique MA enrollees	1.1M	0.6M	41%
2015	Unique MA enrollees	1.0M	0.8M	46%

Note: MA (Medicare Advantage), OASIS (Outcome and Assessment Information Set), M (million). Excludes contracts not required to submit encounter data. Some units of analysis in the encounter data column do not match OASIS assessment data and are not included in the numerators used to calculate the share of MA enrollees with an OASIS assessment column, which includes only encounter records that had a match in OASIS assessment data.

*Encounter data include encounter records and chart review records. Chart review records can either be associated with and provide additional information about an encounter record or be unlinked to any encounter records. Excluding chart review records from 2015 encounter data did not affect 2015 results shown in the table.

Source: MedPAC analysis of CMS data.

more enrollees to have a SNF encounter record than an MDS assessment because MA enrollees with a SNF stay of less than 14 days may not have an MDS assessment. However, Table 7-7 shows that many more MA enrollees had an MDS assessment than a SNF encounter record; of the enrollees with an MDS assessment, only 49 percent in both 2014 and 2015 also had a SNF encounter record

during the year. These findings suggest that many SNF encounter records are missing.

The MedPAR file contains information about SNF stays and is used to track the Medicare benefit limit on inpatient days. The only incentive for SNFs to submit information-only claims is to meet program requirements. SNFs are required to submit information-only claim records to CMS

**TABLE
7-7**

About half of unique MA skilled nursing users without full Medicaid eligibility were reported in encounter data, per comparison with MDS assessment data, 2014-2015

Year	Unit of analysis	Encounter data*				
		MDS assessment	Encounter records plus chart review records		Encounter records only	
		Number	Number	Share of MA enrollees with an MDS assessment who also have a record in encounter data	Number	Share of MA enrollees with an MDS assessment who also have an encounter record
2014	Unique MA enrollees	524,000	299,000	49%	N/A	N/A
2015	Unique MA enrollees	564,000	318,000	49	300,000	48%

Note: MA (Medicare Advantage), MDS (Minimum Data Set), N/A (not applicable). Utilization numbers rounded to nearest thousand. Excludes contracts not required to submit encounter data and MA enrollees eligible for full Medicaid benefits. Some units of analysis in the encounter data column do not match MDS assessment data and are not included in the numerators used to calculate the share of MA enrollees with an MDS assessment columns, which include only encounter records that had a match in MDS assessment data.

*Encounter data include encounter records and chart review records. Chart review records can either be associated with and provide additional information about an encounter record or be unlinked to any encounter records.

Source: MedPAC analysis of CMS data.

**TABLE
7-8**

About half of unique MA skilled nursing users were reported in encounter data, per comparison with MedPAR SNF stay data, 2015

Year	Unit of analysis	Encounter data*				
		MedPAR	Encounter records plus chart review records		Encounter records only	
		Number	Number	Share of MA enrollees with a MedPAR SNF stay who also have a record in encounter data	Number	Share of MA enrollees with a MedPAR SNF stay who also have an encounter record
2015	Unique MA enrollees	231,000	443,000	51%	423,000	50%

Note: MA (Medicare Advantage), MedPAR (Medicare Provider Analysis and Review), SNF (skilled nursing facility). Utilization numbers are rounded to nearest thousand. Excludes contracts not required to submit encounter data. Some units of analysis in the encounter data column do not match MedPAR SNF data and are not included in the numerators used to calculate the share of MedPAR-recorded SNF stays columns, which include only encounter records that had a match in MedPAR SNF data.

*Encounter data include encounter records and chart review records. Chart review records can either be associated with and provide additional information about an encounter record or be unlinked to any encounter records.

Source: MedPAC analysis of CMS data.

for all MA inpatient stays. Table 7-8 shows that in 2015, more SNF stays were reported in encounter data than in MedPAR, but only 51 percent of the enrollees with a SNF stay reported in MedPAR also had a record in SNF encounter data.

Comparison of encounter and HEDIS data For HEDIS, most MA contracts are required to submit beneficiary-level counts of certain types of utilization, including office visits, emergency department visits, and inpatient admissions.²⁰ It is reasonable to expect that plans summarize their internal utilization data for these calculations, so we consider comparisons of HEDIS and encounter data an assessment of whether HEDIS specifications are followed uniformly across contracts. The comparisons may also indicate whether contracts are able to successfully submit all encounter records for utilization data that are likely to be the basis for their HEDIS data. We compared 2015 HEDIS data with our summary of the encounter data using HEDIS specifications.

Of the contracts for which we expected to find HEDIS data, about 78 contracts did not submit beneficiary-level HEDIS data for physician office visits in 2015. For contracts that submitted both HEDIS and encounter data, we aggregated the count of office visits and found

significant variation between the two data sources. Table 7-9 (p. 226) shows that, through HEDIS, less than half (46 percent) of contracts submitted a total count of office visits for all enrollees that was within 10 percent of the number of visits reported in encounter data. Of the remaining contracts, about half reported more than 10 percent too many office visits, and the other half reported more than 10 percent too few office visits in HEDIS data (data not shown). Finally, we compared counts of office visits for individual beneficiaries and found that only 56 percent had a count of office visits through HEDIS that was within one of the number reported in encounter data.

Table 7-9 shows a similar analysis for counts of emergency department visits and inpatient admissions and found that 78 and 81 contracts, respectively, did not submit HEDIS data. Only 10 percent of contracts had a total count of emergency department visits in HEDIS data that was within 10 percent of the number reported in encounter data. For inpatient admissions, we found that 27 percent of contracts had aggregate counts within 10 percent in these data sets. Finally, the share of beneficiaries who had the same utilization counts in HEDIS and encounter data was much higher (63 percent for emergency department visits, 60 percent for inpatient admissions) than for office

**TABLE
7-9**

MA plan HEDIS® data poorly match counts of physician office visits, emergency department visits, and inpatient admissions reported in encounter data, 2015

Unit of analysis	Number of contracts not submitting HEDIS data	Share of contracts with aggregate HEDIS count within 10 percent of aggregate encounter data count	Share of service users with HEDIS count equal to encounter data count*
Physician office visits	78	46%	56%
Emergency department visits	78	10	63
Inpatient admissions	81	27	60

Note: MA (Medicare Advantage), HEDIS® (Healthcare Effectiveness Data and Information Set®). Excludes contracts not required to submit encounter data. Encounter data include encounter records and chart review records.
 *Comparison of counts for beneficiaries using each service is considered equal if exactly equal to emergency department visits and inpatient admissions, or within 1 for office visits. Excludes contracts that did not submit HEDIS data, regardless of whether submission was expected based on submission requirements.

Source: MedPAC analysis of CMS data.

visits; however, the majority of beneficiaries do not have an emergency department visit or inpatient admission in any given year.

Overall, there appear to be significant differences in the utilization counts reported through HEDIS and encounter data for many MA contracts. At a minimum, these results demonstrate the potential for CMS to use encounter data to calculate utilization counts more uniformly relative to the utilization counts reported by contracts in HEDIS data.

Few MA contracts report relatively complete encounter data for multiple services Because we found missing encounter data for some types of services, we conducted similar comparisons of encounter data with MedPAR, dialysis risk adjustment indicator, MDS, and OASIS data at the contract level to see whether a subset of MA contracts submitted complete data across all comparisons. We limited our analysis to contracts with 2,500 or more enrollees in 2015 and contracts with a MedPAR inpatient stay match rate of at least 90 percent. Fifty-two contracts with an aggregate enrollment of about 2 million enrollees met these criteria.

Of the 52 contracts, average match rates for the dialysis risk adjustment indicator were 94 percent, but only 65 percent for home health and 68 percent for SNF. Only seven contracts had match rates of at least 90 percent for all four data sets. We conclude, based on these findings, that for the preliminary 2015 data we analyzed, using a subset of contracts to assess MA utilization would severely

limit the generalizability of any findings. Specifically, the 7 contracts with high match rates were all sponsored by health systems, had an aggregate enrollment of about 200,000 enrollees, and operated in a small number of health care markets. We plan to continue assessing the possibility of analyzing a subset of MA contracts as we gain access to more-current data.

Outlook for encounter data accuracy and completeness

The preliminary 2015 encounter data (the version that CMS publicly released) include more records than the 2014 data and align somewhat better with other measures of service use, but are not complete enough—meaning that there are not records in the data set to reflect all encounters that should be documented—for comparing MA with FFS utilization. CMS and MA plans report that they are continuing to learn and improve the data collection process. Several stakeholders contend that more recent encounter data files are more complete and accurate.

We anticipate gaining access to final 2015 and 2016 encounter data files in 2019. We expect, based on the trend from 2014 to 2015 and stakeholder feedback, that the 2016 encounter data will be more complete than in prior years.²¹ However, given the current incentives to submit encounter data and the limited assessment of completeness, we

anticipate that encounter data will continue to improve only incrementally. In other words, incomplete encounter data are a problem that may not resolve on its own without changes to current processes.

Our outlook differs from that of some stakeholders because we focus on assessing data completeness—whether records of all encounters that took place are present in the data. We found evidence that encounter data are incomplete—sometimes substantially so—based on our validation analysis that focused on comparisons with external data sources for inpatient stays (MedPAR data), any dialysis use (risk adjustment data), skilled nursing stays (MDS), and home health use (OASIS), as well as comparisons with plan-generated HEDIS data for inpatient stays, emergency department visits, and physician office visits. In contrast, CMS uses far fewer metrics that assess completeness. Only one measure is similar to the comparisons in our study—the quarterly report cards that include a comparison of inpatient encounter records with hospital-reported inpatient stays reported in MedPAR data. Other report card information addresses the number of submitted and accepted encounters. Although the number of encounter records and the acceptance rates may be increasing, only the inpatient stay metric assesses completeness of the data. Similarly, the performance metrics CMS adopted in August 2018 address whether encounter records are consistent with other plan-generated RAPS data, but these also do not assess completeness relative to an external data source. The only way to know whether encounter data submissions are becoming more complete is to adopt new measures of completeness.

CMS’s feedback to plans based on metrics that are not designed to assess completeness gives plans only a nominal assessment of their performance relative to the prior period, but not a real sense of how their submissions compare with the number of records that should be submitted. Many plans do not use comparisons with external data sources to assess their own completeness, but rely instead on the report card and performance assessment provided by CMS. Learning that a greater proportion of their submitted encounter data records are accepted by the EDS system and that their total number of submissions and rate of acceptance has improved each year can leave plans with the sense that their encounter data submissions have improved; however, this information is not designed to assess whether encounter data are complete.

We are eager for MA encounter data to achieve sufficient completeness to evaluate MA care delivery and service

use relative to FFS Medicare and inform policy options to improve the Medicare program. Observed improvement in the completeness of encounter data has been slow, and we note that current incentives to submit encounter data do not span all services.

Ensuring the robustness of encounter data

Existing incentives for plans to submit complete encounter data are largely limited to their use for risk adjustment. In general, the use of encounter data for this purpose has been increasing, and it is expected that encounter data will ultimately replace RAPS data for identifying diagnoses. To strengthen the incentive to submit encounter data for risk adjustment, CMS should reestablish a time line for increasing the use of encounter data so that these data are the sole source of diagnostic data within a few years.

The only other established incentive for encounter data submission is based on performance measures that CMS recently finalized. However, these measures are currently designed only to identify the lowest performing contracts for future compliance action and do not focus on assessing encounter data completeness.

Assessing completeness and accuracy of encounter data

To ensure that encounter data are sufficiently complete and accurate for their intended uses, CMS should expand upon current metrics to include additional measures comparing the data with external and plan-generated data sources.

External data sources

CMS should adopt additional metrics to compare encounter data with external data sources similar to the ones applied in our study. Our validation analyses focused on comparisons with external data sources for inpatient stays (MedPAR data), any dialysis use (risk adjustment data), skilled nursing stays (MDS), and home health use (OASIS). In future analyses, we plan to include as external data sources the Inpatient Rehabilitation Facility–Patient Assessment Instrument (IRF–PAI) for IRFs and the Continuity Assessment Record and Evaluation (CARE) for long-term care hospitals.

Given that Medicare encounter data should provide accurate total counts of encounters and descriptions of key characteristics of those encounters, several metrics

of completeness and accuracy should be adopted for comparison with encounter data. For example:

- Does each MA enrollee who has a record in the external data source have an encounter record for that service type during the year?
- Does the number of utilization units (e.g., admissions, stays, days) for a particular MA enrollee in the external data source match the number reported in encounter data?
- Do the dates of service for a particular MA enrollee identified in external data source match the dates reported on the encounter record for that enrollee and service?

For consistency, generally similar metrics of completeness and accuracy could be adopted for comparison with each external data source. CMS could assess these metrics across the entire MA program and by MA contract. Notably, these metrics assess only first-order and second-order dimensions of the data. To ensure that encounter data are sufficiently complete and accurate for comparisons between MA and FFS Medicare, a full validation analysis would need to assess additional important data elements (e.g., performing physician, procedures). These additional data elements should be addressed by metrics of completeness and accuracy that are unique to provider types and associated comparison data in situations where these data sources offer more opportunities for comparison than are available for the metrics that are similar across data sources. In addition, the development of an external data source for assessing the completeness of all physician visits, outpatient hospital services, and certain other Part B services would improve our overall assessment of completeness. The best currently available comparison with plan-generated data comes from HEDIS, which addresses some of these services. This shortcoming is of significant concern because these services comprise a substantial share of typical medical services, and any differences in their relative utilization would contribute greatly to our understanding of how MA plans' incentives may shift their enrollees' care between different types of providers.

Plan-generated data sources

Comparing MA encounter data with other plan-generated data sources does not provide an independent assessment of data completeness and accuracy, but these comparisons can help flag potential underreporting and assess whether

a plan's data processing is internally consistent. The plan-generated data sources that include utilization information are HEDIS, RAPS, and bid data. If highlighting inconsistencies between encounter data and these other data sources causes plans to develop internally consistent data processes, it is likely that the completeness and accuracy of all data will improve, and then, in some cases, encounter data could replace other plan-generated data sources.

As reported in our findings, some utilization information from HEDIS—physician office visits, emergency department visits, and inpatient stays—indicate that some plans are underreporting encounter data for these services, and a roughly equal number of contracts are reporting more visits and stays in encounter data than in HEDIS. Although these differences may be due to missing encounter data or variation in how contracts implement HEDIS specifications, the fact of any difference demonstrates incompleteness or inaccuracy, given that both data sets originate from the plan. While CMS is finalizing a mechanism that is independent of plan-generated data for assessing the completeness and accuracy of physician visits, outpatient hospital services, and certain other Part B services, the agency should compare HEDIS and encounter data for each utilization measure that is included in encounter data. Over the longer term, CMS itself could apply HEDIS specifications to encounter data submitted by plans, thereby ensuring that the specifications were applied uniformly.

RAPS data, which are used for risk adjustment by identifying diagnoses for individual beneficiaries, also note the date of the encounter that produced the diagnosis and the type of provider (inpatient hospital, outpatient hospital, or physician) reporting the diagnosis. CMS has compared these data elements (i.e., beneficiary identifier, date of service, and type of provider) from RAPS data with encounter data separately for each provider type but currently sets a threshold of accuracy (40 percent to 90 percent) intended to identify only contracts with encounter data submissions that are substantially below reasonable expectations. A plan with internal data consistency and successful reporting should have an exact match between encounters reported in RAPS and encounter data. Given our conclusion that the provider type indicator does not accurately specify whether the encounter was an inpatient hospital, outpatient hospital, or physician visit, CMS should evaluate whether the date information in RAPS data is valid. If dates and beneficiary identifiers are valid, CMS could pool RAPS data and encounter data from all

three provider types for this comparison. As long as RAPS data are collected and used to calculate risk scores, CMS could hold plans accountable for reporting encounter data that match encounter information reported in RAPS.

Each MA plan submits an annual bid for providing Medicare services. The information submitted on the bid form includes actual utilization and spending data that summarize the number of services provided and amount spent across service categories in the base year (e.g., in 2019, plans will submit bids for 2020 using actual data from 2018 as a basis for their bid). For most plans, the utilization information on their bid should match their encounter data.²² CMS could compare utilization numbers for each service category in bid data with encounter data; however, because bids are prepared and submitted 6 months after the base year ends and the encounter data submission deadline is usually 13 months after the base year ends, this comparison would be retrospective. Spending information submitted on bids cannot currently be compared with spending information in encounter data because the reported information can differ from actual spending in significant ways (e.g., encounter data can indicate payments to providers made on a capitated basis as \$0). Given the timing discrepancy and the lack of complete spending information in encounter data, it seems unlikely that a plan's bid could be based entirely on encounter data.

Increasing incentives to submit complete and accurate encounter data

Concurrent with adopting more effective metrics to assess encounter data completeness and accuracy, CMS should implement additional mechanisms for improving completeness and accuracy based on the results of the metrics. For example, CMS could provide greater incentives for data submission by linking plan performance to the agency's performance metric framework, its oversight and enforcement framework, or an encounter data submission withhold. In addition, CMS should reestablish a time line for increasing the use of encounter data in place of RAPS data so that encounter data are the sole source of diagnostic data for risk adjustment.

Improving performance assessment and feedback

As seen in Table 7-1 (p. 210), CMS has already developed a framework for assessing MA contracts' submission of encounter data. In particular, each contract's performance on the measures is shared with the MA organization, and

oversight is specified for contracts that fall below the thresholds: outreach to plans, technical assistance, warning letters, and corrective action plans (Centers for Medicare & Medicaid Services 2018e). (CMS notes that additional information about the compliance schedule and process will be provided in the future.) However, to provide a real incentive for plans, this framework needs improvement:

- The comparisons we discussed in this chapter (e.g., comparisons with external data sources, consistency with plan-generated data sources) would be good candidates for new measures in the agency's review.
- For the performance measures monitored, thresholds could increase over time to encourage accurate submission.
- Public reporting for each performance measure could be expanded beyond the number of contracts in noncompliance (e.g., how many inpatient stays were reported in RAPS and encounter data, what share of RAPS stays had a match in encounter data, how well the average contract performed).
- The path of reform for contracts performing below thresholds could include financial penalties.

Requiring a corrective action plan is the highest level of penalty imposed on organizations with submissions that are substantially below expectations. This level of penalty is reactive to poor performance and lacks the weight needed to incentivize organizations to submit complete encounter data. The Medicare Part C and Part D Oversight and Enforcement Group (MOEG) at CMS conducts a three-year cycle of audits, including a portion of MA and MA prescription drug plan contracts in each year, and assesses civil monetary penalties and suspensions of payment, marketing, and enrollment for contracts found to be in noncompliance with program requirements.²³ These penalties are fairly severe and are imposed on only those contracts with serious instances of noncompliance. Such penalties could be applied to contracts failing to submit encounter records for all items and services provided to MA enrollees; however, these targeted penalties, on their own, would not address incomplete encounter data, a problem that spans almost all MA contracts.

Establishing a payment incentive to submit complete encounter data

Under a withhold option, CMS would withhold some amount from MA plans' monthly payment—an amount

that would be returned in full to plans that performed well on data submission requirements. The amount of repayment would be based on plans' performance on established metrics (e.g., comparisons with external data sources and consistency with plan-generated data sources), and repayment would occur after the encounter data submission deadline for the year. The withhold policy would be desirable in two ways. First, it would provide a financial incentive to submit complete and accurate encounter data for specified services and it could be applied to all MA contracts, unlike the audit and enforcement framework, which targets only subsets of plans. Furthermore, the policy could be designed to impose penalties that are proportional to the degree of incompleteness and inaccuracy of the submitted data.

The schedule determining the amount of repayment to each plan could be more generous in the first year and become stricter over time. To do so, CMS could calculate plans' performance on metrics using past data and repay the full withhold for plans with metric results that are better than the average in the first year (or some other, generous threshold); this first step would establish a schedule of increasing repayment thresholds for subsequent years. Ultimately, the encounter data withhold could be phased out if the majority of MA plans submitted sufficiently complete and accurate data. If data submission problems became an issue for only a small group of plans, CMS could use a more targeted policy, such as the audit and enforcement framework.

Basing the amount withheld on a percent of monthly payments to MA plans would be a simple way to implement the withhold, and it would mean that the withhold size corresponded with plan enrollment. Currently, CMS conducts a payment reconciliation for final risk scores after all risk adjustment data, as well as encounter and RAPS data, are submitted. After the submission deadline, CMS calculates final risk scores and determines the difference between initial payment and the amount that should have been paid. During this period, CMS could also calculate encounter data performance metrics for each plan and determine withhold repayment amounts so that encounter data withhold and risk score reconciliation could occur simultaneously.

The options under discussion—increasing use of encounter data for risk adjustment, implementing stricter penalties for plans with poor performance on these measures, and requiring a withhold with repayment based

on performance metrics—are not either-or options but could all work in concert.

Collecting encounter data through Medicare Administrative Contractors

A final option for improving encounter data submissions would set the encounter data submission process on an alternate path by using MACs to collect data directly from providers rather than continuing to have poor-performing MA organizations go on collecting data from providers and submitting them to Medicare. This option could be considered a fallback if other options proved unsuccessful. For example, the Congress could require CMS to implement additional completeness metrics and incentives. For MA organizations not achieving 95 percent completeness and accuracy within five years—when the Congressional Budget Office projects that MA enrollment will be about 40 percent of all Medicare enrollment—the MAC option would automatically go into effect (Congressional Budget Office 2018). Including this fallback among the Commission's recommendations to improve encounter data submissions is intended to provide an additional incentive for plans to comply with completeness and accuracy requirements.

The current encounter data review process is largely modeled on FFS MAC operations. CMS originally considered using one or more MACs, but ultimately decided to build a front-end system that performs essentially the same MAC process through the EDS. In fact, one of the FFS MACs serves as the EDS contractor. Both MA plan sponsors and providers have experience working with MACs.

In FFS Medicare, MACs receive claims for Medicare beneficiaries directly from providers and process those claims for payment. In addition, MACs forward FFS claims data to third parties, such as Medigap plans and Medicaid entities (state agencies or managed care plans) that have an obligation to pay cost sharing on behalf of Medicare beneficiaries. The MA encounter submission process could be changed so that providers submit claims for MA enrollees directly to the MAC assigned to their geographic region or to a MAC focused exclusively on MA claims. The MAC would apply the same edits and checks as those applied to FFS claims for Medicare-covered services and would then forward the records to the relevant MA plan. On receipt of forwarded records, MA plans could process payments to the provider. The usual MAC turnaround time is up to three or four days to

process clean claims (those passing claim edits and not requiring corrections) and one additional day to forward records to the MA plan.²⁴ For supplemental services that MA plans offer, MACs could simply forward records to the MA plan without applying the FFS edits that are particular to FFS claims processing, as they do for other third-party claims. In this process of using a MAC to receive and forward claims records for MA enrollees, the MAC would retain a copy of the records, process them in encounter data format, and forward them to CMS.

There are two options for implementing a MAC-based encounter data collection process as a fallback. First, CMS could require this process to be used for all MA organizations if the fallback was triggered. This option would have the advantage of clarity for providers: The submission to the MAC of their Medicare claims under FFS and MA would be uniform. The other option would apply the same thresholds for completion as the other option but at the MA organization or contract level. It would allow plans to conduct their own encounter data submission if that is their preference, as long as they continued to meet the new standards for completeness and accuracy. MA organizations that failed to submit complete encounter data would be required to have their encounter data collected from providers by MACs, and MA organizations that preferred to use MACs could elect to do so.

Using MACs would be a significant change in encounter data processing, but it would provide all plans with a uniform system of data checks and validation before plans processed and paid claims. Currently, many plans hire contractors to process and submit their encounter records to CMS. Although we did not explore the cost of using such a contractor, we believe the administrative cost of processing claims through MACs would be far less. Similarly, we expect that the cost of converting claims to the appropriate format for encounter data submission to CMS would be lower. A few of the plan officials we interviewed said their plans processed and submitted encounter data themselves. Because they had already developed and paid for the necessary infrastructure, these plans would likely prefer not to have MACs take their place. Also, some of the plan officials interviewed did not like the idea of having a third party be an intermediary in their data exchange with providers and felt that it would limit the type of relationship they had with providers.

We also spoke with several provider organizations about the MAC-processing idea. They indicated that providers

commonly employ clearinghouses to submit their claims to both MA organizations and MACs for FFS Medicare. They indicated that payers require a variety of front-end edits for claims that change over time. These edits enforce requirements for basic claim data formatting and for payment adjudication. Contracted clearinghouses or in-house billing departments routinely track changes to the edits and update specifications in their claims submission practices for each payer. Some provider organizations thought there would be no significant differences in their experience if MA claims were submitted directly to a MAC since the clearinghouse would continue to address payer-specific front-end edits. However, they expressed concern that adding MACs as an additional (rather than replacement) step in the sequence of claims processing could add delays to the process. Other provider organizations thought that submitting MA claims directly to a MAC could make the front-end edits more consistent and improve the timeliness and quality of feedback for rejected claims. These organizations found the variation in front-end edits and quality of feedback from MA plans added significant burden and delays in their claims processing relative to submitting claims to MACs.

Based on our review, if the MAC option were triggered and providers were required to submit claims directly to MACs rather than to MA organizations, we believe providers would experience no greater burden than they do under the current practice of submitting claims to MA plans or to MACs on behalf of FFS beneficiaries. Providers might even experience significant simplification in submitting claims, particularly if claims for all Medicare beneficiaries, in traditional FFS or in MA, regardless of plan, were submitted to MACs.

All options for increasing incentives for plans to submit complete encounter data require the addition of performance metrics that compare encounter data with external data sources and possibly with plan-generated data sources. Yet not all services can be evaluated equally for completeness and accuracy (e.g., physician and outpatient hospital service assessment is lacking), but a phased rollout would expedite adoption of available metrics and data while developing additional tools that can be added to the program once finalized. Using all available data sources would be a significant improvement over the current level of assessment. With an assessment framework in place, it would be possible to implement all options for increasing data submission incentives: CMS could use its audit and enforcement framework to target

contracts with submissions that are substantially below expectations and program requirements. An encounter data withhold would provide a broad incentive for all contracts to submit complete and accurate data, and CMS could assess penalties proportional to performance. Over time, either the completeness and accuracy metrics would show that a majority of MA organizations were compliant and the withhold was no longer needed or the metrics would indicate poor performance—either program-wide or for particular MA organizations—thus triggering the requirement for providers to submit claims directly to MACs, with encounter data collected through this alternate pathway.

Ensuring that encounter data are complete and accurate

To improve the robustness of MA plans' encounter data using the options under discussion, CMS could consider phasing in the rollout of an improved framework as follows:

- First, CMS could adopt performance metrics that compare encounter data with external data sources and plan-generated data sources where external data sources are lacking. Informing plans about the performance metrics and their calculation methods could occur in the advance notice and announcement of MA payment rates for 2021.
- Next, CMS could calculate plans' performance on these metrics and provide detailed, timely feedback to MA organizations on their results, as well as feedback to the public on the completeness and accuracy of encounter data across the MA program. CMS could calculate plans' performance for the most recent year or two to establish a baseline level of performance, while giving feedback to plans on an ongoing basis once performance metrics were established.
- Then CMS could establish a payment withhold policy that retains a percentage of payment to MA plans and returns a portion of that withhold at the end of the encounter data collection period. The returned portion could be based on plans' performance during the most recent year or two on established standards, with the intention of increasing incentives to improve encounter data completeness and accuracy. The withhold policy and performance standards could be announced for 2022, after plans received feedback about their baseline performance.

- Finally, CMS could institute a mechanism for providers serving MA enrollees to submit claims directly to MACs—applicable to MA plans that preferred this method of submitting encounter data to CMS. This mechanism could be made available sometime in the next few years. Also, CMS could establish a set date (e.g., 2024) and threshold (or a schedule of dates and increasing thresholds) that would trigger a program-wide requirement for providers serving MA enrollees to submit claims directly to MACs. A program-wide trigger could incentivize improvement across all MA organizations. In addition, CMS could establish a separate compliance threshold for individual MA organizations that would trigger the requirement for these organizations' providers to submit their claims directly to MACs. This trigger would help ensure that the lowest performing MA plans had a continuous incentive to improve their submission of encounter data. Under any of these circumstances in which claims are submitted directly to MACs, the MA organizations should reimburse the MACs for the cost of claims processing and forwarding, a cost that MA organizations already bear.

Concurrent with these steps, we encourage CMS to seek out or develop comparison data sources where these are lacking (e.g., assessments of physician and outpatient hospital services) and improve existing data sources that exhibit shortcomings (e.g., instruments used to assess post-acute care) for use to corroborate encounter data submissions. Our intent is to ensure completeness of the encounter data to the greatest extent possible. The extent of incompleteness in the comparison data used for assessment is not known (e.g., while MedPAR attempts to capture all inpatient and SNF utilization, there are missing records and there is no comparison data set for physician and outpatient hospital services). Improvements in the completeness of the comparison data would improve the ability to assess the completeness of encounter data as part of CMS's effort to achieve 100 percent encounter data completeness. Given the amount of time already passed in encounter data collection efforts (CMS began the current round of collection in 2012) and the importance of the uses of encounter data, CMS should immediately take any steps it can, using available data sources while working to add data for comparison where gaps exist.

Given the urgency of signaling immediate next steps to CMS and the Congress and the identification of

opportunities to begin addressing data completeness and accuracy issues, the Commission thinks it makes sense to act on the recommendation now. We also plan to continue exploring options for subsequent steps designed to ensure that these incentives and performance metrics are having their intended effect (e.g., comparing encounter data with plan bid supporting information and expanding or tailoring audit activities to assess aspects of encounter data).

RECOMMENDATION 7

The Congress should direct the Secretary to establish thresholds for the completeness and accuracy of Medicare Advantage (MA) encounter data and:

- **rigorously evaluate MA organizations' submitted data and provide robust feedback;**
- **concurrently apply a payment withhold and provide refunds to MA organizations that meet thresholds; and**
- **institute a mechanism for direct submission of provider claims to Medicare Administrative Contractors**
 - **as a voluntary option for all MA organizations that prefer this method**
 - **starting in 2024, for MA organizations that fail to meet thresholds or for all MA organizations if program-wide thresholds are not achieved.**

RATIONALE 7

Complete and accurate encounter data would be valuable to the Medicare program for a multitude of reasons. However, encounter data currently lack completeness across providers and MA contracts, and the current system of feedback and incentives for improved encounter data submissions has shortcomings. Given the urgency of signaling immediate next steps to CMS and the Congress, we suggest a phased rollout so that the completeness and accuracy of MA encounter data are improved as soon as possible.

Encounter data performance metrics currently focus on the timing of encounter submissions, and comparisons are made only with plan-generated risk adjustment (i.e., RAPS) data. CMS should expand performance metrics to include comparisons with external and plan-generated data sources. Evidence of MA service use from external data sources—such as information-only claims and patient assessments submitted by providers—offer the most robust assessment of encounter data completeness. Existing independent data sources tend to cover inpatient and post-acute services but leave a gap

in the assessment of physician, outpatient hospital, and certain other Part B services. Data generated by plans can be used to fill in these gaps; however, comparisons with plan-generated data assess whether a plan's data processing is internally consistent. Such comparisons can identify missing encounter records, but they do not fully evaluate completeness. The specificity of comparisons with independent data sources could be tailored based on the robustness of the comparison data source. For example, information-only claims from hospitals are used to calculate DSH and IME payments and are relatively robust. Comparisons with information-only claims could be more rigorous and could use the following data elements in a match: beneficiary number, admission date, discharge date, provider number, and procedure information. Certain patient assessments are collected for MA enrollees but do not affect Medicare payments. Comparisons with these data could be less specific, requiring only that beneficiaries are included in both encounter and comparison data sources. Additionally, CMS could provide MA plans with some feedback, such as the total dollars included in encounter data submissions, on an information-only basis. (However, using reports of total dollar amounts may need to take into consideration the limitation that encounter data may include zero or other amounts for payment fields that do not match actual amounts paid to providers.) Finally, providing feedback to plans about their performance on metrics and publicly reporting aggregate performance for all plans would encourage complete and accurate submissions and would inform policymakers and researchers about encounter data completeness.

CMS could publicly report aggregate performance statistics for the MA program on all metrics, and feedback to plans could be more detailed, including information about each instance of missing encounter data. New completeness metrics could be established and implemented through the advance notice and announcement of MA payment rates for 2021. Feedback about the completeness and accuracy of prior years' encounter data could be provided to plans and the public soon after metrics are established.

Compliance with the current performance metric framework uses a single threshold designed to identify outlier plans with very low encounter data submission. However, the use of this threshold does not address the scope of incomplete encounter data. Our analysis found incompleteness to be a broad issue, with nearly all plans

needing at least some improvement. A payment withhold tied to performance metrics that assess encounter data completeness would appropriately address the scope of encounter data problems and would offer a financial incentive for MA organizations to improve their encounter data submissions. To implement the policy, a percentage of each plan's monthly payment would be withheld, making the size of the withhold correlate with a plan's enrollment and the number of expected encounter records to be submitted. The portion of the withhold to be returned to the plan would be based on a plan's performance and a range of standards. For example, plans with excellent performance could receive their full withhold in return, plans with good performance could receive most of their withhold in return, and so on, such that the amount of withhold returned would be proportional to each plan's performance. Standards could be set such that overall withhold return rates could start at a generous level, with a high rate of return being easy to attain, and then become more strict over time. If, collectively, MA plans met the standards for submitting complete and accurate encounter data, the withhold policy could be phased out. After plans received feedback about their performance on the completeness metrics for prior years, a withhold policy and standards for withhold return could be implemented in the following payment year.

It is imperative for encounter data to be complete and accurate. If payment penalties are not sufficient to ensure the submission of complete encounter data, CMS should institute a complementary approach by which providers contracted with MA organizations submit claims directly to MACs. Providers currently submit all Medicare FFS claims to MACs, as they do information-only claims for MA enrollees using inpatient hospital and skilled nursing services. In addition, MACs currently forward FFS claims to third parties that have cost-sharing obligations, such as Medigap plans and Medicaid agencies. To use this process in MA, MACs could apply FFS data edits to Part A and Part B services to ensure that submitted records are complete before forwarding them to MA plans for payment processing. For supplemental services, MACs could forward records directly to MA plans without any processing. MACs would retain a copy of each claim and supplemental service record that passes through the MAC, and CMS would save all claims and records in the encounter data file.

To implement this policy, CMS would institute a mechanism for providers serving MA enrollees to submit

claims directly to MACs for MA plans that preferred this method of submitting encounter data to CMS. Under any of these circumstances in which claims are submitted directly to MACs, the MA organizations would be required to reimburse the MACs for the cost of claims processing and forwarding, a cost that MA organizations already bear. This mechanism could be made available sometime in the next few years. At the same time, CMS would establish a set date (e.g., 2024) and threshold (or a schedule of dates and increasing thresholds) that would potentially trigger a program-wide requirement for providers to submit claims directly to MACs. Such a trigger would incentivize all MA organizations to improve data submission. In addition, CMS would establish a separate completeness and accuracy threshold for individual MA organizations that would trigger a requirement for providers to submit their claims directly to MACs. This trigger would help ensure that the lowest performing MA plans had a continuous incentive to improve their encounter data submissions. The purpose of using both an organization-level and a program-wide threshold is to ensure that complete encounter data are collected by CMS no matter the extent to which individual MA organizations' performance improves. Ideally, the payment withhold and MAC threshold would provide sufficient incentive to plans to improve their encounter data submission such that very few, if any, MA organizations would fail to meet thresholds and thus trigger the requirement that they use MACs. The program-wide threshold could be designed to consider the size of MA organizations and their contribution to the aggregate encounter data set, for example by enrollment weighting. If organizations representing the majority of the MA program improve their encounter data completeness year after year, we would expect that the MAC portion of the recommendation would affect only the individual organizations that fail to improve encounter data submission processes. However, if organizations representing the majority of the MA program fail to improve the submission of their encounter data year after year, such that it becomes apparent that complete MA encounter data will not be achieved through plan submissions, the Commission then recommends requiring the use of MACs for the entire program. The Commission believes that complete encounter data are valuable enough that completeness must be achieved through plan submission, or through the use of MACs if necessary. The Commission's recommendation is intended to apply all three policies in concert.

Spending

- This recommendation is expected to reduce program spending relative to current policy by less than \$50 million over one year and by less than \$1 billion over five years. Specifically, if the performance of some plans results in less than the full withhold amount being returned to the plan, there would be a reduction in program spending. Although the withhold policy is not designed to save the program money, as the policy increased plan incentives to submit complete and accurate encounter data, it could reduce payments to plans that fail to do so.

Beneficiary and provider

- The recommendation would not have any direct effect on beneficiaries. To the extent that encounter data for MA enrollees become available through CMS’s Blue Button 2.0 program (which currently provides beneficiaries in traditional fee-for-service Medicare

access to their claims data) and MA enrollees access their encounter information, the recommendation will improve the completeness and accuracy of that encounter information.

- The impact on plans and providers would vary depending on each entity’s current method for processing claims or submitting encounter data. Specifically, for plans that used MACs to process their providers’ claims, the change relative to current processes could offer some benefits, such as increased standardization in claims submission for providers, and slight drawbacks, such as the potential to add a few days to the complete claims submission process for certain providers. Finally, we note that a small set of providers that do not submit traditional claims, such as some staff-model HMO plans or medical groups that have a full capitation contract exclusively with one MA organization, could face greater difficulty if they used a MAC for claims submission. ■

Endnotes

- 1 HEDIS is a registered trademark of the National Committee for Quality Assurance. CAHPS is a registered trademark of the Agency for Healthcare Research and Quality, a U.S. government agency.
- 2 See the MA encounter data validation section for our analysis comparing inpatient encounter records and inpatient information-only claims for MA enrollees contained in the Medicare Provider Analysis and Review file (pp. 221–222).
- 3 CMS will monitor the Program of All-Inclusive Care for the Elderly and Medicare–Medicaid demonstration plans, but these plans are excluded from compliance actions.
- 4 Other possible sources of diagnostic information—such as encounters for home health, skilled nursing, ambulatory surgery, durable medical equipment, and hospice services—are not used to determine payment through the risk adjustment model, either because adding diagnoses from these sources does not improve the model’s ability to predict medical expenditures or because there are concerns about the reliability and manipulability of the diagnoses. The filtering logic used to identify physician visits that are eligible for risk adjustment is different for RAPS data (based on physician specialty) and encounter data (based on procedure codes). The use of procedure codes provides more specificity in identifying whether physician visits are face-to-face and eligible for risk adjustment or not.
- 5 The data elements submitted are beneficiary health insurance claim number; diagnoses; provider type; and date(s) of service for services provided by hospital inpatient facilities, hospital outpatient facilities, and clinicians. The demographic data that are also needed to calculate risk scores come from CMS administrative data.
- 6 The Improper Payments Information Act of 2002 (IPIA) (Public Law 107–300), as amended by the Improper Payments Elimination and Recovery Act of 2010 (IPERA) (Public Law 111–204), requires government agencies to identify, report, and reduce erroneous payments in government programs and activities. In the process of implementing IPIA/IPERA requirements, CMS has reported a Part C composite payment error estimate since fiscal year 2008.
- 7 CMS offsets unsupported diagnoses with unreported diagnoses in one of the five medical records a plan submits in support of the diagnosis under audit.
- 8 The proposed encounter data schedule was 50 percent in 2018, 75 percent in 2019, and finally 100 percent in 2020.
- 9 In October 2017, CMS made an “initial final” payment reconciliation of payments to plans for 2016 based on diagnoses submitted to RAPS as of January 31, 2017, and diagnoses submitted to the EDS as of May 1, 2017.
- 10 The “report and repay” requirement is under appeal after being overruled by the U.S. District Court for the District of Columbia. See opinion in *United HealthCare Insurance Company et al. v. Alex M. Azar II*, September 7, 2018.
- 11 In addition, quality incentives or other bonus payments to providers are not captured in encounter data. Depending on how these payments are structured, one might argue that they should also be included in the model calibration.
- 12 There would still be variation in coding intensity across MA contracts.
- 13 Facilities submit information-only claims to CMS for MA enrollees to support the calculation of DSH, indirect medical education, and graduate medical education payments to facilities.
- 14 An extension was allowed for submission of encounter data for 2015 dates of service. The preliminary file represents data submitted as of the original deadline, March 1, 2017.
- 15 For this analysis, we excluded Medicare–Medicaid Plans because many were just starting during this period and undergoing passive and voluntary enrollment, and cost plans because they are required to submit encounter data only for services included in their cost report.
- 16 MDS assessment data are collected within 14 days of admission and at other points for traditional FFS Medicare beneficiaries.
- 17 State Medicaid agencies that contract with managed care organizations generally must ensure that an independent external quality review organization (EQRO) performs a review of each managed care organization on an annual basis. CMS developed protocols for EQROs, including one that can be used to evaluate encounter data submissions. See <https://www.medicare.gov/medicaid/quality-of-care/downloads/eqr-protocol-4.pdf>.
- 18 Additional MDS assessments are required for beneficiaries enrolled in FFS Medicare.
- 19 MDS assessments are also required for Medicaid-covered nursing home stays. By excluding MA enrollees who are eligible for full Medicaid benefits from the analysis, we could

- be reasonably certain that non-Medicaid MA enrollees with an MDS assessment would also have a SNF encounter record.
- 20 We excluded MA contracts with fewer than 1,000 enrollees because they were not required to submit HEDIS data before 2015. This requirement changed to 500 enrollees starting in 2015.
 - 21 We do not expect significant differences in the final 2015 data, based on prior within-year file updates.
 - 22 Plans that went through contract consolidation or had certain changes in their service area between the base year and the bid year may submit utilization and spending information for the base year that is adjusted or subset on their bid, which would not match encounter data for the plan configuration that existed in the base year.
 - 23 In addition to audits conducted as part of the three-year cycle, MOEG audits individual contracts identified through complaints to assess each contract's compliance with Medicare guidelines, including those focused on sales and marketing, utilization management, quality improvement, claims administration, appeals and grievances, licensing and credentialing, bid preparation, provider network management, and so forth.
 - 24 In Medicare FFS, MACs are required by statute to enforce a payment floor of at least 14 days before releasing processed claims for payment, but clean claims generally take less time to process.

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CHAPTER

8

**Redesigning the
Medicare Advantage
quality bonus program**

Redesigning the Medicare Advantage quality bonus program

Chapter summary

The Commission has formalized a set of principles for quality measurement in the Medicare program (Medicare Payment Advisory Commission 2018a). The Commission recently applied these principles to design a hospital value incentive program that includes a small set of population-based outcome, patient experience, and value measures; scores all hospitals based on the same absolute and prospectively set performance targets; and accounts for differences in patients' social risk factors by distributing payment adjustments through peer grouping.

The Medicare Advantage (MA) quality bonus program (QBP), which rewards MA plans on a quality star rating scale, is flawed and inconsistent with the Commission's principles for quality measurement. First, the QBP includes almost 50 quality measures, including process and administrative measures, instead of focusing on a small set of population-based outcome and patient experience measures. Second, organizations are rated at the MA contract level. Contracts cover very wide areas—including noncontiguous states—and therefore a contract-level rating may not be a useful indicator of the quality of care provided in a beneficiary's local area. Third, the QBP uses a "tournament model," scoring plans' performance relative to one another rather than in relation to predetermined performance targets. Under this model, performance targets depend on the relative performance of plans and are not known in

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- Design of an MA value incentive program
- Financing: Applying budget neutrality to MA's quality payment program
- Summary and next steps

advance, which makes it difficult for plans to manage their quality improvement efforts. Fourth, the QBP uses a version of peer grouping to adjust for differences in plans' enrolled populations but does not appear to sufficiently capture variation in quality among Medicare population subgroups (such as low-income beneficiaries and beneficiaries with disabilities).

An additional issue is that, unlike nearly all of Medicare's fee-for-service (FFS) quality incentive programs, the MA-QBP is not budget neutral but is instead financed by added program dollars. The Commission's original conception of a quality incentive program for MA plans was a system that would be budget neutral and financed with a small percentage of plan payments (Medicare Payment Advisory Commission 2012). A budget-neutral system is consistent with the Commission's principle of providing a financially neutral choice between private MA plans and traditional FFS Medicare and of ensuring a level playing field between the two sectors.

In this chapter, we propose a Medicare Advantage value incentive program (MA-VIP) for assessing quality of care consistent with the Commission's quality principles. It is intended to be patient oriented, to encourage coordination across providers and time, and to promote relevant improvement in the nature of the delivery system. An MA-VIP would use a small set of population-based outcome and patient experience measures to evaluate MA quality. The program would use clear, prospectively set performance standards to translate MA performance on these quality measures to a reward or a penalty. The MA-VIP would consider differences in plans' enrollees by incorporating an improved peer-grouping method in which quality-based payments are distributed to plans based on their performance for population groups, such as a plan's population of beneficiaries who are fully dual eligible for Medicare and Medicaid.

Unlike the current QBP, which is a bonus-only program financed with additional dollars, we envision that the MA-VIP would be budget neutral, financed through a small share of payments from plans. As we have noted, this approach would be consistent with existing budget-neutral FFS quality programs, and plans would receive rewards or be subject to penalties based on their performance. Because the QBP adds about \$6 billion a year to Medicare program expenditures, the MA-VIP would result in program savings and a reduced Part B premium for all Medicare beneficiaries. One concern with moving to a budget-neutral approach for an MA-VIP is that it may result in fewer extra benefits for MA enrollees; however, the available evidence suggests that would not necessarily be the outcome. Such an outcome was expected when the Patient Protection and Affordable Care Act of 2010 reduced MA payments, but instead, plan bids have declined, and the value of extra

benefits has increased despite the payment reductions (Medicare Payment Advisory Commission 2019). Although some stakeholders maintain that all QBP payments have to be used to finance extra benefits, there is no such requirement. Our analysis of 2019 bid data shows that, for plans newly in bonus status, only a small share of payment increases from the QBP is passed on to beneficiaries in the form of extra benefits. Our analysis also found that plans that lost bonus status lowered their bids in response to the reduced benchmarks, suggesting that plans could become more efficient if faced with greater financial pressure.

Ideally, an evaluation of quality in MA would be based in part on a comparison with the quality of care in traditional FFS Medicare, including accountable care organizations, in local market areas (Medicare Payment Advisory Commission 2010). However, data sources for comparing MA with traditional FFS at the local market level are limited. Therefore, our proposed MA–VIP design does not yet include a component for FFS comparison. In the future, better encounter data from MA and expanded patient experience surveys will help enable comparisons of the two programs. ■

Introduction

The Commission maintains that Medicare payments should not be made without considering the quality of care delivered to beneficiaries and has formalized a set of principles for quality measurement in the Medicare program (Medicare Payment Advisory Commission 2018a). The Commission recently applied these principles to design a fee-for-service (FFS) hospital quality payment program. In the March 2019 report to the Congress, the Commission recommended that the Congress replace Medicare's current hospital quality payment programs with a new, single hospital value incentive program (HVIP). Consistent with the Commission's principles, the HVIP includes a small set of population-based outcome, patient experience, and value measures; scores all hospitals based on the same absolute and prospectively set performance targets; and accounts for differences in patients' social risk factors by distributing payment adjustments through peer grouping.

For the past several years, the Commission has pointed out the flaws of the Medicare Advantage (MA) quality bonus program (QBP) in terms of its complexity, inequities in distributing financial rewards, and opportunities for organizations to obtain unwarranted bonuses by consolidating contracts. This chapter reviews our concerns with the current system—in particular, that the QBP lacks key quality measurement components: use of a small set of population-based measures, absolute and prospectively set targets for scoring plans' performance, and payment adjustments that effectively account for differences in beneficiary social risk factors. To improve the QBP, we introduce an alternative MA value incentive program (MA-VIP) designed to be patient oriented, encourage coordination across providers and time, and promote improvements in the delivery system.

Ideally, Medicare should be able to compare MA and FFS quality in local market areas (Medicare Payment Advisory Commission 2010). Provisions in the Balanced Budget Act of 1997, which are the origins of the current 5-star MA quality rating system, specify that CMS should provide information on the quality of care in private plans: “To the extent available, [beneficiaries should receive information on] plan quality and performance indicators for the benefits under the plan (and how they compare with such indicators under . . . [FFS] . . . in the area involved)” (U.S. House of

Representatives 1997). However, comparable data sources across FFS and MA at the local geographic unit are limited, primarily because encounter data from MA plans are not complete enough to be compared with FFS claims data. Once encounter data are more robust, they can form the basis for comparison with FFS claims data using various units of analysis—such as a geographic area—to compare MA and FFS. In the case of patient experience and patient-reported outcome survey results, sample sizes from each program (MA and FFS) would have to be increased to make market-area comparisons. As proposed, the design of the MA-VIP does not initially include a component for FFS comparison, but as the ability to compare the populations improves, the MA-VIP would evolve to serve that purpose.

Current MA quality bonus program

The Patient Protection and Affordable Care Act of 2010 (PPACA) called for CMS to institute a QBP for MA beginning in 2012. The law specifies that a 5-star rating system should be used to determine eligibility for bonus payments. (The statute did not provide additional guidance on the structure or operation of the star system, but CMS had been using a preexisting 5-star rating system to inform beneficiaries of MA quality.) Plans rated 4 stars or higher (“in bonus status”) would receive an increase in their MA benchmarks of 5 percent or, in some counties, 10 percent.¹ A higher benchmark can result in an increased level of extra benefits for plan enrollees, but when a benchmark increases because of bonus payments, there is no requirement that all the bonus dollars be used to finance extra benefits. There is a misconception that such a requirement exists, but a higher benchmark can also result in a plan increasing its bid—that is, increasing its payments to providers for the Medicare benefit package and retaining more dollars for profit and administration rather than applying the benchmark increase toward the computation of rebate dollars that finance extra benefits. (When a plan's bid to provide the Medicare Part A and Part B benefit package is below the benchmark, the plan's payment rate is equal to its bid plus a rebate amount based on the difference between the bid and the benchmark. The rebate amount must be used to provide additional benefits to enrollees. The rebate amount for plans at 4.5 and 5 stars is 70 percent of the bid–benchmark difference; at 3.5 and 4

stars, 65 percent of the difference; and below 3.5 stars, 50 percent of the difference).

Star ratings are based on 46 measures of clinical quality, patient experience, and administrative performance. For each measure, a contract receives a score from 1 to 5 stars (with minor exceptions).² Different categories of measures, as defined by CMS, have different weights. Process measures have a weight of 1, access and patient experience measures have a weight of 1.5, outcome measures have a weight of 3, and the two improvement measures that CMS computes have a weight of 5. The overall star rating is the weighted average of all the measures a plan can report (and the plan must report at least half of the measures).³ For most of the star measures, the threshold, or cut point, for assigning performance results for each of the five star rating levels is determined through a “tournament model.” Under this model, plans are measured against each other’s performance, not against a set performance target. Each year, plans fall into five groups according to their performance results, with the highest group at 5 stars and the lowest at 1 star. Under this system, the cut points that determine the groupings can be higher or lower from year to year, thus producing shifting performance targets.

In addition to being the basis of “bonus payments,” the star rating system is intended to be a source of information about MA quality for beneficiaries. Star ratings—both the overall ratings and star levels for individual measures—are posted at the Medicare Plan Finder site of Medicare.gov. The ratings are updated each October for the October–December annual election period (when beneficiaries can move among plans and between MA plans and FFS).

As of February 2019, among MA contracts with any star rating, about 77 percent of MA beneficiaries were enrolled in MA plans in bonus status. An additional 3 percent of beneficiaries were in bonus status plans because they enrolled in a new contract whose parent organization (i.e., the company sponsoring the contract) had an average star rating at or above 4 stars (reflecting the CMS policy of how bonus dollars are determined in such a case). We estimate that the QBP constitutes about 2.5 percent to 3.0 percent of aggregate payments to MA plans, or about \$6 billion a year in additional program costs. This level of additional program expenditures means that all of the nearly 60 million Medicare beneficiaries who have Medicare Part B are obligated to pay an additional \$1 per month in their Part B premium—an obligation that also

strains state finances because the states pay the Part B premium for the 12 million Medicare beneficiaries who are dually eligible for Medicare and Medicaid.⁴

The QBP has undergone several changes over the years. Some have been in response to, or consistent with, recommendations or observations the Commission has made with a view toward improving the QBP. At the same time, policy decisions allowing companies to use the consolidation strategy to raise star ratings—by merging lower rated contracts with higher rated contracts and allowing plans to choose the higher rating as applicable to the entire consolidated contract—have been detrimental to the program (Medicare Payment Advisory Commission 2019).

Concerns with the quality bonus program

The MA star system has two purposes: to provide information to beneficiaries about their available options and to serve as the basis for the QBP, which offers financial incentives to promote higher quality. The current system is flawed in that:

- too many measures are scored, diluting results aimed at assessing quality;
- reporting units do not represent market area performance;
- plans are scored against moving, rather than preset, targets; and
- the QBP’s method of accounting for differences in enrollees’ social risk factors does not appear to be effective at capturing these differences.

Proliferation of quality measures scored

The Commission’s principles for quality measurement call for using a small set of population-based outcome, patient experience, and value measures. Over the past several years, the Commission has expressed concern that Medicare’s quality measurement programs are “overbuilt,” relying on too many clinical process measures that are, at best, weakly correlated with health outcomes of importance to beneficiaries and the program. Relying on a large number of process measures can reinforce payment

incentives to overuse measured services. Process measures are also burdensome for providers to report while yielding limited information to support clinical improvement.

The proliferation of measures (up to 46 in the MA–QBP) that determine star ratings gives plans several avenues to achieve a bonus-level overall rating, even if their performance is uneven and results for outcome measures are below bonus-level performance. Of the 376 MA contracts with star ratings (excluding results from Part D outcome measures) in 2019:

- Seventy-one contracts (covering 7 million enrollees) had administrative measures (which we also refer to in the chapter as insurance function measures) averaging 4.5 stars or higher but outcome results averaging less than 3.5 stars. Thirty-four of those contracts (covering a little over 5 million enrollees) had an overall star rating of 4 or 4.5 (bonus level).
- Fourteen contracts, covering about 600,000 enrollees, had Consumer Assessment of Healthcare Providers and Systems[®] (CAHPS[®]) results averaging 4.5 stars or higher but had outcome results averaging less than 3.5 stars.⁵ Ten of the 14 (with enrollment of about 500,000) had an overall star rating of 4 or 4.5 (bonus level), which might not be a desirable result if outcome measures and patient experience are each considered equally important measure domains.
- One contract (with over 90,000 enrollees) had clinical process of care measures averaging 4.5 stars or higher but outcome measures averaging less than 3.5 stars.

Effect of inappropriate reporting units: The contract as the reporting unit and contract consolidations

A major reason for the flaws in the current system is that the unit of measurement for reporting on and evaluating quality is the MA contract. One of the problems with this unit is that MA contracts can include disparate geographic areas. For example, in 2013, one contract's service area consisted of counties in two noncontiguous states, Hawaii and Iowa. The star rating for this contract would reflect performance in two completely different service areas and may not provide a full reflection of plan quality in either area.

Further, MA organizations can consolidate contracts to artificially raise star ratings. A higher rated contract can

be merged with a lower rated contract, and the higher star rating immediately applies to the combined entity (through the mechanism discussed in detail in the March 2018 and 2019 reports to the Congress and earlier reports (Medicare Payment Advisory Commission 2019, Medicare Payment Advisory Commission 2018b)). Indeed, through consolidations, the original Hawaii–Iowa contract mentioned above now consists of a service area that includes counties in Arizona, Colorado, Hawaii, Illinois, Iowa, Kansas, Missouri, Nebraska, New Mexico, South Dakota, and Texas. Quality results continue to be reported and evaluated on a contract-wide basis for this multistate contract. Across all MA contracts in 2019, about 45 percent of HMO and local preferred provider organization (PPO) enrollees are in contracts that have a substantial share of enrollment coming from noncontiguous states. Recent legislation changed the policy with respect to consolidations, effective January 1, 2020, so that consolidated contracts receive the weighted average star rating of the combined contracts. However, the new policy still permits organizations to obtain unwarranted bonuses by combining lower rated contracts with higher rated contracts when the averaging method yields an overall bonus-level star rating.

In addition to the concern over organizations receiving unwarranted bonus payments through consolidations, because quality measures are reported to beneficiaries in the Medicare Plan Finder at the contract level, beneficiaries see inaccurate information. In the case of a consolidation to achieve bonus status, for example, a new bonus-level star rating is immediately assigned to a contract that is being merged into another contract rated 4 stars or higher. For contracts covering wide geographic areas, the reported data on quality can be inaccurate because the data represent average quality results across, for example, 11 different states.⁶

The Commission has a long-standing recommendation that Medicare should collect, calculate, and report quality measurement results in MA at a local geographic level because of differences in quality across geographic areas and because beneficiaries should have information that is specific to their geographic area (Medicare Payment Advisory Commission 2010).⁷ While it is a matter of concern that nearly half of MA beneficiaries are in coordinated care plans with contracts spanning noncontiguous states, there is also intrastate variation in the quality of care. For example, in California, among

**TABLE
8-1**

Data on year 2016 hospital readmission rates for the three largest California MA organizations illustrate in-state differences in utilization and quality results

	Los Angeles area			San Francisco Bay Area			Percentage difference in observed-over-expected rates (Los Angeles over San Francisco Bay Area)
	Observed rate	Mean risk-adjusted expected rate	Observed-over-expected rate	Observed rate	Mean risk-adjusted expected rate	Observed-over-expected rate	
Contract A	13%	18%	0.72	13%	17%	0.79	91%
Contract B	13	18	0.72	10	16	0.61	118
Contract C	15	17	0.87	12	15	0.77	113

Note: MA (Medicare Advantage). Each of the three contracts has a different plan sponsor. Each sponsor has one contract covering the entire state and has at least 2,000 hospital admissions in each of the two areas. Data exclude beneficiaries who died in 2016 or early 2017. The quality result is based on the relative performance in the observed-over-expected rate; a lower rate indicates better performance.

Source: MedPAC analysis of 2016 Healthcare Effectiveness Data Information Set® data.

the state’s three largest MA contracts, there are large differences between observed and observed-over-expected hospital readmission rates reported through the Healthcare Effectiveness Data and Information Set® (HEDIS®), for instance, between the Los Angeles area and the San Francisco Bay Area (Table 8-1).⁸ Table 8-1 shows that for each contract, a 9 percent or greater difference exists between the quality results (i.e., relative performance in observed over expected rates) for the two areas. Contract A has better results in the Los Angeles area, where the observed-over-expected readmission rate is about 10 percent lower (i.e., better) than the San Francisco Bay Area rate; Contracts B and C show a much higher observed-over-expected rate in the Los Angeles area as compared with the Bay Area. None of this information on variation across the state is conveyed to beneficiaries in the Medicare Plan Finder. Each contract’s performance on the readmission measure is a statewide rate.

Use of “tournament models” for scoring

The Commission holds that Medicare quality programs should give rewards based on clear, absolute, and prospectively set performance targets as opposed to the moving, retrospective targets set through “tournament models” (i.e., providers are scored relative to one another). For most of the MA star system’s measures, CMS uses a tournament model to retrospectively determine star ratings based on the relative performance of all contracts, despite

the potential availability of an absolute and prospectively set system of targets. For a given HEDIS measure, for example, plans are grouped into five star categories through a statistical algorithm that determines clusters of levels of performance. The algorithm identifies cut points for each star level based on these clusters. CMS recently modified the approach to put in place, as of 2020, “guardrails” whereby, from one year to the next, the increase or decrease in cut points is limited to a 5 percent change (42 CFR §423.186(i)). However, a plan’s reward depends only on its contract’s performance relative to the performance of other contracts. Further, the cut points for each star level are determined after the performance year is completed, so plans cannot know in advance what outcomes they need to achieve, making it difficult for providers and plans to manage their quality improvement efforts. Another concern with the tournament model is that for each year, it is a point-in-time determination of the best and worst performers, and each year will have a (potentially different) set of best and worst performers.

CMS changed to a primarily tournament model after a comparison of results over time between measures that had fixed targets for 4-star performance versus the measures that had star levels based on the tournament model. CMS found that the measures in the tournament model showed greater improvement over time than the measures with a fixed, predetermined cutoff for 4-star performance (bonus-level performance) (Centers for Medicare & Medicaid

**TABLE
8-2**

Kidney disease monitoring rates are generally high, but the clustering algorithm results in different star levels associated with each rate from year to year

2018 stars (released October 2017)				2019 stars (released October 2018)			
Rate	Number of plans at rate	Star rating	Share of plans	Rate	Number of plans at rate	Star rating	Share of plans
100%	5	5		100%	5	5	
99	27	5	At 5 stars: 27%	99	31	5	At 5 stars: 44%
98	70	5		98	54	5	
97	65	4		97	77	5	
96	63	4	At 4 stars: 34%	96	77	4	At 4 stars: 35%
95	54	3		95	56	4	
94	46	3	At 3 stars: 27%	94	26	3	
93	25	2		93	24	3	
92	12	2	At 2 stars: 10%	92	16	3	
91	5	1		91	10	3	At 3 stars: 21%
90	5	1	At 1 star: 3%	90	1	3	
				89	1	3	
				87	1	3	

Note: The number of stars awarded in 2018 ranged from 1 star to 5 stars. For 2019, the range was from 3 stars to 5 stars.

Source: MedPAC analysis of CMS star rating data.

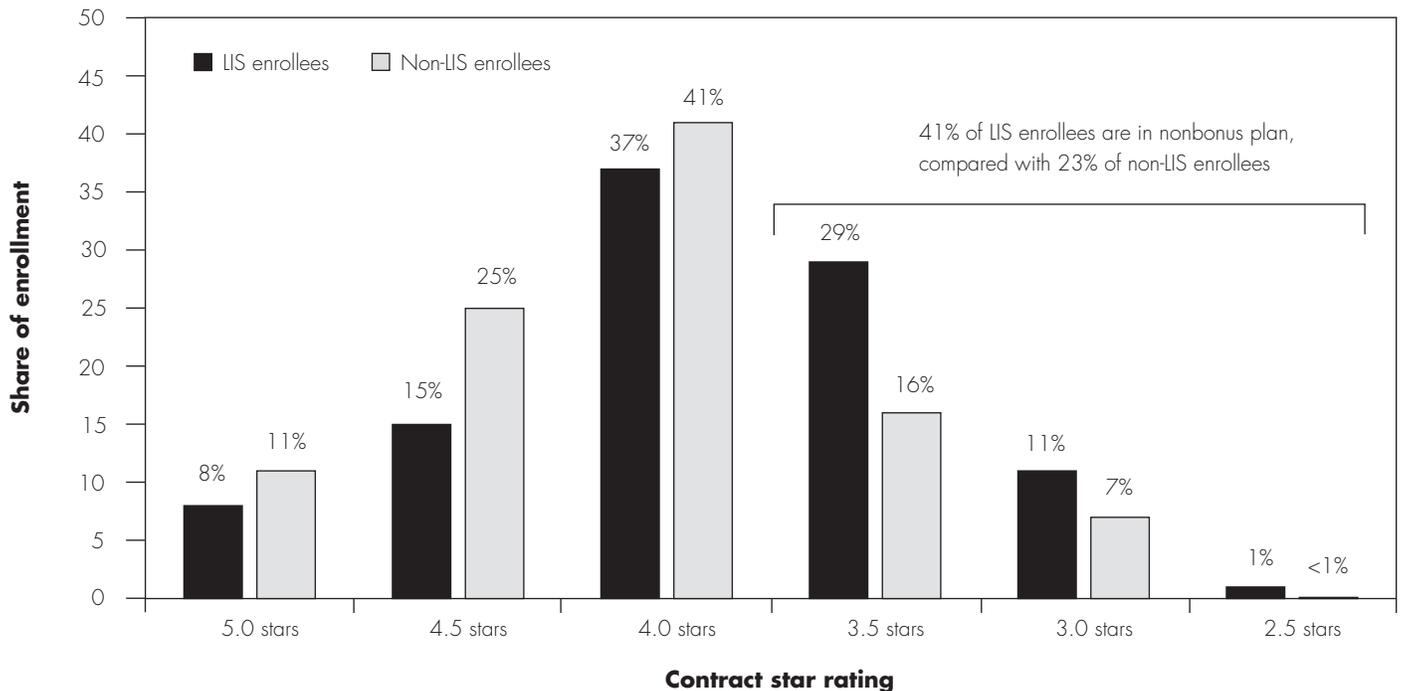
Services 2014). However, for some measures, CMS had set too low a threshold under the fixed-target model, and the new clustering algorithm produced large variations in star assignments even when there had been improvement in measure results.

An example is the kidney disease monitoring measure. The measure had a preset 4-star threshold of an 85 percent monitoring rate in 2014 and 2015—a threshold that had been established in 2012. The method of determining stars for this measure was changed to the tournament model beginning in 2016, after which there was improvement in the rates. The preset target of 85 percent was the 7th percentile of performance in 2014, making possible a 4.53 average star rating for 2014 and 4.17 for 2015. In 2016, with the tournament model, the average star rating dropped to 3.34 and improved to 3.73 by 2018 (data not shown). In the 2018 star ratings (measurement year 2016), there were no plans below a 90 percent level for this measure (Table 8-2). In the most recent star data, though, there are contracts reporting a monitoring rate below 90 percent, yet there are not plans at all five levels of star ratings. It appears that the clustering algorithm resulted in

only three distinct clusters, with the lowest group receiving a 3-star rating. Note that 13 contracts with a 2019 rate below 92 percent would have received a 1-star rating in 2018 rather than the 3-star rating they received for 2019. Table 8-2 also shows that the way the tournament model is implemented yields other inconsistent results. While a 97 percent rate was a 4-star level of performance in 2018, the rate is assigned 5 stars in 2019; and a 95 percent rate that received 3 stars in 2018 received 4 stars for 2019. The kidney disease monitoring measure illustrates the effect of setting too low a threshold under the fixed-target model and the problem of the large variations in star assignments produced by the clustering method, even when there have been improvements in measure results.

Possibly ineffective accounting for differences in enrollees’ social risk factors

CMS takes into account differences in a plan’s enrolled population, including social risk factors, not through adjusting raw measure results, but by adjusting overall star ratings. CMS instituted a type of peer-grouping mechanism that adjusts a contract’s overall star rating

**FIGURE
8-1****LIS enrollees are more likely to be in lower rated contracts (2018 enrollment, 2019 star ratings)**

Note: LIS (low-income subsidy). Components may not sum to 100 percent due to rounding.

Source: MedPAC analysis of CMS star ratings and CMS LIS enrollment data by contract.

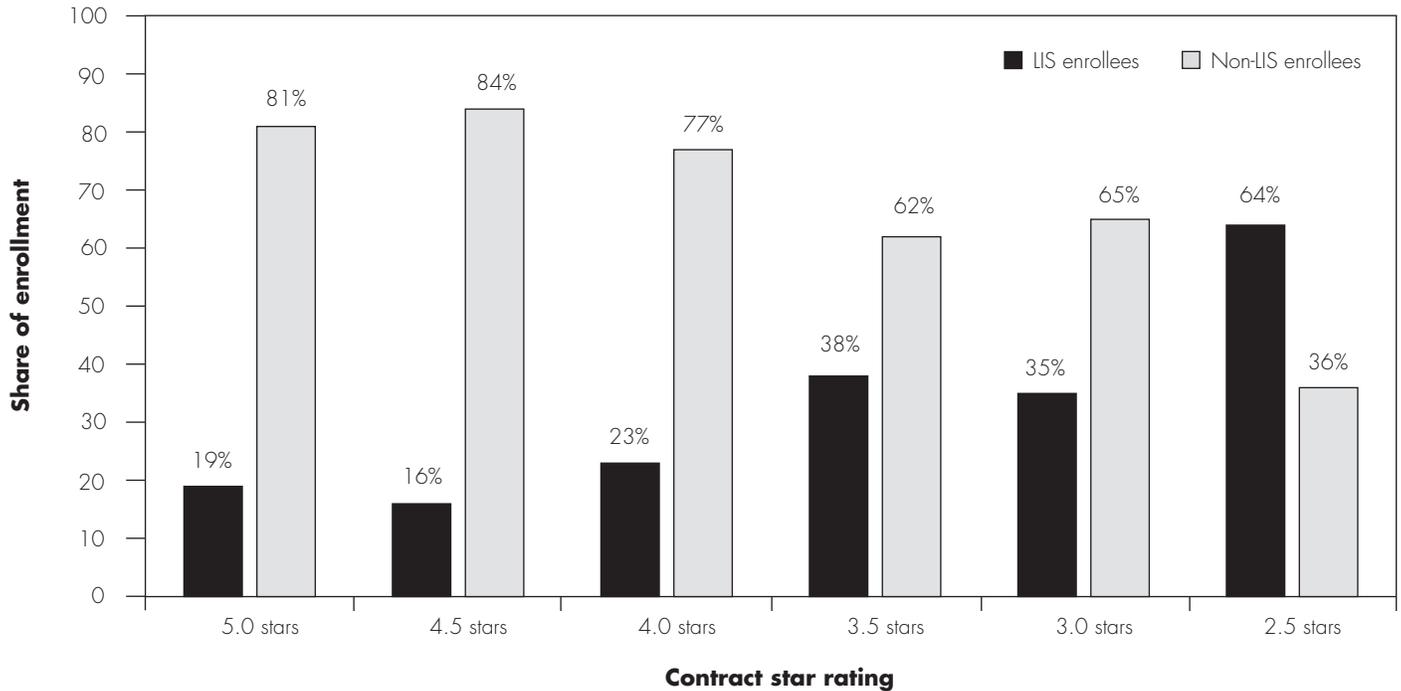
based on a contract's share of low-income and disabled enrollees.⁹ Even with this adjustment, plans that have a higher proportion of lower income beneficiaries continue to have lower overall star ratings. In 2018, 41 percent of low-income subsidy (LIS) enrollees were in nonbonus plans, compared with 23 percent of non-LIS enrollees (Figure 8-1). The share of LIS enrollment is inversely related to the level of star ratings, with the highest share of LIS enrollment (64 percent) found in the lowest rated (2.5-star) plans (Figure 8-2).¹⁰ (In 2020, CMS will take into account more measures in determining the peer grouping adjustments, which is a change that is expected to benefit plans with high shares of LIS enrollees (Centers for Medicare & Medicaid Services 2019).)

The distribution of MA LIS enrollment (Medicare–Medicaid dually eligible beneficiaries and others eligible for the LIS Part D subsidies based on their income and assets) could suggest either that the peer grouping mechanism CMS currently uses (which results in an adjusted overall star rating) performs inadequately or that

plans with large shares of LIS enrollees are generally more poorly performing plans. Plans can tailor offerings to attract LIS enrollees through special needs plans for Medicare–Medicaid dually eligible beneficiaries or by offering benefit packages with a premium set specifically at or below the regional low-income benchmark level and a benefit structure attractive to the LIS population. We have found that such options are lower quality options relative to options in the same geographic areas available to non-LIS beneficiaries. Three million MA enrollees are in counties in which the minimum plan rating for non-LIS options is 4 stars, but available LIS options include only plans below 4 stars. Part of the reason for this difference could be that not all companies offer options that are attractive to, or meet the needs of, LIS individuals. Of the seven companies (plan sponsors) with 5-star contracts, three do not offer options tailored to low-income beneficiaries. The average proportion of LIS enrollment in those companies is about 9 percent (compared with 29 percent for the overall MA average,

**FIGURE
8-2**

Lower contract star ratings are associated with higher shares of LIS enrollment (2018 enrollment, 2019 star ratings)



Note: LIS (low-income subsidy).

Source: MedPAC analysis of CMS star ratings and CMS LIS enrollment data by contract.

excluding employer group enrollees). Another three of the seven 5-star companies have LIS-targeted options in only some of their contracts or only some of their service areas under a given contract. Only one sponsor has LIS-targeted plans and non-LIS plans in all counties of its service area. At the contract level (among the thirteen 5-star contracts), one contract that serves only Miami-Dade and Broward counties in Florida has LIS enrollment of 84 percent; three contracts have 19 percent to 23 percent LIS enrollment. Five of the 13 contracts have LIS enrollment of 10 percent or lower.

Design of an MA value incentive program

To align with its principles for quality measurement in Medicare, the Commission plans to design a new MA

value incentive program (MA-VIP) to replace the QBP. Under these principles, the MA-VIP would be designed to be patient oriented, encourage coordination across providers and time, and promote change in the delivery system. It would use a small set of population-based outcome and patient experience measures to evaluate MA quality: The program would use clear, prospectively set performance standards to translate MA performance on these quality measures to a reward or a penalty.¹¹ The MA-VIP would consider differences in a plan's enrollee population by incorporating a peer-grouping methodology in which quality-based payments were distributed to plans based on their performance evaluated within categories (such as fully dual-eligible beneficiaries vs. non-fully dual-eligible beneficiaries). The differences in populations served would be the basis for determining the distribution of incentive payments or penalties. Comparison of the level of quality across plans would be based on results that

are not adjusted by differences in the social risk factors of the population.

The Commission has recommended that the Secretary take several steps to foster Medicare's ability to compare the quality of care between the MA and traditional FFS programs (Medicare Payment Advisory Commission 2010). We are limited in this effort, however, mainly because of the lack of FFS patient experience and patient-reported outcome survey data as well as robust MA encounter data. Absent these necessary data, our MA–VIP design focuses on comparing quality of care among MA plans, with the continued goal of being able to compare MA and FFS in future years.

Small set of population-based measures

Under one of the Commission's principles, Medicare quality programs should include a small set of population-based outcome and patient experience measures that, where practical, should align across all Medicare-accountable entities and providers, including MA plans and accountable care organizations (ACOs) (Medicare Payment Advisory Commission 2019, Medicare Payment Advisory Commission 2018a). So that these measures are not unduly burdensome for providers, they should largely be calculated or administered by CMS, preferably with data already being reported, such as claims and encounter data.

Most of the outcome and patient experience measure domains we propose for an MA–VIP are existing quality measure domains and include measures the Commission has discussed in the past as a basis for comparing MA and FFS and has discussed including in a voluntary value program for groups of clinicians (Medicare Payment Advisory Commission 2018a, Medicare Payment Advisory Commission 2015).¹² The measure domains include avoidable hospitalizations, avoidable emergency department (ED) visits, readmissions, patient experience, and patient-reported outcomes. Currently, the lack of complete MA encounter data limits the population-based measures we can include in the MA–VIP. For example, our analysis has found the post-acute care encounter data to be incomplete, so we cannot use the data to directly measure post-acute care for beneficiaries. Also, encounter data, like FFS claims data, do not include detailed clinical information such as tests performed during medical visits, discharge plans, and lab results (e.g., cholesterol levels) that could allow us to measure preventive care, coordination across providers, and clinical outcomes without a need for medical record review. The MA–VIP

measure set should continue to evolve as the encounter data improve and clinical data from electronic health records and other clinical sources become available for quality measurement.¹³ In the future, we can model the MA–VIP payment adjustments using measure results calculated from three data sources: (1) encounter data that MA plans submit to CMS supplemented with other administrative data sources (e.g., Medicare Provider Analysis and Review (MedPAR) hospital inpatient data); (2) beneficiary-level patient experience survey data (e.g., CAHPS); and (3) beneficiary-level patient-reported outcome survey data (i.e., the Health Outcomes Survey (HOS) results). Once MA encounter data have improved, relying on these data as the source of quality evaluations will bring greater uniformity to the comparison among MA plans and with FFS. In addition, the use of MA encounter data and FFS claims-based data would have the advantage of not introducing new reporting systems or new reporting requirements to either program.^{14,15}

Avoidable hospitalizations

In addition to disruptions to patients and caregivers and costs to the health care system, hospital admissions put patients at risk of hospital-acquired infections and complications. Hospitalizations due to conditions such as diabetes and pneumonia are potentially preventable if ambulatory care is provided in a timely and effective manner. Patients may have required acute-level services at the time they sought care, but the need for the admission might have been avoided with appropriate ambulatory care and coordination activities. Rates of avoidable hospitalizations can reflect an MA plan's quality of care, because high-quality MA plans should be able to manage beneficiary, hospital, and physician relations to coordinate care and provide appropriate access (Wholey et al. 2003).

A measure of avoidable hospitalizations is based on the premise that, while not every admission for a chronic or acute ambulatory care-sensitive condition can be averted, comparatively high risk-adjusted rates of these events can identify opportunities for improvement in ambulatory care systems. The Commission has previously analyzed unadjusted FFS rates of avoidable hospitalizations in local market areas and found variation across population groups (e.g., by age, sex, Medicaid eligibility) and across two definitions of market areas (Medicare Payment Advisory Commission 2018a).¹⁶ This variation signals opportunities to improve the quality of care within areas and the potential to use the measure to compare quality across local health care markets. Recently, we have worked with a contractor to further develop a risk-adjusted

avoidable hospitalizations measure. The measure builds on existing measure specifications and definitions (HEDIS Hospitalization for Potentially Preventable Complications and the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators), but with a more complete and accurate risk adjustment model that could be applied to FFS, ACO, and MA populations.^{17,18}

The avoidable hospitalizations measure represents the risk-adjusted ratio of observed-to-expected potentially avoidable admissions. The total avoidable hospitalizations ratio we could use for MA–VIP modeling includes both chronic ambulatory care–sensitive conditions (e.g., diabetes) and acute ambulatory care–sensitive conditions (e.g., pneumonia) based on encounter data and supplemented with administrative data (e.g., MedPAR hospital inpatient data).

Avoidable emergency department visits

ED visits are costly and can lead to adverse consequences such as hospitalization, confusion, and complications from testing and treatment. Some ED visits are preventable, which can indicate poor management of chronic conditions (e.g., hypertension), inadequate access to care for acute conditions (e.g., low back pain), or poor choices on the part of patients (Dowd et al. 2014). ED visits for conditions that are preventable and treatable with appropriate primary care decrease health system efficiency and raise costs (Enard and Ganelin 2013). Our recent analysis found, conservatively, that about 7 percent of FFS ED visits were nonurgent and thus could likely have been appropriately treated in a physician’s office or urgent care center (see Chapter 11 of this report).

Existing population-based measures of avoidable ED visits include AHRQ preventable ED visits, New York University ED visits algorithm, and 3M™ potentially preventable ED visits. But none of these measures is currently included in the MA–QBP or other Medicare quality incentive programs. We have previously calculated FFS avoidable ED visit results for local market areas using the 3M methodology and found variation in avoidable ED visit rates across areas (Medicare Payment Advisory Commission 2017). However, the Commission expressed concern that the 3M measure was not available in the public domain and that providers could find the measure definitions overly complicated (Medicare Payment Advisory Commission 2017). Therefore, we have been working with a contractor to develop a less complicated, risk-adjusted avoidable ED visit measure. The measure

builds on existing literature and measure development work to identify ED visits that could have been treated in a physician office (e.g., chronic care management) or urgent care center (e.g., urinary tract infection). As with the avoidable hospitalizations measure, the avoidable ED visits measure includes a risk adjustment model that could be applied to FFS, ACO, and MA populations.

The avoidable ED visits measure represents the risk-adjusted ratio of observed-to-expected potentially avoidable ED visits. The total avoidable ED visits ratio includes both chronic ambulatory care–sensitive conditions (e.g., diabetes) and acute ambulatory care–sensitive conditions (e.g., urinary tract infection). Ideally, our proposed MA–VIP would develop avoidable ED visit rates based on encounter data, but the robustness of these data remains an issue. We plan to test the use of encounter data to calculate avoidable ED visit rates in MA plans, but we may find the data are not complete enough for our modeling.

Readmissions

Hospital readmissions are disruptive to patients and caregivers and costly to the health care system; they also put patients at additional risk of hospital-acquired infections and complications. Readmissions are a major source of patient and family stress and can contribute substantially to loss of functional ability, particularly in older patients. Measuring and adjusting payments based on a plan’s readmission rates holds the plan accountable for ensuring that beneficiaries have the discharge information they need and encourages the plan to facilitate coordination with other providers. The HEDIS Plan All-Cause Readmissions measure has the maximum weight in the current MA–QBP program, and plan-reported performance on the measure has improved over time.

In the MA–VIP, plans would be scored on their risk-adjusted rates of unplanned readmissions within 30 days of discharge for all conditions, based on encounter and administrative data. In future MA–VIP modeling, we could use the readmissions measure used in the HVIP, which has a more complete and accurate risk adjustment model; it is based on the entire FFS population, whereas the HEDIS readmission risk adjustment model is based on the experience of a subset of MA enrollees.

Patient/enrollee experience

A new MA–VIP should include population-based enrollee experience measures, based on the Commission’s

principles. When patients have a better experience, they are more likely to adhere to treatments, return for follow-up appointments, and engage with the health care system by seeking appropriate care. The MA–CAHPS is a national standardized survey instrument and data collection method for measuring enrollees’ perspectives on the quality of health services provided by MA plans. The survey allows Medicare, plans, beneficiaries, and others to make objective and meaningful comparisons of MA plans. Since 2011, CMS and MA plans have worked with third-party survey vendors to collect survey results annually from a random sample of each plan’s members. The survey results are used to calculate seven core measures of enrollee experience: (1) getting needed care, (2) getting appointments and care quickly, (3) customer service, (4) rating of health care quality, (5) rating of health plan, (6) getting needed prescription drugs, and (7) care coordination. These MA–CAHPS measures are star measures in the QBP and are publicly reported on the Medicare Plan Finder website. The Commission has discussed opportunities for CMS to improve the CAHPS survey such as including an overall “net promoter” measure (i.e., a measure of whether a beneficiary would be willing to recommend his or her plan to others). CMS should also consider changes to the survey administration protocol that allow plans to receive quicker survey results to implement in their quality improvement activities (e.g., web-based vs. mail and phone survey modes).

In the MA–VIP, we propose to score an enrollee experience composite of all seven MA–CAHPS case-mix-adjusted measures. This approach captures a more comprehensive picture of enrollees’ experience with a plan’s services compared with using only the overall rating or a subset of MA–CAHPS measures. We expect to use beneficiary-level MA–CAHPS survey data to calculate an enrollee experience composite for each of the plans in an MA–VIP modeling exercise.

Patient-reported outcomes: Improving or maintaining physical and mental health status

Beneficiaries are a valuable and, arguably, authoritative source of information on outcomes, so the MA–VIP should include enrollee-reported outcomes to assess the quality of care MA beneficiaries receive. MA plans are currently required to collect HOS responses from a random sample of their Medicare beneficiaries and, two years later, survey the same beneficiaries again. HOS results are used to calculate plan-level measures of improved or maintained physical health and mental

health, which are star measures in the MA–QBP. As previously described, the Commission has expressed concerns about the HOS, including that the HOS has often produced results showing no significant outcome differences among MA plans (i.e., floor and ceiling effect) (Medicare Payment Advisory Commission 2010). We encourage CMS to continue to improve the HOS survey to meaningfully capture patient-reported outcomes, such as revising the number of surveys required to calculate reliable results (Rose et al. 2019). In the MA–VIP, we propose to score a composite of the case-mix-adjusted maintenance and improvement measures. We anticipate using beneficiary-level HOS survey data to calculate an enrollee-reported outcomes composite for plans in an MA–VIP modeling exercise.

Role of process and insurance function measures

Outside of the outcome and enrollee experience measures scored in the MA–VIP, Medicare can use other quality measures and compliance standards to monitor MA plan performance and publicly report this information to beneficiaries (e.g., star rating and display measures). For example, Medicare can continue to collect, track, and publicly report some HEDIS process measures that are tied to outcomes. Some research has shown that removing measures from the star rating public reporting and financial incentives program did not result in performance declines, nor did performance trends differ from measures remaining in the star ratings (Reid et al. 2019).

Health plans should be held accountable for their insurance functions through compliance standards, not through the MA–VIP. A Medicare beneficiary should be able to rely on CMS’s decision to enter into an MA contract with a given organization as an assurance that the organization is able to provide good quality care and can administer the Medicare contract effectively and efficiently. Even if a plan has good clinical quality and outcomes, if it is unable to administer a contract it should be placed under a corrective action plan, have sanctions imposed (such as suspending enrollment and marketing for the plan), or, in extreme cases, have its contract terminated if it is unable to adequately perform the insurance and contract administration functions required of an MA plan.

Reporting unit

Under the proposed MA–VIP, we will calculate the quality of each parent organization (e.g., UnitedHealthcare) within a local market area (e.g., Washington, DC). This approach would be different from the current system,

under which the star ratings are determined at the contract level, allowing a single star rating to apply to the contract's entire service area. Modeling under the proposed MA–VIP will also distribute penalties or rewards to each parent organization in a local market area. Comparing the quality of care within market areas can lead to the ability to compare quality in MA with quality in FFS and can provide more meaningful information to beneficiaries. We recognize that some market areas may have a small number of parent organizations offering plans (and in some areas there may be only one organization in the MA market). So, the MA–VIP may have to include an alternative approach for determining how such areas would be participating in the redesigned system—such as by using combinations of market areas (which would also be a way of dealing with markets with small numbers of enrollees). How to address small sample sizes is an implementation issue for CMS to consider.

Scoring methodology using prospective performance targets

Unlike the current MA–QBP, which scores plans' performance on quality relative to other plans' performance scores, the MA–VIP is designed to reward or penalize a plan based on the plan's performance relative to prospectively set targets for each measure domain. Medicare can define the performance targets (i.e., set the performance scale) for each measure domain using different methods. For example, the continuous scale of targets can be set along a broad distribution of historical data so that most entities have the opportunity to earn credit for their performance. Medicare could also start the continuous scale of targets around a desired value to drive quality improvement above that value. Medicare can assess targets annually and, if needed, revise them depending on whether expectations for quality achievement are met. (Multiyear targets for quality improvement might simplify administration of the MA–VIP, but there is a tension between multiyear targets and the budget-neutral approach to financing, which is discussed later in the chapter. Revising targets each year would allow yearly calibration between (1) dollars expended as bonuses or reduced payments through penalties and (2) the dollar amount that would most closely approximate budget neutrality in each year.)

For the proposed MA–VIP modeling, we plan to set the scale of targets along a broad distribution of national historical data. MA plans earn points for their performance on each of the five quality domains based on a continuous scale, starting at 0 and gradually increasing to 10 points.

A plan's total MA–VIP score is the average of all of its points earned across the five measure domains. Our MA–VIP model treats each measure as an equally weighted, separate domain (each domain is worth 20 percent of the total score), as we proposed for the HVIP. Policymakers could give the measure domains different weights based on a ranking that takes into account interests shared by the Medicare program and its beneficiaries.

Using peer groups to convert performance to rewards and penalties

Medicare should also take into account, as necessary, differences in enrollee populations, including social risk factors. Because adjusting measure results for social risk factors can mask disparities in clinical performance, Medicare should account for social risk factors by directly adjusting payment through peer grouping. In our March 2019 report to the Congress, we described how our HVIP model that incorporated these principles produced payment adjustments more equitably compared with the existing hospital quality payment programs. Similarly, the proposed MA–VIP can link payment to quality of care to reward MA plans for providing quality care efficiently. (Although this discussion uses the term *MA plan*, the unit of measurement would be the MA parent organization in a local market area.)

In a departure from the recommended HVIP for hospitals, we recommend peer grouping by local area rather than at the national level. In the HVIP, we classified hospitals at the national level into 10 peer groups based on their share of fully dual-eligible beneficiaries treated. For each peer group, we created a separate pool of dollars that was distributed within the peer group's hospitals as a reward or penalty based on their quality performance. The peer groups with a higher share of fully dual-eligible beneficiaries received a higher reward (more of a payment adjustment) for higher quality, compared with the peer groups with a smaller share of fully dual-eligible beneficiaries.

We created HVIP peer groups at the national level because we did not believe geography itself should be a factor in the quality of care hospitals provide. In contrast, the Commission favors local market areas for assessing quality in MA, for several reasons. MA plans often leave or enter new markets or do not operate in certain markets, which means, in a sense, they choose their enrollee populations. Plans can affect their enrollment mix by designing benefit packages that are attractive (or unattractive) to particular populations—which is not the

Illustration of the Medicare Advantage value incentive program's use of peer grouping to convert quality performance to rewards or penalties in a local market area

In the following example, a local market area has three Medicare Advantage (MA) parent organizations for which to calculate performance measure results (referred to in this example as “three MA plans”). We divide each plan’s beneficiary population into two peer groups: fully dual-eligible beneficiaries (Peer Group 1) and non-fully dual-eligible beneficiaries (Peer Group 2). We follow Steps 1 through 5 to convert each of the MA plan peer group’s quality measure performance to a MA value incentive program (MA–VIP) payment adjustment that provides rewards or penalties. Step 6 combines the peer groups’ payment adjustments into one total MA–VIP adjustment.

Step 1: For each peer group, calculate each MA plan’s performance on the five quality measure domains; this step produces a performance rate for each plan’s peer groups for each measure domain. The calculations will be based on either beneficiary-level administrative data or survey data.

Step 2: Convert each MA plan’s performance on the five quality measure domains for each peer group to points based on the same continuous performance-to-points scale (nationally determined).

Step 3: Average each MA plan’s points on the five measure domains to determine total MA–VIP points for each peer group. (Assume equal weighting of measure domains.)

Step 4: For each peer group, create a pool of expected MA–VIP payments to plans, based on a specified percent tied to plan payments for each peer group (e.g., 2 percent of each plan’s payments for its peer group’s population).

Step 5: For each peer group, calculate the payment multiplier or percentage adjustment to payment per MA–VIP point, which converts total MA–VIP points to dollars and results in spending each group’s pool of dollars defined in Step 4 using the following formula:

$$\text{Payment multiplier} = \frac{\text{MA–VIP pool for peer group}}{\text{sum of (each MA plan’s payment tied to the peer group} \times \text{each MA plan’s total MA–VIP points for the peer group)}}$$

Step 6: Compute each MA plan’s adjustment for the coming year based on past performance and its peer group’s payment multiplier using the following formula:

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case for hospitals. Also, beneficiaries can and often do switch plans within their local market areas because of changes in cost. Therefore, we propose to calculate the MA–VIP within a local market area with stratified scoring and pools of dollars for fully dual-eligible beneficiaries (Peer Group 1) and non-fully dual-eligible beneficiaries (Peer Group 2). (The MA–VIP peer groups are groups of beneficiaries, not groups of providers like in the HVIP; however, the same principle of accounting for differences in social risk factors through payment adjustment applies.)

We anticipate that peer groups in the MA–VIP with more social risk factors will receive a higher reward for higher quality, like in the HVIP. Under the MA–VIP, we also anticipate that grouping different populations served by a plan within a local area would make payment adjustments more equitable compared with the existing QBP. The

MA–VIP will link payment to the quality of care in order to reward plans for efficiently providing high-quality care to beneficiaries.

We use eligibility for full Medicaid benefits, like we do in the HVIP, as a proxy for whether a plan’s members are more difficult to treat because individuals with full Medicaid benefits are much more likely than other Medicare beneficiaries to be disabled, have multiple chronic conditions, and have functional impairments. Policymakers could consider using other social risk factors to define peer groups, such as LIS and disability status (which is a current adjustment factor in the MA–QBP) and refine the definitions as more data become available. The text box illustrates how the MA–VIP would use peer grouping within a local market area.

Illustration of the Medicare Advantage value incentive program's use of peer grouping to convert quality performance to rewards or penalties in a local market area (cont.)

MA plan's total MA-VIP adjustment = (Peer Group 1 payment multiplier × MA plan's total MA-VIP points for Peer Group 1) + (Peer Group 2 payment multiplier × MA plan's total MA-VIP points for Peer Group 2)

Table 8-3 illustrates the conversion of MA-VIP points to payment adjustments using peer grouping in a local market area with three MA plans that have different

numbers of fully dual-eligible and non-fully dual-eligible beneficiaries. We calculate quality measure results based on administrative and survey data for each plan's fully dual-eligible beneficiaries (Peer Group 1) and non-fully dual-eligible beneficiaries (Peer Group 2) for each of the five measure domains (Step 1). Using the same nationally determined continuous performance-to-points scales, we convert each peer

(continued next page)

**TABLE
8-3**

Example of converting MA-VIP points to payment adjustments in a local market area

	Peer Group 1 (fully dual-eligible beneficiaries)			Peer Group 2 (all others)		
	Plan A	Plan B	Plan C	Plan A	Plan B	Plan C
Number of beneficiaries	10,000	100,000	54,000	20,000	620,000	820,000
MA-VIP total points (Steps 1-3)	8	4	4	8	6	6
Plan payments tied to each peer group's beneficiaries	\$200M	\$2,000M	\$1,080M	\$200M	\$6,200M	\$8,200M
2 percent of plan payments tied to each peer group's population	\$4M	\$40M	\$21.6M	\$4M	\$124M	\$164M
Total pool of dollars for peer group (Step 4)		\$65.6M			\$292 M	
Payment multiplier for peer group [group's pool / sum (plan payments × points)] (Step 5)		0.47%			0.33%	
MA-VIP payment adjustments [points × multiplier] (Step 6)	3.77%	1.89%	1.89%	2.65%	1.99%	1.99%
MA-VIP payments [multiplier × plan payments]	\$7.5M	\$37.7M	\$20.4M	\$5.3M	\$123.4M	\$163.3M
Net payments	\$3.5M	-\$2.3M	-\$1.2M	\$1.3M	-\$0.6M	-\$0.7M
Total MA-VIP payment adjustment (net after 2 percent of payment)						
Plan A			+1.21% (+\$4.8M)			
Plan B			-0.03% (-\$2.9M)			
Plan C			-0.02% (-\$2.0M)			

Note: MA-VIP (Medicare Advantage value incentive program), M (million). This example assumes a local market area has three Medicare Advantage plans. Fully dual-eligible beneficiaries qualify for a full range of Medicaid benefits. MA-VIP total points range from 0 to 10 points. Totals may not sum to components due to rounding.

Illustration of the Medicare Advantage value incentive program's use of peer grouping to convert quality performance to rewards or penalties in a local market area (cont.)

group's quality performance to points for each domain (Step 2). We average each plan's performance by peer group to determine MA–VIP total points for each plan's peer groups (Step 3). (Steps 1 through 3 are the same as the steps for the hospital VIP (HVIP) scoring methodology (see Chapter 15 in the Commission's March 2019 report).) The table shows that MA Plan A earns the highest performance across both peer groups (8 points). MA Plans B and C both earn lower points for their fully dual-eligible population (4 points) compared with their non-fully dual eligible population (6 points).

We create a pool of dollars based on 2 percent of each of the MA plan's payments tied to each of the peer groups (Step 4). Since MA Plan C has the largest number of beneficiaries, its contribution to the pool of dollars is largest. The pool to be redistributed for Peer Group 2 (non-fully dual-eligible beneficiaries) is larger than Peer Group 1's pool because there are more beneficiaries and payments in Peer Group 2. For each Peer Group, we calculate a payment multiplier or

percentage adjustment to payment per MA–VIP point (Step 5). The payment multiplier for each peer group is the group's pool of dollars from Step 4 divided by the sum of each plan's total payments times their MA–VIP total points. Because Peer Group 1 has a larger point multiplier than Peer Group 2, the plan with higher performance for their duals population can earn a higher reward.

We calculate payment adjustments (Step 6) based on each plan peer group's MA–VIP points and payment multiplier. In total, MA Plan A has the highest performance for both peer groups and so earns a reward of 1.21 percent, net of their 2 percent of payment that went into the pool. On net, MA Plan A earns a reward of \$3.5 million for Peer Group 1 and a reward of \$1.3 million for Peer Group 2, for a total reward of \$4.8 million. MA Plans B and C both receive small penalties because they receive fewer points for both their dual and nondual populations. The entire pool of dollars is distributed to the MA plans. ■

Financing: Applying budget neutrality to MA's quality payment program

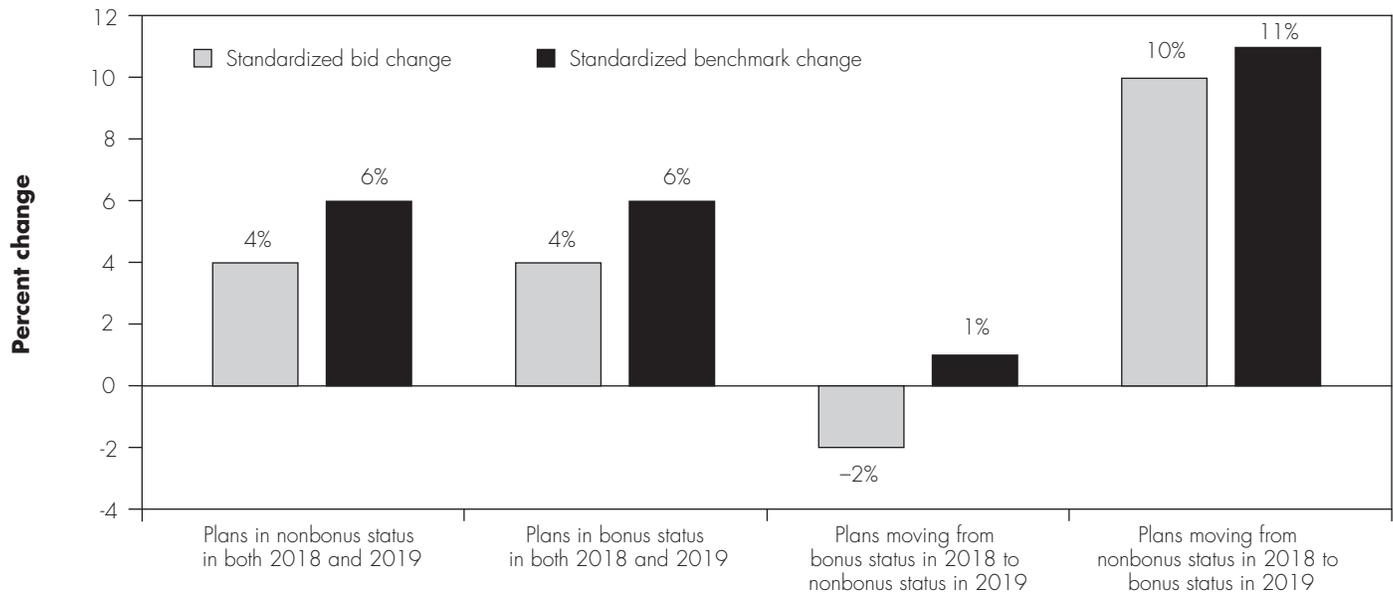
Nearly all of Medicare's FFS quality payment programs either are budget neutral (financed by reducing payments per unit of service) or produce program savings because they involve penalties. In contrast, the MA–QBP is financed with added program dollars and no financial penalties are applied.

Similar to the HVIP, we propose that the MA–VIP be a budget-neutral system with a small share of benefit payments used to create a pool of dollars that is redistributed among plans based on their performance on a small set of quality measures. Instituting a system in which the share of payments determining the pool of

dollars is relatively small during an initial phase can lessen the financial impact of any unintended or unanticipated effects that might disadvantage some plans in a new system. Such a system would create a level playing field with the fee-for-service quality incentive programs. The redesigned system would also be a means of imposing financial pressure on health plans to increase their efficiency (see text box on financial pressure, pp. 262–263). The Congressional Budget Office, which included the elimination of the MA–QBP as a budget option in a December 2018 report, projected that eliminating benchmark increases on the basis of quality bonuses would reduce mandatory spending by \$94 billion between 2021 and 2028 (Congressional Budget Office 2018); as we have noted, it also would reduce Part B premiums for all beneficiaries and states.

FIGURE 8-3

Additional quality bonus payments resulted in higher bids, while plans losing bonus status reduced their bids for the Medicare benefit package between 2018 and 2019



Note: Special needs plans are excluded, as are plans with changes in segments (subplan classifications) that materially differ between the two years. All bid data pertain to the Medicare Part A and Part B benefit package. The “bonus-to-nonbonus” category includes projected enrollment of about 275,000 enrollees in plans for which we could compare year-over-year bids; the “nonbonus-to-bonus” category includes projected enrollment of about 850,000.

Source: MedPAC analysis of 2019 Medicare Advantage bid data.

Leveling the playing field between MA and FFS

The Commission supports the concept of a level playing field between MA and FFS. Each year the Commission’s March report contains such statements as the following:

Because private plans and traditional FFS Medicare have structural aspects that appeal to different segments of the Medicare population, we favor providing a *financially neutral choice* between private MA plans and traditional FFS Medicare. Medicare’s payment systems, as well as monitoring and enforcement efforts, should not unduly favor one component of the program over the other (Medicare Payment Advisory Commission 2019). (Emphasis added.)

We have noted that there is not a level playing field between MA and FFS in that the financing mechanism for the MA-QBP is not consistent with the budget-

neutral or penalty-based approaches used in most FFS quality incentive programs. In FFS, the quality incentive programs can act as a source of financial pressure on plans to improve efficiency while maintaining good quality (because of the risk of reduced payments). By contrast, the MA-QBP, which is financed through added program dollars without penalties, has the opposite effect, potentially relieving financial pressure that plans might otherwise face. For example, as shown in Figure 8-3, plans that lost bonus dollars increased their efficiency (lowered their bids), while plans newly receiving bonus dollars substantially increased their bids.

Would a budget-neutral MA-VIP reduce MA plans’ offerings or extra benefits?

Plans are required to provide the Medicare Part A and Part B benefit package. When a plan’s bid for the Medicare package (its statement of the revenue the plan needs to cover Medicare benefits) is less than the MA benchmark (the maximum Medicare payment to the plan, based on

Imposing financial pressure in Medicare Advantage

In proposing a redesigned system that would be budget neutral, we should consider the possible impacts of this approach on the Medicare Advantage (MA) program.

For fee-for-service (FFS) Medicare, the Commission supports the concept of imposing financial pressure on providers through yearly update recommendations that provide adequate payment to providers while maintaining good access to care for beneficiaries. There is not a similar year-by-year evaluation of the adequacy of payment for MA plans. Given that MA expenditures represent about one-third of all Medicare program expenditures, it is appropriate to contemplate (1) whether the same expectations of improved efficiency through financial pressure should be a factor in the MA program and (2) whether the quality bonus program (QBP) in its current form—which is inconsistent with the usual incentive structures of FFS quality programs—is having an opposite effect and an unintended negative effect in some cases. That is, bonus payments reduce financial pressure on MA plans, and, in a system that is not a level playing field for MA plans, the system potentially imposes financial

pressure on the wrong entities—plans not in bonus status because they are serving high-needs populations and have no opportunities to raise their star ratings through the consolidation strategy.

While there is not an annual evaluation of payment adequacy in MA that might reduce MA rates, there are other sources of financial pressure in MA. The statutory payment structure is a source of financial pressure. Some county benchmarks are set at 95 percent of FFS, and, because all benchmarks are tied to FFS rates, any reductions in FFS expenditures translate to benchmark reductions reflecting improved efficiency in FFS. Another source of financial pressure is competition among plans as well as competition with FFS based on cost (the cost of FFS plus a Medigap premium vs. the cost of an MA plan in a given area).

Statutory provisions affecting payment

When the Patient Protection and Affordable Care Act of 2010 (PPACA) was enacted and reduced MA payments in a number of counties, some stakeholders warned that MA enrollment and plan participation in the program would decline. That prediction did not

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a share of local FFS spending), the plan is required to provide extra benefits—reduced cost sharing for Medicare services or extra services such as dental care.¹⁹ Higher benchmarks can give plans the opportunity to offer more generous extra benefits. Under the QBP, there is no “bonus payment” per se, but, rather, plan bids are compared with higher benchmark levels to determine where the bid is in relation to the benchmark and whether a plan will be providing extra benefits because its bid is below the benchmark (which is either a bonus-supplemented benchmark or a nonbonus benchmark). Having a bonus program that raises benchmarks for higher quality plans is a way of encouraging Medicare beneficiaries to enroll in higher rated plans—if the plans use those bonus dollars to provide extra benefits. With regard to the uses of MA bonus payments, there is a misconception among some stakeholders that plans are required to use MA bonus

payments exclusively to provide extra benefits to MA enrollees. However, there is no such requirement. Because Medicare beneficiaries are more likely to choose a plan based on its premium levels and other costs (and factors such as the provider network and plan reputation)—rather than the CMS star rating—plans have an interest in offering extra benefits to attract enrollment. If benchmarks rise, either because a plan is newly in bonus status or for other reasons, plans can choose to enrich their benefit packages—or allot a greater share of the Medicare revenue to the Medicare benefit package (paying providers more, or allotting more to profit or administrative costs). If benchmarks fall, plans can choose to reduce their costs or profit level if they feel that the competition in a particular market requires that they maintain a certain level of extra benefits (or they see a need to improve the benefit

Imposing financial pressure in Medicare Advantage (cont.)

come about. Instead, we have seen that plans are able to operate successfully within the financial constraints PPACA imposed; that enrollment in MA has increased dramatically (doubling between 2010 and 2019, from 11 million to 23 million enrollees); and that extra benefits are at historically high levels.

The PPACA payment changes have now been fully implemented after a phase-in period of up to six years in some counties.²⁰ The Commission's most recent analysis of bidding data indicates that plans are becoming more efficient: Bids for the Medicare Part A and Part B benefit package now average 89 percent of FFS expenditures, and average rebates for nonemployer, non-special needs plans are at \$107 per member per month, compared with \$85 in 2013 (Medicare Payment Advisory Commission 2019). In some counties, rebates per beneficiary exceed \$300 per month. Notably, the most recent data show that even in the counties where it is thought that plans are least likely to be able to have bids below FFS—because the areas are low-FFS-expenditure areas—the median bid in such areas is now below FFS (at 0.99 percent of FFS in the 115 percent of FFS spending quartile).

The analysis of bids in the March 2019 report found that, overall, “Ninety-seven percent of all beneficiaries live in a county served by at least one plan that bid below its service area’s average FFS spending for 2019. However, that does not mean that plans could bid lower than FFS in each county of their service areas [because a bid can be a combined bid for a multicounty service area]” (Medicare Payment Advisory Commission 2019). (This discussion, though, raises the question of whether a comparison with FFS is an appropriate measure of the efficiency of MA. Given the evidence that bids have steadily declined in each of the quartile areas, it appears that plans have been able to harness their capacity for innovation and efficiency to the benefit of their enrollees, who have generous extra benefits at record levels. However, the Medicare program as a whole has not fully benefited from this increased efficiency because benchmarks continue to be tied to FFS expenditure levels and there is no direct payment policy, such as an MA payment update mechanism, that evaluates payment levels in relation to what constitutes an efficient plan (analogous to the Commission’s examination of efficient providers in the FFS sector).) ■

package). Our analysis of the bids for 2019 shows that most of the extra dollars from bonus payments were not used to provide extra benefits to MA enrollees, and only those plans that saw a decline in their benchmarks due to the loss of bonus status reduced their costs of providing the basic Medicare benefit package (Figure 8-3, p. 261).

Figure 8-3 shows the change in bids and benchmarks between 2018 and 2019 based on plans’ bonus status or change in bonus status. The bids and benchmarks are standardized amounts, representing amounts for a population of average risk. The “standardized bid change” amounts show the level of plans’ medical inflation for the Medicare Part A and Part B benefit package (the cost of the benefit, administration, and profit). For plans that maintained the same bonus status between 2018 and

2019 (nonbonus in each year or bonus status each year), the cost of providing the Medicare benefit—including administrative costs and profit—rose by a standardized 4 percent. For such plans, benchmarks increased 6 percent (for a population of average risk). For plans that had an increase in their Medicare payments because they moved from nonbonus status to bonus status, the reported cost of providing the Medicare benefit rose by 10 percent—over twice the increase for the other categories of plans. The rise in medical inflation for these plans (10 percent) nearly matched the rise in quality-adjusted benchmark levels (11 percent). In contrast, plans moving from bonus status to nonbonus status reduced their cost of providing the Medicare benefit in the face of only a small increase in the benchmark.

**TABLE
8-4**

In 2019, plans leaving bonus status had a smaller benchmark increase than other plans but applied a higher dollar amount of their benchmark increase to extra benefits

	Amount per beneficiary per month		
	Bonus status unchanged from prior year	Plans moving from bonus to nonbonus status	Plans moving from nonbonus to bonus status
Risk-adjusted benchmark increase	\$72	\$46	\$108
Risk-adjusted bid increase	\$48	\$14	\$83
Marginal addition to rebate computation (benchmark minus the bid)	\$24	\$32	\$26
Value of extra benefits to beneficiaries (50 percent to 70 percent of rebate, based on stars)	\$16	\$21	\$17
Components of the risk-adjusted bid increase			
Dollar change in net medical expenses	53	\$30	\$59
Dollar change in administrative costs	-\$10	-\$5	-\$10
Dollar change in Medicare margin	\$4	-\$10	\$33

Note: Special needs plans are excluded. Table excludes plans with changes in segments (subplan classifications) that materially differ between the two years. All bid data pertain to the Medicare Part A and Part B benefit package. Components may not sum to totals due to rounding.

Source: MedPAC analysis of 2019 Medicare Advantage bid data.

Table 8-4 breaks down the components of the payment changes for the plan categories shown in Figure 8-3 (p. 261). The table compares (1) actual bids (not standardized for risk—i.e., representing the actual costs plans expect to incur, based on the expected risk of the plan’s enrollees) against (2) benchmarks that have been risk adjusted using the plan’s projection of the risk of its enrollees. Making the comparison in this manner establishes the value of rebates that must be offered when a plan bids below the benchmark. Risk-adjusted amounts are compared because Medicare’s payments to a plan are risk adjusted (i.e., the plan’s risk-adjusted payment is more or less than the Medicare base payment, which is for a person of average risk, unless the plan expects to enroll a population that is of exactly average risk). The difference between the expected actual payment from Medicare and the expected actual cost of providing the benefit is the basis for determining the rebate amount. Table 8-4 shows that, in the case of plans leaving bonus status (bonus to nonbonus), their benchmarks increased (reflecting a base benchmark increase of 1 percent (shown in Figure 8-3, p. 261) and an increase in the projected risk scores for these plans (risk score data not shown in table)). Such plans had

a risk-adjusted benchmark increase of \$46, of which \$32 (or 70 percent) was allotted to the rebate computation, producing a monthly beneficiary rebate amount of \$21. These plans’ bids increased very little (by \$14); they reduced their margins by an average of \$10 per member per month; they reduced their administrative costs; and their Medicare Part A and Part B medical expenses increased less than they did for other plans (by \$30, nearly all of which is attributable to the increase in risk scores for these plans). For the two other plan categories, a third (\$24 of \$72) or less (\$26 of \$108) of the benchmark increase was applied toward the rebate computation. In the nonbonus-to-bonus category, a substantial share of the increased benchmarks (30 percent) was used to increase plan margins, and payments for Medicare-covered health care services increased. Of the three components of the bid for the Medicare Part A and Part B benefit—medical costs, administrative costs, and margin (profit)—the administrative cost component decreased for all categories shown in the table. (Because of the increase in margins, it may have been necessary to reduce administrative costs to maintain a medical loss ratio—the percentage going toward medical costs—of 85 percent or less, as required of MA plans.)

**TABLE
8-5**

How the proposed MA-VIP could address financing and payment issues rooted in the current MA quality performance system

Issue	How addressed in a redesigned system
The MA-QBP adjusts payment based on plan performance on 46 measures, which include process and insurance function measures.	MA-VIP adjusts plan payment based on plan performance on a small set of population-based outcome and patient/enrollee experience measures (avoidable admissions, avoidable emergency department visits, readmissions, patient experience, improving physical and mental health).
Some organizations have used existing policy to obtain unwarranted bonus payments, giving them a competitive advantage over other plans.	Evaluation of quality would be at the local market level and no longer determined at the contract level.
Under QBP's tournament model, plans do not know ahead of time the targets they need to achieve to receive a bonus.	MA-VIP scores a plan's quality measure results against a performance-to-points scale that is known ahead of time.
It is not clear that MA peer-grouping mechanisms are effective. Plans serving high-needs populations are not receiving bonus payments.	An alternative peer-grouping mechanism would be used.
Because the QBP is financed with additional program dollars, it is inconsistent with the budget-neutral fee-for-service quality incentive programs.	Financing could be on a budget-neutral basis by using a small share of payments from all plans in a pool to be redistributed on the basis of plan performance.

Note: MA-VIP (Medicare Advantage value incentive program), QBP (quality bonus program).

Figure 8-3 (p. 261) and Table 8-4 illustrate a number of points with respect to plans' use of bonus dollars and their bidding behavior. As illustrated by the plans newly in bonus status (nonbonus to bonus), not all bonus payments went toward providing extra benefits to plan enrollees. Instead, additional dollars in 2019 were used to increase margins and payments to providers. Plans with their bonus status unchanged used a greater share of payment increases to apply to the rebate computation, used less toward increasing their margin, and used the greatest share for provider payments and other components of the cost of providing the Medicare benefit (such as quality improvement activities). For plans losing their bonus status (but still receiving higher payments because of higher risk scores), the largest share (70 percent) of their increased payment was applied to maintain or improve their level of extra benefits through the rebate.

The two main takeaway points from this analysis are that, between 2018 and 2019, when plans received extra money in the form of a boost in their benchmark by moving from nonbonus to bonus status, the money was not all used to provide extra benefits; in fact, most of it was not used for that purpose. The other takeaway point is that when plans

lose their bonus status and have less money coming from the Medicare program, they reduce their bid, or stated cost, for providing the Medicare Part A and Part B benefit. That is, you could say that they react to financial pressure by becoming more efficient—behavior that is consistent with the behavior of efficient providers in FFS Medicare when financial pressure is applied on Medicare's FFS payments.

The cost of quality activities

A certain share of the Medicare Part A and Part B bid is composed of health plan quality activities. Thus, a portion of the bid increases shown in Figure 8-3 (p. 261) consists of expenditures for such activities, and one might argue that the higher bids among plans going from nonbonus to bonus status reflect their higher spending on quality-related activities. However, it is a small share of the bid. According to the medical loss ratio public use files for 2014 (the last public release of the data), excluding Kaiser Foundation Health Plans, the seven contracts that received a 5-star rating in 2016 (reflecting 2014 quality) spent a revenue-weighted average of 0.9 percent of their revenue on quality improvement activities (which are separately reported because they count as expenditures toward health

care in determining whether at least 85 percent of revenue goes to health care). Expenditure levels ranged from under 0.1 percent to 1.5 percent among the seven contracts. The weighted share of revenue used for quality improvement activities across all plans other than 5-star plans was 1.6 percent. These figures are well below the 5 percent increase in benchmarks available through the QBP. These figures are also the “gross cost” of quality initiatives. The “net cost” of quality initiatives may be a gain rather than a cost to a plan (resulting in a lower bid), to the extent that quality activities have a return on investment that reduces costs and produces savings (for example, reducing avoidable hospital admissions and readmissions would reduce plan costs).

Summary and next steps

The current QBP’s measurement approach, scoring, and peer-grouping mechanism do not align with the Commission’s principles for quality measurement. Instead, our principles are embedded in the proposed MA–VIP. Table 8-5 (p. 265) shows how our redesigned system would address design and financing issues of concern. In the future, the Commission plans to model the MA–VIP design using currently available data and compare plan performance on the current QBP with the MA–VIP. ■

Endnotes

- 1 Some counties have a statutory cap that limits the benchmark in relation to historical rates and can result in the reduction or elimination of the effect of a bonus-level rating on the county's benchmark. The Commission has recommended removing the caps as well as eliminating the double bonus (10 percent) payments (Medicare Payment Advisory Commission 2016).
- 2 Note that in this chapter we often use the terms *plan* and *contract* interchangeably. An MA contract, in CMS's terminology, can have multiple "plans" or benefit packages, including a mix of special needs plans, employer group plans, and plans for non-employer-sponsored beneficiaries. Each plan under a contract has a separate bid. Although the statutory language states that bonus-based benchmark increases would be at the plan or contract level, star ratings are assigned at the CMS contract level for whatever mix of benefit packages or plan variants a sponsor wishes to offer. The contract-level star ratings apply to all of the plans under the contract.
- 3 Stand-alone Part D prescription drug plans (PDPs) also have star ratings, but do not receive bonuses based on their performance. For MA prescription drug plans (MA-PDs), the Part D quality measures do factor into the star rating for bonus purposes. For the Part D star measures, the thresholds for the five levels of star ratings for MA-PDs are computed separately from the thresholds for stand-alone PDPs.
- 4 In 2017, 56.2 million beneficiaries had at least one month of Part B enrollment (based on our analysis of the CMS Medicare denominator file). Twenty-five percent of Part B expenditures are financed by beneficiary premiums. In 2017, Part B constituted a little over 50 percent of overall Part A and Part B expenditures (Boards of Trustees 2018). The share of \$6 billion in Medicare Part A and Part B expenditures that would have to be financed by beneficiary premiums would thus be about \$750 million, or a little over \$1 per beneficiary per month. Medicaid expenditures for the Part B premium are a combination of federal and state funds.
- 5 CAHPS[®] is a registered trademark of the Agency for Healthcare Research and Quality, a U.S. government agency.
- 6 There is also a misalignment between the star ratings included in the Medicare Plan Finder during the annual election period, announced in October of each year, and the star ratings used to determine bonus payments for the enrollment year. The latter are star ratings that plans use in their bids, submitted in June for the coming payment/enrollment year. Because the bidding precedes the announcement of new star ratings, plans must use two-year-old ratings that determine whether their benchmarks include bonus payments. Beneficiaries are essentially faced with two parallel signals of plan quality when deciding whether to enroll in a given plan. One signal is the most recent star rating of the Medicare Plan Finder, and the other signal—which has a strong influence on beneficiary choice—is the generosity of extra benefits financed by bonus dollars. The MA-VIP system would align the signals.
- 7 The March 2010 report suggests the use of geographic areas consisting of metropolitan statistical areas (MSAs), separated by state for multistate MSAs, and health service areas identified by the National Center for Health Statistics as groupings of nonmetropolitan counties based on the patterns of service use of Medicare beneficiaries.
- 8 HEDIS[®] is a registered trademark of the National Committee for Quality Assurance.
- 9 Under CMS's classification, the low-income category consists of beneficiaries receiving the Part D low-income subsidy (LIS), which is composed of two groups, Medicare-Medicaid dually eligible beneficiaries and other beneficiaries receiving the LIS. The disabled category includes Medicare beneficiaries entitled to Medicare on the basis of disability who are under 65, as well as beneficiaries who are 65 or older but were originally entitled to Medicare (before age 65) on the basis of disability.
- 10 These low star-rated contracts with high shares of low-income enrollees also tend to have lower enrollment than high star-rated contracts. For example, the 4-star contracts had an average total enrollment of 88,000 compared with an average total enrollment of 29,000 for the 3.5-star contracts, 22,500 for 3-star contracts, and 3,400 for the 2.5-star contracts. Contracts with low enrollment may have fewer financial resources to invest in activities that can improve star ratings, such as strategies to improve documentation and reporting of the measures included in the star ratings.
- 11 We would envision that new plans would not participate in the program until they are able to report quality measures. In a plan's first year of operation, for example, the plan would not be subject to the MA-VIP because CMS would be unable to determine whether the plan's performance merited a bonus or deserved a penalty.
- 12 The proposed MA-VIP measure set does not include two of the measures included in the Commission's past illustrative measure sets: mortality and Medicare spending per beneficiary (or a total cost of care measure). The mortality measure used in the hospital value incentive program holds hospitals accountable for coordination of care during and 30 days after a stay; however, an annual mortality measure

- for MA plans could encourage potential patient selection. Spending measures may not be necessary for MA because FFS resource use is a component of the benchmarks in determining MA payments.
- 13 Quality measure developers, such as the National Committee for Quality Assurance, are working to translate existing HEDIS health plans measures into electronic formats that can automatically extract data needed for quality measurement from electronic health records, registries, health information exchanges, and other electronic health information (National Committee for Quality Assurance 2019). Health plans will have the option to report HEDIS results, which include electronic data, beginning in June 2019. As health plans and measure developers continue to test and implement these approaches, Medicare can revise the measures scored in quality payment programs.
 - 14 If FFS claims are to be the source of information on quality (until such time as electronic medical records from FFS and MA can provide the necessary information), the MA data that most closely parallel the FFS claims data are MA encounter data. However, at present, the two systems—FFS claims and MA encounter data—are not entirely comparable. In addition to the issue of encounter data completeness, well-established differences in the coding practices of the two programs would affect the comparison of risk-adjusted quality measures. The Commission’s analysis of encounter data has identified a way in which the documentation of diagnoses can be made more consistent between FFS and MA, which is to use only MA diagnoses included on encounter records and not allow supplemental diagnoses that come from chart reviews.
 - 15 As with the HVIP, if there is a “small-numbers” issue, the MA–VIP could use additional years of data to increase the number of observations, which reduces random variation and allows Medicare to measure the quality of care for low-volume plans. However, we are limited to modeling one year of results because of the lower levels of completeness in earlier years of encounter data.
 - 16 In the Commission’s past work, we used the term *potentially preventable admissions*, but in this chapter we refer to the measure concept as *avoidable hospitalizations*. The literature and industry also refer to the measure as *ambulatory care-sensitive condition hospitalizations*, and *hospitalizations for potentially preventable complications*.
 - 17 The regression model used in the HEDIS measure to calculate the expected results is based on the risk profiles of a sample of MA beneficiaries. Since this small MA population differs from FFS beneficiaries, we needed to develop new risk weights to calculate expected results. The new risk weights are based on the entire FFS population, which we believe is representative too of the entire Medicare population (MA, ACO, and FFS). The common risk adjustment also furthers the Commission’s goal of comparing quality across payment models.
 - 18 The HEDIS Hospitalization for Potentially Preventable Complications is an MA display measure but is not a star measure in the QBP.
 - 19 When plans provide extra benefits financed either by rebate dollars or member premiums, the cost to the plan of providing the benefit includes an allowance for administration and profit (gain or loss margin). This “load” factor applies to benefits other than the Part B or Part D premium reductions. If, for example, a plan’s bid is \$100 below the benchmark and the plan is a 5-star plan, the plan must provide \$70 worth of extra benefits. If the plan decides that it will use the entire amount to reduce cost sharing for Medicare Part A and Part B services and the plan’s administration/profit level is 15 percent, the average amount of cost sharing reduction for beneficiaries will be 85 percent of \$70, or \$59.50.
 - 20 CMS initially limited the full effect of the PPACA payment reductions by providing additional payments to plans through an MA-wide demonstration project that used the QBP to provide extra payments to all plans at or above 3 stars from 2012 through 2014 (see the Commission’s March 2013 report to the Congress).

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CHAPTER

9

**Payment issues in
post-acute care**

Payment issues in post-acute care

Chapter summary

Post-acute care (PAC) providers—skilled nursing facilities (SNFs), home health agencies (HHAs), inpatient rehabilitation facilities (IRFs), and long-term care hospitals (LTCHs)—offer Medicare beneficiaries a wide range of skilled nursing and rehabilitation services. In 2016, about 43 percent of Medicare fee-for-service (FFS) patients discharged from an acute care hospital were discharged to PAC, and, in 2017, the program spent about \$60 billion across the four PAC settings.

Although similar patients can be treated in different PAC settings, Medicare’s FFS payments can vary substantially because Medicare uses separate prospective payment systems (PPSs) to pay for care in each setting. Further, because each setting uses its own assessment tool to evaluate patients, it has been difficult to compare across settings the patients treated and the outcomes they achieved. The addition of uniform items to these different assessments has helped to improve comparison efforts. The regulatory requirements PAC providers must meet also differ. HHAs and SNFs have setting-specific requirements, while IRFs and LTCHs, which are licensed as hospitals, must meet hospital requirements in addition to other setting-specific requirements. The need to align the requirements is important, but some could raise a provider’s costs, so it would be important to ensure that providers face, by and large, the same set of requirements under a new payment system, the unified PAC PPS.

In this chapter

- Background
- Evaluating an episode-based payment system for post-acute care
- Evaluating patient functional assessment data reported by post-acute care providers
- Aligning regulatory requirements across PAC providers

As mandated by the Congress, in June 2016, the Commission evaluated a prototype design and concluded that a unified PAC PPS would establish accurate payments and increase the equity of payments across conditions. Because the variation in profitability by clinical condition would be narrower compared with current payment policy, providers would have less incentive to selectively admit certain types of patients over others. Since 2016, the Commission has continued to examine financial and administrative issues regarding a unified PAC PPS, including the level of aggregate PAC spending on which to base payments (to ensure that Medicare's payments are adequate but not overly generous), the need for a transition from existing payment systems to the new one, the monitoring required to keep payments aligned with the cost of care, and a way to increase the equity of PAC payments under existing systems before a PAC PPS is implemented.

In its work to date on a unified PPS, the Commission has evaluated a design that would establish payments for each PAC stay. This chapter discusses three issues related to a PAC PPS. The first pertains to a system that uses an episode of PAC as the unit of service. The Commission evaluated an episode-based design and compared it with one that was stay based—that is, one that would pay for each PAC stay. An episode would include only PAC and exclude prior hospital stays, intervening hospital stays during the episode, and Part B services (such as physician and ancillary services) furnished during the episode. An episode-based PPS would encourage providers to furnish an efficient mix of PAC and dampen FFS incentives to furnish unnecessary PAC services within the episode.

However, given the overpayments for short episodes and underpayments for long ones that would likely result, some providers could respond in unintended ways that could impair access to high-quality care for beneficiaries. Past behavior suggests that some providers would respond to the financial incentives by avoiding beneficiaries who would likely require extended PAC and by basing treatment decisions (such as whom to admit and when to discharge or transfer a patient) on financial considerations rather than what is best for the beneficiary. An outlier policy could be designed to narrow the differences in profitability across episodes but would be unlikely to correct the large overpayments and underpayments based on episode length.

Having evaluated the tradeoffs between the two designs, the Commission favors pursuing a stay-based design as the initial strategy to better protect beneficiaries against undesirable provider behavior. Certain policies would dampen incentives under the stay-based design to furnish unnecessary PAC stays, including a PAC value-based purchasing program and a strengthened accountable care program.

Once a new PPS is adopted and practice patterns under the existing settings converge, CMS could consider an episode-based design.

A second issue involves PAC providers' recording of functional assessment data, which are used to establish care plans for patients, risk adjust payments, and measure quality of care. For years, the Commission urged the collection of uniform patient assessment information and the standardization of quality measures so patients and the providers treating them could be compared across PAC settings. The Improving Medicare Post-Acute Care Transformation Act of 2014 requires the Secretary to collect uniform patient assessment information, develop common quality measures, and report this information. These efforts are well underway.

However, recent analyses have led the Commission to question the current state of the functional assessment data. Because this information affects payments for some PAC providers and the calculation of certain quality metrics, providers have an incentive to report the information in ways that raise payments and appear to improve performance. We cite numerous examples of changes PAC providers have made in response to payment incentives; if providers similarly respond to financial incentives in how they report patients' function, the assessment data become of questionable value for payment, quality measurement, and care planning. To evaluate the quality of the functional assessment information, we examined the consistency of its reporting by PAC providers. In our analysis, we found that the same beneficiary discharged from one PAC setting and directly admitted to another PAC setting received substantially different functional assessment scores; that is, the score received at discharge was markedly different from the one received at admission to the second setting. To conduct this analysis, we sorted patients into broad function groups based on four activities of daily living. Although the patient groups were associated with severity of illness and other patient characteristics, the assessments for these patients were not consistent between two PAC providers. Further, there were large disagreements between assessment items used for payment and those used for quality reporting. Differences revealed how achieving certain scores would raise providers' payments and would show larger than warranted improvement in quality performance. The large differences and apparent bias in the reporting suggest these data must be improved to reliably capture meaningful differences among patients.

Our analyses and past experience with PAC providers responding to payment incentives raise questions about whether this information should be relied on for establishing payments. Even if the data appeared consistent, we question whether Medicare should base payments on a factor of care that is firmly in a provider's control. Though other administrative data, such as diagnosis information included

in claims data, are also provider reported and may be vulnerable to misreporting, patient functional status is more subjective and may be more difficult to audit. Still, maintaining and improving function is a key outcome measure for PAC providers, so improving the reporting of assessment data is desirable. We discuss possible strategies to improve the reporting of assessment data, the importance of monitoring the reporting of these data, and alternative measures of function that do not rely on provider-completed assessments.

The third issue involves differences in current requirements by PAC setting, and we discuss approaches for aligning these requirements. Because a unified PAC PPS would establish a common payment system, Medicare's existing setting-specific regulations would need to be aligned so that PAC providers face the same set of requirements for treating similar patients. The Commission suggests a two-tiered regulatory approach. All PAC providers would be required to meet a common set of requirements that would establish the basic provider competencies to treat the average PAC patient. Providers opting to treat patients with specialized or very high care needs—such as those who require ventilator support or high-cost wound care—would be required to meet a second tier of requirements that would vary by the specialized care need. For example, a single set of requirements, such as those related to treating patients on ventilators, would apply to all providers opting to treat a given special condition or care need. A provider opting to treat multiple complex conditions or special care needs would be required to meet each set of condition-specific requirements. This approach would be akin to licensing by service line and would shift the regulations from setting specific to patient focused. Medicare would periodically need to update the conditions assigned to the second tier to reflect changes in medical practice. The chapter also explores the changes that would be required to align coverage requirements across the PAC settings. ■

Background

Post-acute care (PAC) providers—skilled nursing facilities (SNFs), home health agencies (HHAs), inpatient rehabilitation facilities (IRFs), and long-term care hospitals (LTCHs)—offer Medicare beneficiaries a wide range of services, including recuperation and rehabilitation services and hospital-level care. In 2016, about 43 percent of Medicare fee-for-service (FFS) patients discharged from an acute care hospital were discharged to PAC, and the program spent about \$60 billion across the four PAC sectors. Although PAC providers can treat similar patients, Medicare’s FFS payments can differ substantially because the program uses separate prospective payment systems (PPSs) to pay for stays in each setting. The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT) requires the Commission to complete two reports on a unified payment system for PAC providers—one recommending features of a prospective payment system (PPS) and another detailing prototype features of a PAC PPS, due after the Secretary conducts his own analysis and makes recommendations to the Congress on a unified payment system.

In response, in June 2016, the Commission recommended features of a PAC PPS that used patient and stay characteristics to establish payments for PAC stays in the four PAC settings. Using readily available data, the Commission concluded that the design would establish accurate payments for most of the more than 40 patient groups it examined and would increase the equity of Medicare’s payments across providers. With smaller differences in profitability across conditions, providers would have less incentive to selectively admit certain types of patients over others.

Since its 2016 report, the Commission has continued to examine various issues regarding a PAC PPS, including the level of aggregate PAC spending to establish payments, the need for a transition to a fully implemented PPS, the monitoring required to keep payments aligned with the cost of care, and a way to increase the equity of PAC payments before a PAC PPS is implemented. Last year, the Commission’s work evaluating the accuracy of payments for a sequence of PAC stays led it to explore a PPS design that would establish payments for an episode of PAC.

The Commission also recommended that a value-based purchasing (VBP) policy for PAC be implemented to tie

payments to provider performance on measures of quality and resource use. A VBP policy would help counter the incentive to lower the quality of care furnished if doing so reduced a provider’s costs. Our recommended VBP design supports including a measure of resource use to dampen the FFS incentives to increase the volume of PAC stays.

Maintenance of or improvement in function is a goal for many beneficiaries receiving PAC. A patient’s functional status and changes in function are used to establish care plans for patients, risk adjust payments, and measure quality of care. Until recently, the patient assessment information collected in each setting differed, making it difficult to compare patients and outcomes. In addition to separate assessment tools, quality reporting requirements and measures differ by setting. For years, the Commission has urged the collection of uniform patient assessment information and the standardization of quality measures so patients and the providers treating them could be compared across PAC settings. IMPACT requires the Secretary to collect uniform patient assessment information, develop common quality measures, and report this information. These efforts are well underway.

Current regulatory requirements vary by setting. HHAs and SNFs must meet setting-specific requirements, while IRFs and LTCHs, being licensed as hospitals, must meet hospital requirements in addition to setting-specific rules. Because a unified PAC PPS would establish a common payment system, Medicare’s existing setting-specific regulations would need to be mostly aligned so that PAC providers face the same set of requirements and the associated costs of meeting them. Some differences would remain due to differences between institutional and noninstitutional care.

CMS has experimented with bundled payment for PAC, most recently with two demonstrations run by the Center for Medicare & Medicaid Innovation. Called the Bundled Payments for Care Improvement (BPCI) initiative and the Comprehensive Care for Joint Replacement (CCJR) model, these demonstrations make organizations responsible for total spending for and quality of an episode of care, thereby giving providers an incentive to reduce unnecessary care, coordinate with one another, and improve the quality of care beneficiaries receive (see text box on the BPCI initiative and the CCJR model, pp. 278–281). To meet the requirements of its own mandated report

Bundled Payments for Care Improvement initiative and the Comprehensive Care for Joint Replacement model

The Bundled Payments for Care Improvement (BPCI) initiative and the Comprehensive Care for Joint Replacement (CCJR) model use discrete events, such as a hospitalization for a knee replacement, to trigger episodes of care for which Medicare pays a bundled rate. Both are described below, along with summaries of the initial results regarding program spending, volume, and quality of care.

Overview of the BPCI initiative and the CCJR model

The BPCI initiative includes four models that began in 2013 and ended in 2018. The next generation of the initiative, the BPCI–Advanced (BPCI–A) initiative, began in 2018 and is scheduled to run through 2023. Because relatively few providers participated in Models 1 and 4, we focus on Models 2 and 3 and the BPCI–A initiative.

Episodes under Model 2 included the inpatient stay in an acute care hospital plus the post-acute care (PAC) and most other services covered under Medicare Part A and Part B up to 90 days after hospital discharge. Like all BPCI models, Model 2 was voluntary. Participants selected any of 48 clinical episode types to which Model 2 applied, including spinal fusions, acute myocardial infarctions, major joint replacements, and urinary tract infections. Under the demonstration, CMS paid fee-for-service (FFS) rates for each service furnished, and then, after each quarter, compared the total payments made for all services during the episode with a target price. The target price was based on each participating provider’s historical episode spending, with a small discount (e.g., 2 percent). When a participating provider’s episode payments fell below CMS’s target price, the provider received the difference between the target price and Medicare’s payments (up to a certain maximum). In contrast, if episode payments were higher than the target price, the participating provider was required to pay CMS the difference (up to a certain maximum).¹ For any given provider, the net reconciled amounts

could be positive (when a provider kept its spending below the target) or negative (when the provider’s spending exceeded the target).

BPCI Model 3 shared many characteristics with Model 2 (e.g., voluntary participation, retrospective reconciliation, and 48 clinical conditions). The largest differences between the models involved defining the terms of the bundled payment—the start of the period covered by the payment and the services it included. Episodes in Model 3 excluded the triggering hospital stay and began when a beneficiary was admitted to a PAC provider. As a result, most Model 2 providers were acute care hospitals and most Model 3 providers were PAC providers.

After Models 2 and 3 ended in 2018, CMS introduced the BPCI–A initiative. The BPCI–A initiative closely resembles Model 2, with a few key changes such as:

- the BPCI–A initiative includes 32 clinical episode types instead of the 48 under Model 2;
- the BPCI–A initiative includes 3 outpatient episode types, whereas Model 2 contained only inpatient episodes;
- the BPCI–A providers’ performance on quality measures affects payments, whereas Model 2 payments were not affected by quality measures;
- the BPCI–A initiative qualifies as an advanced alternative payment model (A–APM) for the purposes of the Quality Payment Program, whereas Model 2 did not; and
- other technical differences (e.g., target prices are provided prospectively to the BPCI–A initiative participants instead of at reconciliation and the BPCI–A initiative includes hospice spending).

Acute care hospitals and physician group practices can participate directly in the BPCI–A initiative; that is, they can enter into an agreement with CMS to participate in the model and bear risk. Other entities can participate as “convener participants.” A convener

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Bundled Payments for Care Improvement initiative and the Comprehensive Care for Joint Replacement model (cont.)

participant brings together multiple downstream entities, facilitates coordination among these entities, and bears and apportions financial risk under the model (a kind of subcapitation). Although PAC providers can participate as convener participants, as of January 2019, very few had chosen to do so. Instead, conveners tend to be health care systems, insurance companies (e.g., United Healthcare Services), and consulting firms specializing in managing bundled payments or PAC more broadly (e.g., naviHealth, Stryker Performance Solutions, Fusion5, and Remedy Partners) (Center for Medicare & Medicaid Innovation 2019).

The CCJR model is like the BPCI–A initiative in that the bundle includes the acute care hospitalization plus nearly all Part A and Part B spending 90 days postdischarge. However, in addition to technical differences, there are three substantial differences between the CCJR model and the BPCI–A initiative. First, the CCJR model is mandatory in 34 metropolitan statistical areas, and the BPCI–A initiative is voluntary. The CCJR model’s mandatory structure is critical to ensure CMS is able to assess its scalability and infer likely effects if the demonstration were expanded nationally. Second, the CCJR model applies to only one inpatient episode (lower extremity joint replacement), whereas the BPCI–A initiative includes 29 inpatient and 3 outpatient episode types. Third, under the CCJR model, only acute care hospitals can initiate an episode, and there is no “convener participant” role.

Preliminary CCJR model and BPCI initiative results

To date, evaluations from the first three years of BPCI Models 2 and 3 and the first two years of the CCJR model provide most of the insight regarding recent bundling programs that include PAC. For these models, we analyzed CMS-sponsored evaluations and peer-reviewed literature for three outcomes of interest—changes in Medicare spending (both per episode and net of reconciliation payments), volume changes, and quality outcomes. The robustness of the data on these outcomes varied across studies, and not all years covered by the

BPCI initiative or the CCJR model have been evaluated to date, so these results could change in the future.

Spending Over the first three years of BPCI Models 2 and 3, Medicare spending per episode declined, but after accounting for reconciliation payments made to participants, these models increased total Medicare spending. Medicare spending rose \$202 million under Model 2 and \$85 million under Model 3 (Dummit et al. 2018).²

For Model 2, reductions in Medicare payments totaled \$278 million (\$691 per episode) for hospital-initiated episodes and \$255 million (\$726 per episode) for those initiated by physician group practices (Dummit et al. 2018). These savings were offset by higher than expected reconciliation payments (\$736 million), resulting in a statistically significant net increase in Medicare spending of \$202 million (\$268 per episode) (Dummit et al. 2018). Net reconciliation payments to providers were higher than expected because CMS eliminated downside risk for part of the period covered by the current evaluations (meaning that providers whose actual spending exceeded their target price did not have to repay CMS). In the latter years of Models 2 and 3 and currently in the BPCI–A initiative, providers face two-sided risk, suggesting that these demonstrations could generate modest program savings in the future.

Reduced PAC spending was the primary driver of total savings per episode under Model 2. PAC savings were achieved by shifting beneficiaries away from institutional PAC settings (especially skilled nursing facilities (SNFs)), shortening SNF stays, and (for a few clinical episodes, such as knee and hip replacements and spinal fusions) reducing the share of beneficiaries discharged to any PAC setting. At the same time, the share of beneficiaries using home health increased, suggesting BPCI participants were able to shift some of their patients from SNFs to home health agencies (HHAs) (Dummit et al. 2018).

The effect of Model 3 (the PAC-initiated bundle) on Medicare spending was similar to the effect of

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Bundled Payments for Care Improvement initiative and the Comprehensive Care for Joint Replacement model (cont.)

Model 2. Model 3 generated savings across a variety of episodes, but the savings were outweighed by reconciliation payments, so that Medicare spending increased on net. Similar to Model 2, reductions in SNF spending drove the per episode savings, while HHA spending increased slightly.

The results from the first two years of the CCJR model were similar to those from the BPCI initiative, although the CCJR model appears to have generated small net program savings by the demonstration's second year. One study suggested that Medicare spending declined about 3 percent more per episode (\$812) relative to a control group for market areas included in the CCJR model (Barnett et al. 2019). After accounting for reconciliation payments to providers, Medicare spending fell \$212 per episode (0.7 percent) relative to the control group. Because the CCJR model qualifies as an A-APM, net savings could be further reduced to the extent that physicians qualified for a bonus under the Quality Payment

Program as a result of participating in the CCJR model. Similar to the BPCI initiative, researchers found that the CCJR model's savings were primarily driven by reductions in institutional PAC spending, particularly in SNFs and IRFs.

Volume Some researchers have expressed concern that while bundled payments give providers an incentive to reduce spending for the period and services covered by the bundle, providers could seek to generate additional bundles. Compared with traditional FFS, the incentive to generate additional volume could be stronger under the BPCI initiative and the CCJR model because providers are paid standard FFS rates plus any reconciliation amounts generated, making the services potentially more lucrative. Any such added volume could offset the modest program savings generated to date, potentially expose beneficiaries to any risk associated with unnecessary care, and increase beneficiary cost sharing.

(continued next page)

on a PAC PPS, the Department of Health and Human Services has convened an expert panel to gather input on design features of a PAC PPS.

Evaluating an episode-based payment system for post-acute care

The Commission evaluated a design for a PAC PPS that would establish payments for an episode of PAC. The episode would include only PAC and exclude prior hospital stays, intervening hospital stays during the episode, and all Part B services furnished during the episode. An episode-based PPS is intended to encourage providers to furnish an efficient mix of PAC and to dampen FFS incentives to furnish unnecessary PAC

services within the episode. The concern is that providers could respond by inappropriately shortening care, avoiding patients who are likely to require extended care, and transferring beneficiaries to other settings for financial rather than clinical reasons.

To begin this work, we updated a stay-based design using 2017 PAC stays. Then we aggregated sequential PAC stays into episodes and evaluated the accuracy and financial incentives of such a design and compared the advantages and drawbacks of an episode-based design (that includes back-to-back PAC stays) with a stay-based design. Given the potential risks to beneficiaries of an episode-based design, the Commission discussed possible near-term and longer term approaches and underscored the importance of concurrently implementing strategies that dampen the incentive for unnecessary volume.

Bundled Payments for Care Improvement initiative and the Comprehensive Care for Joint Replacement model (cont.)

However, to date, there is little evidence to suggest that the BPCI initiative or CCJR model has resulted in a higher volume of services. Of the 48 types of clinical episodes included in BPCI Models 2 and 3, many are nondiscretionary and unlikely susceptible to inducing volume. Therefore, research has focused on major joint replacements of the lower extremity (nonfracture) because providers have a greater ability to influence beneficiaries' decision to undergo these procedures relative to nonelective procedures. Despite their theoretical susceptibility to volume induction, CMS has found no evidence that markets with a large share of volume attributed to BPCI participants experienced differentially high volume growth (Dummit et al. 2018). Similarly, regarding induced volume, researchers examining the CCJR demonstration found no significant differential change in the per capita volume of hip or knee replacement episodes between the treatment areas and control areas after the CCJR model was implemented (Barnett et al. 2019).

Quality The BPCI initiative and the CCJR model did not appear to substantially affect the quality of care received by Medicare beneficiaries. Across multiple studies, the CCJR model was found not to significantly affect quality metrics—including rates of readmissions, complications (e.g., surgical infection rates), emergency department visits, and mortality—over the first two years of the program (Barnett et al. 2019, Dummit et al. 2018, Finkelstein et al. 2018). Similarly, for Model 2, there were few statistically significant changes in mortality, emergency department visits, readmissions, or functional status, but beneficiaries had slightly less favorable views of care experiences and less satisfaction. Model 3 had the least positive quality results, with the evidence suggesting limited but generally mixed results. For example, there was some evidence that beneficiaries had less improvement in functional status and reported less favorable care experiences (Dummit et al. 2018). ■

The advantages and drawbacks of an episode-based PAC PPS

Under an episode-based approach to PAC payment, a single payment would be established under a PAC PPS to pay for a course of PAC (care furnished in one or more PAC settings by one or more providers). Payment for the episode would be based on the average cost of the PAC furnished during the episode.

Paying for an episode of care would have several advantages. First, compared with a stay-based design, an episode-based design would dampen the incentives to generate unnecessary care. Rather than furnish more stays to generate revenue, providers would have an incentive to furnish an efficient mix of PAC that meets a beneficiary's care needs. Second, as regulatory requirements become aligned under a PAC PPS, institutional providers (SNFs, IRFs, and LTCHs) would have the flexibility to offer a

continuum of services to beneficiaries whose care needs evolve over time. Beneficiaries would be less likely to experience poorly coordinated care, especially if institutional PAC providers treated a broad mix of care needs.³ Last, paying a provider by PAC episode rather than by PAC stay would align the unit of service with how PAC providers offering a continuum of services would furnish care.

However, episode-based payments could result in providers furnishing fewer services than medically appropriate. Because a PPS is a system of averages, an episode-based design will likely overpay for short episodes and underpay for long ones. Providers would have a financial incentive to shorten episodes and furnish fewer services, even needed services, if such stinting on care were undetectable by quality metrics that gauge provider performance. Providers would also have an incentive to avoid patients whose need for extended care

The Commission's recommended design features of a stay-based post-acute care prospective payment system

In its June 2016 report to the Congress, the Commission recommended the following features of a post-acute care prospective payment system design:

- a uniform unit of service;
- a uniform method of risk adjustment that relies on administrative data on patient and stay characteristics;
- two payment models (one for routine and therapy services and another one for nontherapy ancillary services, such as drugs) to reflect differences in benefits across settings; sum of the two payments establish the total payment for the stay;
- adjustment of payments for home health stays to prevent considerable overpayment;
- a high-cost outlier policy to protect providers from incurring large losses and help ensure beneficiary access to care; and
- a short-stay outlier policy to prevent large overpayments for unusually short stays. ■

was not adequately reflected in the risk adjustment model. In addition, with more dollars at stake, episode-based payments could encourage providers to initiate more PAC episodes. Compared with a stay-based design, this risk would be lower since the decision to initiate PAC is not made by the PAC provider, whereas PAC providers, in consultation with a patient's physician, decide whether to extend PAC.

The incentives for PAC providers and the administrative infrastructure they would need to implement an episode-based payment system depends in part on how such a payment would be made when multiple providers were involved in the episode. (About one-third of PAC consists of sequential PAC stays (Medicare Payment Advisory Commission 2018b).) CMS could apportion a single payment across multiple providers based on the share of total episode costs incurred by each provider. Each provider would have limited control over the care it does not furnish, yet its final payment would be some portion of the total episode payment. Alternatively, CMS could pay a single entity for the care, perhaps the first PAC provider, and this provider would be at risk for all downstream PAC. Because many PAC providers are small and would not have the infrastructure to set or make payments to other providers, we have assumed for our analyses the first arrangement. Paying hospitals for the PAC episode is not a viable option since the majority of PAC is not preceded by a hospitalization.

Updated analysis of a stay-based PAC PPS using 2017 PAC stays

Our work comparing stay-based and episode-based designs updates our PAC PPS stay-based design using 2017 PAC stays to reflect more current practice patterns and case mix (see text box on estimating costs and payments, pp. 290–295).⁴ Like our previous work, the analyses include PAC admissions to the four settings, regardless of whether there was a preceding hospital stay. These assumptions are consistent with the original congressional request in IMPACT and with current Medicare coverage rules.

The effects we estimate reflect providers' responses to existing policies. When the anticipated changes to the SNF and HHA PPSs are implemented (October 2019 for the SNF PPS, January 2020 for the HHA PPS), the estimated effects of a PAC PPS will differ from those we modeled. Because the proposed designs for both PPSs rely on patient characteristics to establish payments, we expect their effects to be directionally consistent with those of a unified PAC PPS. Likewise, when a PAC PPS is implemented, we expect it to have smaller but directionally similar effects because the setting-specific PPSs would have already had some of the same effects. Our examination of the effects also does not consider the key role hospital discharge planners play in guiding beneficiaries' decisions about where to seek PAC.

Although a unified PPS is likely to change providers' financial incentives, these may or may not affect how placement decisions get made.

The model incorporates the design features recommended by the Commission (see text box on recommended design features). Most importantly, payments for stays are adjusted to reflect the patient's and stay's characteristics but do not adjust payments for service use. The level of payments for home health care stays are adjusted to account for this setting's considerably lower costs compared with institutional PAC. All adjusters are based on readily available administrative data.

The more recent 2017 data reflect several trends in PAC: a shift toward the use of home health care and away from SNF care, a narrowing of differences between hospital-based and freestanding SNFs in therapy practices, changes in the type of cases treated in IRFs as they adapt to new compliance requirements, and the implementation of the dual payment-rate structure in LTCHs.⁵ We compared the results using 2017 PAC stays with our previously reported results for 2013 stays, examining the overall accuracy of the model, the alignment of payments and costs, and the level of payments compared with the cost of care (Medicare Payment Advisory Commission 2017a, Medicare Payment Advisory Commission 2016a).

Consistent with previous results, we found that the level of current payments for PAC stays is high compared with the cost to treat beneficiaries (11 percent higher); the average PAC PPS payment-to-cost ratio (PCR) is 1.11. A stay-based design would establish accurate payments for most of the more than 40 patient groups we examined and would increase the equity of payments across conditions (Table 9-1, pp. 284–285).⁶ The increased equity of payments under a PAC PPS is seen in the narrower range of PCRs compared with the PCRs under current policy. Across the clinical groupings, the PCRs under the current policy range from 0.99 (for severe wound stays) to 1.20 (for other neurology medical stays, such as patients with Parkinson's disease). In contrast, under a PAC PPS, the ratios range from 1.05 (hematology medical) to 1.16 (patients on ventilators). With a narrower range in the profitability of treating different conditions, providers would be less likely to selectively admit some beneficiaries and avoid others. Notably, a PAC PPS would redistribute payments from stays that included high amounts of therapy not predicted by the patients' clinical characteristics (such as the least frail beneficiaries, who receive unusually high amounts of amounts of therapy) to

patients with high care needs (such as patients who have the highest level of severity or who have severe wounds).

We expected that the average predicted costs for stays with low and high shares of therapy costs would be considerably different from these stays' average actual costs. For patients who receive high amounts of therapy services unrelated to their care needs, we expected and found that our model would predict costs that, on average, are lower than actual costs (since the amount of therapy received may have little relationship to the patients' diagnoses and comorbidities). Conversely, for patients who receive low amounts of therapy (such as medical patients with multiple comorbidities), we expected and found that our model predicted costs that are higher than actual costs. Over time, under a PAC PPS, we would expect these ratios to move toward 1.0 as providers changed their therapy practices (and costs) to match patients' care needs.

There were generally two reasons for results that differed from those previously reported. First, some definitions of risk adjusters and reporting groups were refined to more closely describe the characteristics of patients in the group. For example, we narrowed our definition of patients on ventilators to include only those receiving invasive ventilator care (in which the beneficiary has had a tracheostomy). Since 2013, the use of noninvasive ventilator care (in which the patient wears a mask or a shell for ventilator support) increased substantially (Office of Inspector General 2018). We wanted the ventilator group to focus on patients with specialized care needs. As a result, this group of patients now is almost exclusively treated in LTCHs, and the PAC PPS payments are no longer lowered by the averaging with lower cost settings. Second, between 2013 and 2017, the mixes of settings where the patients were treated shifted. For example, payments for respiratory medical stays increased an estimated 1 percent (compared with a previous estimate of 5 percent) because more of these stays were treated in HHAs, which lowered their predicted cost and hence the PAC PPS payments.

Consistent with prior results, payments under a PAC PPS would be redistributed across settings. These results are to be expected when moving from setting-specific PPSs to a unified one, and they do not warrant correction. Payments to HHAs would decrease compared with current payments because the current HHA PPS payments are very high relative to the cost of care. Yet even with the estimated 5 percent reduction, PAC PPS payments would remain 12 percent higher than the costs of home health

**TABLE
9-1**

Compared with current policy, payments under the stay-based option for a proposed PAC PPS would be more accurate and equitable for most patient groups (2017 PAC stays) (continued next page)

Reporting group	Share of stays	Payment-to-cost ratio		Percent change in payments between PAC PPS and current payments
		Under existing policy	Under PAC PPS	
All	100%	1.11	1.11	0%
Clinical group				
Cardiovascular medical	15	1.11	1.11	0
Orthopedic medical	13	1.19	1.12	-6
Other neurology medical	10	1.20	1.12	-6
Serious mental illness	9	1.13	1.12	0
Respiratory medical	9	1.09	1.10	1
Orthopedic surgical	8	1.11	1.12	0
Severe wound	5	0.99	1.12	13
Skin medical	3	1.08	1.12	4
Cardiovascular surgical	3	1.07	1.10	3
Infection medical	4	1.09	1.10	1
Stroke	2	1.09	1.10	1
Hematology medical	1	1.12	1.05	-7
Ventilator	0	1.16	1.16	0
Frailty				
Least frail	24	1.19	1.12	-6
Most frail	22	1.08	1.11	2
Cognitively impaired	19	1.14	1.12	-3
Medically complex				
Multiple body system diagnoses	9	1.06	1.11	4
Severely ill	5	1.06	1.11	4

Note: PAC (post-acute care), PPS (prospective payment system), HHA (home health agency), I-PAC (institutional post-acute care), ESRD (end-stage renal disease), SNF (skilled nursing facility), IRF (inpatient rehabilitation facility), LTCH (long-term care hospital). Analysis includes stays that were part of episodes of PAC that began between January 1, 2017, and June 30, 2017. The table shows the ratios of average payments in 2017 to average costs in 2017 for all the PAC stays included in the group and the ratios of estimated payments under a PAC PPS to average costs in 2017 for all the PAC stays in each group. A payment-to-cost ratio of 1.0 indicates that payments equal the actual costs. "Stays meeting the LTCH criteria" refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 for the standard LTCH PPS rate. Patients' level of frailty was determined using the JEN Frailty Index. "Multiple body system diagnoses" includes patients with diagnoses involving five or more body systems. "Severely ill" stays include patients who were categorized as severity of illness Level 4 and received I-PAC. "Chronically critically ill" stays include patients who spent eight or more days in an intensive care or coronary care unit during the preceding hospital stay or were on a ventilator in the PAC setting. Analysis includes 4.7 million PAC stays in 2017. The percent of stays do not sum to 100 because small groups are not shown. The "percent change" column was calculated using unrounded data.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

stays. Payments would decline for LTCHs and IRFs largely because PAC PPS payments would be based on the average cost of stays across the PAC settings, and many of the types of cases treated in IRFs and LTCHs are also treated in lower cost settings. Because the payments for cases treated in LTCHs that do not meet the LTCH criteria were already significantly reduced in 2017 (they are paid

under the inpatient hospital PPS), payments under a PAC PPS affect them less than cases qualifying for LTCH payments.

Episode-based PAC PPS payments

To test the feasibility of an episode-based design, we analyzed episodes of a typical length, spanning a single

**TABLE
9-1**

Compared with current policy, payments under the stay-based option for a proposed PAC PPS would be more accurate and equitable for most patient groups (2017 PAC stays) (continued)

Reporting group	Share of stays	Payment-to-cost ratio		Percent change in payments between PAC PPS and current payments
		Under existing policy	Under PAC PPS	
Chronically critically ill	4	1.09	1.10	1
Other stay and patient characteristics				
Low/no therapy share of costs				
HHA stays	29	1.22	1.59	30
I-PAC stays	7	0.93	1.05	13
High therapy share of costs				
HHA stays	18	1.36	1.01	-26
I-PAC stays	7	1.20	1.11	-8
Community admitted	55	1.17	1.11	-5
Stays with prior hospital stay	45	1.09	1.11	2
Disabled	26	1.10	1.11	1
Dual eligible	30	1.14	1.11	-2
ESRD	4	1.07	1.10	2
Very old (85+ years old)	30	1.13	1.11	-1
Setting and provider characteristics				
HHA	74	1.18	1.12	-5
SNF	21	1.09	1.18	9
IRF	4	1.11	0.94	-15
LTCH: All stays	1	0.97	0.91	-7
LTCH: Stays meeting LTCH criteria	1	1.07	0.98	-8
Hospital based				
Freestanding	9	0.87	0.91	5
Freestanding				
Nonprofit	91	-1	1.14	-1
Nonprofit				
For profit	21	8	1.05	8
For profit				
	76	-2	1.14	-2

Note: PAC (post-acute care), PPS (prospective payment system), HHA (home health agency), I-PAC (institutional post-acute care), ESRD (end-stage renal disease), SNF (skilled nursing facility), IRF (inpatient rehabilitation facility), LTCH (long-term care hospital). Analysis includes stays that were part of episodes of PAC that began between January 1, 2017, and June 30, 2017. The table shows the ratios of average payments in 2017 to average costs in 2017 for all the PAC stays included in the group and the ratios of estimated payments under a PAC PPS to average costs in 2017 for all the PAC stays in each group. A payment-to-cost ratio of 1.0 indicates that payments equal the actual costs. "Stays meeting the LTCH criteria" refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 for the standard LTCH PPS rate. Patients' level of frailty was determined using the JEN Frailty Index. "Multiple body system diagnoses" includes patients with diagnoses involving five or more body systems. "Severely ill" stays include patients who were categorized as severity of illness Level 4 and received I-PAC. "Chronically critically ill" stays include patients who spent eight or more days in an intensive care or coronary care unit during the preceding hospital stay or were on a ventilator in the PAC setting. Analysis includes 4.7 million PAC stays in 2017. The percent of stays do not sum to 100 because small groups are not shown. The "percent change" column was calculated using unrounded data.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

stay or consecutive pair of PAC stays. We found that an episode-based design would establish accurate payments for almost all the patient groups we examined. However, across these episodes, there were large differences in how long the episodes lasted, and their profitability varied considerably by episode duration. We found

that the average PAC PPS payments for relatively short episodes would be more than twice their average cost; conversely, PAC PPS payments would not cover the cost of relatively long episodes. Given that PAC providers have been highly responsive to changes in payment policy, it is likely that differences in profitability would result in

**TABLE
9-2**

The 10 most frequent episodes comprise single and pairs of PAC stays, 2017

Sequence of PAC	Count	Percent
H	1,025,589	44%
HH	482,006	21
S	362,346	15
SH	213,897	9
HS	63,675	3
IH	58,768	3
I	41,589	2
SS	28,718	1
IS	18,677	1
L	15,143	1
Other	39,110	2

Note: PAC (post-acute care), H (home health stay), S (skilled nursing facility stay), I (inpatient rehabilitation facility stay), L (long-term care hospital stay). Sequences include a single standard stay or pair and exclude unusually short stays. A sequence shows the order and setting of the stays in the episode. For example, "SH" refers to an episode that starts with a skilled nursing facility stay followed by a home health stay. Pairs of stays include episodes with only two standard (and no unusually short) stays and the first two standard stays of episodes that included at least three standard stays (and no unusually short stays). Analysis includes 2.3 million PAC episodes that began between January 1, 2017, and June 30, 2017. The percent column does not sum to 100 due to the other stay combinations.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

providers shortening how long they treat beneficiaries, avoiding beneficiaries who are likely to require extended periods of service, and transferring beneficiaries based on financial considerations rather than what would be best for beneficiaries. Depending on how a single payment would be prorated when multiple providers treated a beneficiary, a provider could make transfer decisions based on financial rather than medical considerations. An outlier pool could narrow, but would be unlikely to correct, the overpayments and underpayments.

Approach to test an episode-based PAC PPS

The majority of beneficiaries who use PAC receive care once in one setting, such as a sole home health or SNF stay. However, about one-third of PAC is furnished to beneficiaries who receive multiple PAC services, in one or more settings. Building on our experience analyzing sequential PAC stays, we created episodes by aggregating individual PAC stays that occurred within seven days of each other. This rule is a rough proxy for clinical relatedness while allowing some flexibility in how quickly home health care can be arranged (transfers between institutional PAC settings typically occur with no days in between the stays). We used beneficiary identifiers and dates to link sequences of PAC stays together.⁷ An

episode began with a PAC stay that was not preceded by other PAC use within seven days. A prior hospital stay was not required to begin a PAC episode because Medicare coverage for stays in HHAs, IRFs, and LTCHs does not require a prior hospitalization.

Given the numerous stay combinations, we assessed the feasibility of an episode-based payment by analyzing episodes comprising single "standard" PAC stays and pairs of standard PAC stays, which combined made up 69 percent of all PAC stays. (*Pair of stays* refers to a sequence of stays in which the patient is discharged from one PAC provider and is admitted directly to another PAC provider.) Standard stays exclude unusually short stays that would be paid under a short-stay policy. If a sequence of PAC stays included at least three standard stays and no unusually short stays, we included the first two in our analysis and omitted the remaining stays. The final sample included 2.3 million episodes constructed from 3.3 million stays.

Compared with longer episodes that include many stays, episode-based PAC PPS payments for episodes that include only single PAC stays and pairs of PAC stays are likely to be more accurate because there are smaller differences in the predicted costs across the episodes due to the narrower variation in how long the episodes last.

We show results for different single and pair combinations (such as a single home health stay vs. a pair) and for relatively short, medium, and long episodes.

Of the episodes included in the analysis (singles and pairs), single PAC stays made up 62 percent and pairs of stays made up 38 percent (Table 9-2). Pair episodes included lateral stays in the same setting (most frequently, back-to-back home health stays) and stays in different settings (most frequently, a SNF stay followed by a home health stay). Of the pairs, the majority (57 percent) were lateral stays, 34 percent were transfers to a less intensive setting, and 9 percent were transfers to a more intensive setting.⁸

To examine the effects of a PAC PPS by episode duration, we assigned episodes to three groups based on length of stay (for institutional PAC) and number of visits (for home health care). Relatively short episodes were those in the bottom third of each distribution; relatively long episodes were those in the top third of the distributions. Mixed episodes, which included both home health care and institutional PAC, were assigned to three groups based on their rank in both institutional PAC length of stay and number of home health visits among those with mixed episodes. Short home health episodes averaged 8 visits compared with 45 visits for long home health episodes. Short institutional PAC episodes averaged 13 days, while long institutional PAC episodes lasted 65 days.

Each episode's costs and payments were estimated as described in the text box on methodology (pp. 290–295). When analyzing the results by the type of episode (e.g., a relatively long episode), we considered care furnished by any institutional PAC provider as a single institutional PAC provider to reflect how a PAC PPS would pay for this care. The PAC PPS would ignore differences among institutional settings in establishing payments for these providers and separately adjust payments for home health stays to align payments to the considerably lower costs of this setting.

Results of an episode-based PAC PPS

Like a stay-based PAC PPS, an episode-based PAC PPS would establish accurate payments for most of the almost 40 patient groups we examined and would increase the equity of payments across conditions (Table 9-3, p. 288).⁹ Episode-based payments would be more closely aligned with their average cost compared with current policy. Across the clinical groupings shown, PCRs would range from 1.11 to 1.16 for an episode-based PAC PPS compared with 1.01 to 1.20 under current policy.

Because the range in profitability would be narrower compared with current policy, providers would be less likely to preferentially admit patients with certain clinical conditions and avoid others.

Because we set aggregate PAC PPS payments to be budget neutral relative to current payments, payments under an episode-based approach would be well above the cost of care (12 percent higher).¹⁰ Lowering the level of total spending (that is, not making an episode-based PAC PPS budget neutral) would be consistent with recommendations made by the Commission over many years to lower PAC payments. Like a stay-based PPS, an episode-based approach would redistribute payments from episodes that include high amounts of therapy not predicted by the patients' clinical characteristics to episodes for patients with high care needs. For example, payments would decrease 7 percent for orthopedic medical cases and would increase 12 percent for patients who had severe wounds.

An episode-based PAC PPS (even for these single and pairs of stays) would have very different effects, depending on the duration of the episode (Table 9-4, p. 289). Relatively short episodes would be highly profitable, and relatively long episodes would be unprofitable, especially for episodes that included only home health care or only institutional PAC. Payments for short episodes would be more than double their cost (the PCRs were 2.48 for short home health episodes and 2.07 for short institutional PAC episodes). Conversely, payments would be about three-quarters of the cost of long home health or institutional PAC episodes (the PCRs were 0.72 and 0.76, respectively). Because mixed episodes (those with home health care and institutional PAC) involve averaging the higher cost of institutional PAC and the lower cost of home health care, payments for them are more aligned to their costs. We do not see similar overpayment or underpayment by clinical condition or patient characteristic, factors included in the risk adjustment. These groups include a mix of short and long episodes, and the differences in profitability average out across the episodes within the groups.

The large differences in profitability could influence provider behavior. To the extent that providers could anticipate the duration of a PAC episode, an episode-based approach could encourage providers to selectively admit beneficiaries likely to have short episodes and avoid those likely to require long episodes. Similarly, since providers could control how long an episode lasted and the care they furnished within the episode parameters, the approach

**TABLE
9-3**

Compared with current policy, under the episode-based option for a proposed PAC PPS, payments would be more accurate and equitable for most patient groups (2017 PAC stays)

Reporting group	Payment-to-cost ratio		Percent change in payment	Share of episodes
	Under existing policy	Under PAC PPS		
All	1.12	1.12	0%	100%
Clinical group				
Orthopedic medical	1.20	1.11	-7	14
Cardiovascular medical	1.12	1.11	0	13
Orthopedic surgical	1.12	1.12	-1	12
Other neurology medical	1.20	1.12	-7	9
Respiratory medical	1.10	1.12	2	9
Serious mental illness	1.14	1.15	1	9
Infection medical	1.10	1.12	2	4
Severe wound	1.01	1.13	12	4
Skin medical	1.09	1.13	4	3
Cardiovascular surgical	1.08	1.13	5	3
Stroke	1.09	1.13	4	2
Hematology medical	1.12	1.11	0	1
Ventilator	1.17	1.16	-1	<1
Frailty				
Least frail	1.23	1.13	-8	21
Most frail	1.09	1.13	3	28
Cognitively impaired	1.15	1.12	-3	21
Medically complex				
Severely ill	1.08	1.13	5	6
Multiple body system diagnoses	1.08	1.14	6	11
Chronically critically ill	1.10	1.12	2	5
Other patient characteristics				
Disabled	1.11	1.13	1	24
Dual eligible	1.15	1.11	-4	29
ESRD	1.08	1.12	3	4
Very old	1.14	1.11	-2	31

Note: PAC (post-acute care), PPS (prospective payment system), ESRD (end-stage renal disease). A payment-to-cost ratio of 1.0 indicates that the average predicted cost is equal to the average actual costs and that the model would establish accurate relative weights for a payment system. Patients' level of frailty was determined using the JEN Frailty Index. "Multiple body system diagnoses" includes patients with diagnoses involving five or more body systems who were treated in institutional PAC settings. "Chronically critically ill" stays include patients who spent eight or more days in an intensive care or coronary care unit during the preceding hospital stay or were on a ventilator in the PAC setting. "Severely ill" stays include patients who were categorized as severity of illness Level 4 based on their first I-PAC stay. Analysis includes 2.3 million PAC episodes that began between January 1, 2017, and June 30, 2017.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

could result in premature discharges or stinting on care for beneficiaries whose care needs were extensive. That said, the results for the patient groups indicate that, on average, payments would be more than adequate. Like any PPS, payments for any given patient would differ from the

average but across all the patients would, on average, be adequate. However, the averaging required to balance out the underpayments and overpayments for long and short episodes would be far riskier for small providers.

**TABLE
9-4**

The episode-based option for a proposed PAC PPS would result in large underpayments and overpayments, depending on the episode length (2017 PAC stays)

Reporting group	Payment-to-cost ratio		Percent change in payment	Share of episodes
	Under existing policy	Under PAC PPS		
All	1.12	1.12	0%	100%
Episode type				
All home health episodes	1.21	1.12	-8	64
Short	1.80	2.48	38	22
Medium	1.30	1.28	-1	22
Long	1.03	0.72	-30	21
All I-PAC episodes	1.09	1.12	3	21
Short	1.01	2.07	106	7
Medium	1.05	1.32	26	7
Long	1.14	0.76	-33	7
All mixed episodes	1.09	1.12	3	15
Short	1.11	1.50	36	5
Medium	1.09	1.13	4	5
Long	1.09	0.92	-16	5
Provider characteristic				
All hospital based	0.87	1.02	17	9
Mixed (hospital based and freestanding)	0.97	0.93	-4	4
All freestanding	1.16	1.15	-1	88
All nonprofit	0.99	1.14	14	21
All for profit	1.18	1.14	-3	70
All government	1.00	1.08	9	2
Mixed ownership	1.05	1.03	-2	6

Note: PAC (post-acute care), PPS (prospective payment system), I-PAC (institutional PAC). A payment-to-cost ratio of 1.0 indicates that the average predicted cost is equal to the average actual costs and that the model would establish accurate relative weights for a payment system. Episodes were divided into "short," "medium," and "long" based on the duration of the episode. For home health-only episodes, these categories refer to the episodes in the bottom, middle, and top third of number of visits. For I-PAC-only episodes, the categories are based on the rank of days spanned by the episode. For mixed episodes, the categories are based on the combined ranks of the number of visits and days of the episode. Mixed episodes include a home health stay and an I-PAC stay. Analysis includes 2017 PAC episodes that began between January 1, 2017, and June 30, 2017. Components may not sum to totals due to rounding.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

Consistent with a stay-based PPS design, an episode-based PAC PPS would redistribute payments across providers based on the mix of episodes they treated. Compared with current policy, payments would increase for hospital-based providers and nonprofit providers and decrease for freestanding providers and for-profit providers.

Episodes that are longer than those we examined (such as those comprising three or more sequential home health stays) are more likely to result in larger differences in

profitability across episodes. The averaging involved in setting a single payment for episodes that span even larger differences in length (and their associated costs) is likely to result in even larger overpayments for short episodes and underpayments for long ones.

A single outlier pool would target payments to the highest cost episodes

The provision of a single outlier pool would be one way to dampen the effects of an episode-based PAC PPS on

Methodology to estimate the costs and payments of post-acute care stays and episodes

To create episodes of post-acute care (PAC), we began with 8.3 million PAC stays in 2017. Of these, we combined 257,000 observations with a prior stay because they appeared to be either partial skilled nursing facility (SNF) or home health stays. We excluded beneficiaries who had managed care coverage, had missing data, or lived in Puerto Rico. We also excluded beneficiaries with overlapping start and end dates for institutional PAC stays, with institutional stays whose end dates overlapped with home health episodes, or with duplicate start dates for stays or episodes. Home health stays with end dates that overlapped with institutional PAC stay dates remained in the analysis because a beneficiary could end a home health care episode and enter into an institutional PAC setting before the end of the 60-day home health episode. A beneficiary's separate SNF claims were aggregated to create a stay. We included stays that were part of episodes that were initiated between January 1, 2017, and June 30, 2017, to ensure that most episodes were completed in 2017. The resulting sample was 4.7 million stays.

Creating episodes

Building on our experience analyzing sequential PAC stays, we created episodes by aggregating individual PAC stays that occurred within seven days of each other (Medicare Payment Advisory Commission 2018b). This rule was a rough proxy for the clinical relatedness while allowing some flexibility in how quickly home health care can be arranged (in contrast, stays that included transfers between institutional PAC settings typically occur with no days in between the stays). Episodes could include any combination of home health or institutional PAC. We used beneficiary identifiers and admission and discharge dates to link sequences of PAC stays together. An episode began with a PAC stay that was not preceded by other PAC use within seven days; a prior hospital stay was not required to begin a PAC episode. Episodes varied from a single PAC stay to more than six consecutive stays.

The stays in the episode analysis included single PAC stays and pairs of PAC stays, which made up 69 percent of the 4.7 million PAC stays in our sample. In addition, the following cases were excluded from the episode analyses:

- episodes in which one of the first two stays was unusually short, such as home health stays that qualified for a low utilization payment adjustment;¹¹
- later stays in an episode of care. Our analysis used episodes constructed from the first pair of stays.

The sample resulting from these exclusions totaled 3.3 million stays and 2.3 million episodes. We separately examined pairs of stays that are part of a longer episode and episodes consisting of only a pair of stays (terminal pairs). We found few differences in the results and did not report the groups separately.

Billing rules in place in 2017 govern what constitutes a stay, and our analysis did not alter stay definitions. Given the separate PPSs for each of the four settings, differences exist among settings in how intervening events, such as hospitalizations, define stays. In SNFs, for example, stays interrupted by a hospitalization are considered separate stays, while home health episodes continue after an intervening hospitalization. An interrupted stay in inpatient rehabilitation facilities (IRFs) and long-term care hospitals (LTCHs) can trigger a separate stay, depending on the length of the interruption and the intervening event.¹² In the future, when a common set of requirements is developed for PAC providers' participation, billing rules and the treatment of interrupted stays could be defined uniformly.

Estimating the cost of stays and episodes

To estimate the costs of each stay, we used information from 2017 claims and 2017 Medicare cost reports. For each institutional PAC claim, therapy and nontherapy costs were estimated by converting charges to costs using department-specific charge-to-cost ratios

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Methodology to estimate the costs and payments of post-acute care stays and episodes (cont.)

calculated from the provider's cost reports. Routine costs for institutional PAC stays were estimated by calculating the average routine cost per day from the provider's cost report and multiplying that amount by the length of the stay. The costs of routine home health visits are reported in the cost reports filed by home health agencies (HHAs). To arrive at the average cost of stays, we averaged the costs to treat stays across the four settings, weighted by the volume of stays treated in each setting. To estimate the cost of an episode, we summed the costs of stays included in the episode.

Estimating payments

Payments under each setting's current PPS ("actual payments") were gathered from PAC claims. To estimate payments under a PAC PPS, the design relies on models that predict the cost of each stay using patient and stay characteristics. Characteristics marked with an asterisk in the following list were taken from the hospital claim when there was a preceding hospital stay and proxied from PAC claims for stays without a preceding hospitalization. The risk adjustment would be improved with the inclusion of comorbidities from a longer period of time before the PAC stays. However, this adjustment would require CMS to use a much larger set of information to establish the payment for each stay. The risk score reflects the diagnoses gathered from inpatient, outpatient, and physician claims during the prior year (2016).

The following patient and stay information was used to predict the cost of each stay. The factors are intended to evaluate whether a PAC PPS design is feasible, not to specify the exact risk adjustment the design should include:

- patient age and disability status;
- primary reason to treat (Medicare severity–diagnosis related groups (MS–DRGs), aggregated into the broad "reason to treat" groups)*;
- patient comorbidities (using both the hospital and PAC stay claims);

- days spent in the intensive and coronary care units during the prior hospital stay;
- the patient's severity of illness using the all-patient refined–diagnosis related groups (APR–DRGs)*;
- the number of body systems involved in the patient's comorbidities (using both hospital and PAC claims);
- patient's risk score;
- a JEN Frailty Index (using both hospital and PAC claims);
- patient's cognitive status (using both hospital and PAC claims); and
- other aspects of care (bowel incontinence, severe wounds or pressure ulcers, use of certain high-cost service items, and difficulty swallowing) (PAC claim).¹³

We used these factors to attempt to capture different dimensions of a patient that could influence the cost of care without creating adverse or unintended consequences for beneficiaries. The Secretary could consider these or other measures in the risk adjustment included in the final design. For example, we included measures of frailty (using the JEN Frailty Index), but a similar constellation of comorbidities aimed at capturing a beneficiary's impairments could be used. All risk adjusters were based on administrative data (claims, Medicare Advantage risk scores, and beneficiary enrollment information) and did not use patient assessment information.

In the analysis updating the stay-based design, a home health indicator was included in all models to account for this setting's considerably lower costs compared with institutional PAC. Without this adjustment, home health providers would be substantially overpaid and the institutional PAC providers would be substantially underpaid compared with the cost of care. In the stay analysis, the adjuster is applied to each stay. In the episode analysis, we included two adjusters: one

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Methodology to estimate the costs and payments of post-acute care stays and episodes (cont.)

indicating whether an episode comprised only home health stays (either a single stay or pair of stays) and a second indicating whether the episode was a mix of home health and institutional PAC. These adjusters ensure that the level of payments would be aligned with the cost of care but do not directly adjust for whether the episode was a single stay or pair of stays.

In the stay-based analysis, we used Poisson regression models and developed one model to predict the costs of routine and therapy care for stays in the four PAC settings and a separate model to predict nontherapy ancillary (NTA) costs for stays in SNFs, IRFs, and LTCHs. We developed a separate model for NTA services because the home health care benefit does not cover these services. In the episode-based design, we estimated a model of routine and therapy costs per episode using the episodes constructed from the initial pair of stays and home health episodes. The model for NTA services was based on constructed episodes in which at least one of the initial stays was in an institutional setting.

All payments under a PAC PPS were adjusted for budget neutrality so that total payments across the four settings were the same as under the current payment systems. In the episode-based design, budget neutrality was based on the episodes that include single and pairs of stays. However, the design does not adjust for cost differences across institutional settings.

The design includes an illustrative high-cost outlier policy for unusually high-cost stays and episodes. In principle, high-cost outlier policies protect providers from incurring exceptionally large losses from treating unusually high-cost patients and help ensure beneficiary access to services. In the stay analysis, we established separate outlier pools for stays treated in HHAs and those treated in institutional PAC settings. The episode analysis includes a third pool for episodes that include an HHA and an institutional PAC stay. Each pool was set at 5 percent of spending and paid for 80 percent of the difference between the estimate's cost of the episode and the outlier threshold. We compared

these results with a single 5 percent outlier pool for all episode types.

The analysis updating the stay-based design also includes a short-stay outlier policy. Such policies prevent large overpayments for unusually short stays and protect beneficiaries from early transfers that could be motivated by financial rather than clinical considerations. We calculated the average cost per day for short stays across all institutional PAC stays and paid short stays this average daily rate for the number of days in the stay. Similarly, we calculated an average per visit cost for short home health stays and paid this average per visit rate for each visit in the stay. To acknowledge the higher costs typically incurred on the first day of the stay, we added 20 percent to the per day and per visit payment for the first day or visit. Because our work on episodes excludes very short stays, we did not include a short-stay outlier policy in the episode-based design.

Evaluating provider incentives under episode-based payment

We examined provider incentives by considering how payments and costs would vary if the same average patient were treated in different settings for different lengths of time, that is, for “short,” “medium,” and “long” stays. To calculate these variations, we estimated what costs and payments would be for different types of episodes while holding patient characteristics fixed (at the overall PAC average). We generated these estimates in three steps.

First, we used a regression model to estimate risk-adjusted differences in costs across nine types of episodes distinguished by setting (home health only, institutional only, and mixed) and length (short, medium, long). With episode cost as the dependent variable, we estimated a linear regression using indicators of episode type and patient characteristics as controls. The patient characteristics were the same as those used in the episode-level payment model, except that we excluded a small number of measures that are

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Methodology to estimate the costs and payments of post-acute care stays and episodes (cont.)

observed only for home health or only for institutional providers.

Second, from the estimated cost regression, coefficients of the indicators of episode type were used to calculate the average (predicted) episode cost for all nine episode types for an average PAC episode.

Finally, we computed what payments would be under the episode-based payment model. Under the episode-based payment design, the average home health-only episode has a payment equal to the average costs of those episodes multiplied by a factor used to maintain budget neutrality—likewise for institutional-only episodes and mixed episodes. Accordingly, we estimated what the implied episode-based payment would be for each setting type for the average patient by computing the (weighted) average cost over the three length categories for the three setting types. With costs and episode-based payments computed for an average patient for all nine episode types, we were able to examine differences in payment-to-cost ratios and profit levels across episode types for the same type of patient.

Evaluating the design of the PAC PPS

To evaluate the accuracy of a PAC PPS and estimate its impact on payments, we examined the accuracy of the models in aggregate (across all stays) and their effects on many patient groups. Stays from the four settings were assigned to one or more groups based on the stays' characteristics. (We created these groups to report the results of the PPS design, but the underlying prediction models remained the same across all groups.) We grouped patients by clinical condition, medical complexity, impairment, and other characteristics. Details of each group are listed below.

Clinical condition

Almost all of the clinical conditions we examined were based on information (diagnosis and procedure codes) from claims for the preceding hospital stay and, where there was no prior acute hospital stay within 30 days, from claims for the PAC stay. Two clinical conditions, ventilator care and severe wound care, were based

on information from the PAC claim. For stays or episodes without a prior hospital stay, the MS-DRG assignment was proxied using information from the PAC claim. With one exception, the clinical condition groups were mutually exclusive and hierarchical. The serious mental illness group and the other clinical groups are not mutually exclusive; an episode could be assigned to another clinical group *and* to the serious mental illness group. If relevant, stays or episodes were first assigned to ventilator care, then to severe wound care; all others were assigned to a major diagnosis category (MDC) based on the MS-DRG. A patient with a severe mental illness was assigned to this clinical group and to a ventilator, wound care, or MDC group. Except for ventilator care and patients with severe wounds, the clinical groups were based on the first stay of an episode. Ventilator care or wound care was flagged if it was present at any point during the PAC episode. Consistent with past work, we examined 14 broad clinical groups:

- Stroke
- Other neurology medical (medical stays assigned to MDC 1, excluding stroke)
- Orthopedic medical (medical stays assigned to MDC 8)
- Orthopedic surgical (surgical stays assigned to MDC 8)
- Respiratory medical (medical stays assigned to MDC 4)
- Cardiovascular medical (medical stays assigned to MDC 5)
- Cardiovascular surgical (surgical stays assigned to MDC 5)
- Infection medical (medical stays assigned to MDC 18)
- Hematology medical (medical stays assigned to MDC 16)

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Methodology to estimate the costs and payments of post-acute care stays and episodes (cont.)

- Cardiovascular medical (medical stays assigned to MDC 5)
- Skin medical (medical stays assigned to MDC 9)
- Serious mental illness (identified using the hierarchical condition code indicator 57 or 58; includes schizophrenia, bipolar disorder, and severe depression)
- Ventilator care
- Severe wound care
- Chronically critically ill—Episodes for patients who spent eight or more days in the intensive care or coronary care unit during the preceding hospital stay or were on a ventilator in the PAC setting. About 5 percent of episodes are in this group.
- Severity of illness Level 4 (the highest level)—Episodes for institutional PAC patients assigned to the highest severity group (Group 4, indicating extreme severity) using the APR–DRG based on the diagnostic information from the immediately preceding hospital stay (or proxied for patients admitted directly from the community). About 6 percent of episodes are in this group.

Medical complexity

We examined three definitions of medical complexity. The definitions (and the stays included in each) overlap to some degree.

- Multiple body systems—Episodes in institutional PAC settings for patients with diagnoses involving five or more body systems. About 11 percent of episodes are in this group.

Patient impairment

We looked at two aspects of patient impairment:

- Impaired cognition—Patients who were in a coma or had dementia or Alzheimer’s disease are in this category.

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long institutional episodes. In the results shown thus far, we modeled the PAC PPS using separate 5 percent outlier pools for home health–only episodes, institutional PAC–only episodes, and mixed episodes to reflect the different levels of episode costs. This way, home health–only episodes are compared with each other, institutional PAC–only episodes are compared with each other, and mixed episodes are compared with each other. Unusually high-cost episodes in each group would qualify for outlier payments. Alternatively, a single outlier pool could be established for all episodes. In an illustrative example, we modeled a common 5 percent pool for all episodes. With a single pool, outlier payments would be more targeted to very sick patients, regardless of setting. Although a single pool would be more in keeping with a unified PAC PPS, it would make it much harder for unusually high-cost

home health episodes to qualify for an outlier payment, given that the level of their costs is so much lower than institutional PAC.

As expected, a single outlier pool would lower the share of home health episodes qualifying for an outlier payment and raise the share of institutional PAC stays that would qualify (Table 9-5, pp. 296–297). Specifically, the share of home health episodes qualifying for an outlier payment would decrease from 9 percent of outliers with separate pools to 1 percent with a single pool. With a single pool, even relatively long home health–only episodes would be unlikely to qualify for outlier payments. With separate home health pools, 27 percent of long episodes would qualify for an outlier payment compared with 3 percent with a single pool. Because home health–only episodes

Methodology to estimate the costs and payments of post-acute care stays and episodes (cont.)

- Patient frailty—We used the JEN Frailty Index to assign episodes to the top (most frail) and bottom (least frail) quartiles of the distribution of the frailty scores.

Other stay/episode and beneficiary characteristics

We examined the following groups:

- Low and high therapy—Used in the stay analysis. For institutional PAC stays, the groups included stays with the lowest (bottom quartile) and highest (top quartile) therapy costs as a share of total stay costs. For home health stays, the low group included HHA stays with no therapy costs.
- Community admissions—These episodes were admitted from the community, including patients with no hospital stay within the 30 days preceding the PAC stay, identified by the lack of a matching hospital claim.
- Episodes with a prior hospitalization—These episodes were identified by matching hospital claims to PAC PPS claims.

- Episode durations—We divided episodes for home health only, institutional PAC only, and mixed episodes into the short, medium, and long groups. For home health–only episodes, *short*, *medium*, and *long* referred to the episodes in the bottom, middle, and top third of number of visits. For institutional PAC–only episodes, short, medium, and long were ranked by episode length. For mixed episodes, we defined short, medium, and long based on the combined ranks of the number of visits and of lengths of episodes.

We also examined the following groups:

- Beneficiaries with disabilities
- Beneficiaries dually eligible for Medicare and Medicaid
- Beneficiaries with end-stage renal disease
- Beneficiaries 85 years of age and older ■

would pay more into the outlier pool than they would receive, the profitability of home health episodes would decline, though payments would remain well above the cost of care. Conversely, the share of institutional PAC episodes qualifying would increase from 11 percent to 17 percent, and their profitability would increase. The impact on long institutional PAC episodes was even larger: 45 percent of these episodes would qualify for an outlier payment with a single pool and bring their payments closer to covering their costs. Episodes for beneficiaries on ventilator care and for beneficiaries who were severely ill or had diagnoses that involved multiple body systems would be more likely to qualify for an outlier payment with a single pool.

In designing a PAC PPS, policymakers will need to weigh the benefits of having a larger share of home health

episodes qualify for an outlier payment against having an outlier policy that targets payments for beneficiaries with higher cost care needs. With separate pools, even high-cost episodes that involve home health care would be unlikely to qualify for outlier payments. In contrast, a single pool would target outlier payments for beneficiaries treated in institutional settings with high care needs.

Provider incentives to shorten or extend episodes

So far, we have concluded that an episode-based PAC PPS creates incentives for providers to furnish shorter episodes over longer episodes. By design, the episode-based PAC PPS would make the payment for a home health–only episode based on patient characteristics, regardless of episode length. Thus, short or long episodes would be paid the same amount. Similarly, institutional PAC providers would each be paid the same amount regardless of episode

**TABLE
9-5**

Under the episode-based option for a proposed PAC PPS, a single outlier pool would target outlier payments for the highest cost beneficiaries treated in institutional PAC (2017 PAC stays) (continued next page)

Reporting group	PAC PPS episode-based payment with separate outlier pools for episodes with home health care		PAC PPS episode-based payment with a single outlier pool		
	Share of episodes qualifying as outliers	Ratio of payment to cost	Share of episodes qualifying as outliers	Ratio of payment to cost	Share of episodes
All	10%	1.12	6%	1.12	100%
Clinical group					
Orthopedic medical	9	1.11	3	1.10	14
Cardiovascular medical	10	1.11	4	1.10	13
Orthopedic surgical	8	1.12	8	1.13	12
Other neurology medical	11	1.12	4	1.10	9
Respiratory medical	9	1.12	6	1.12	9
Serious mental illness	10	1.15	9	1.16	9
Infection medical	10	1.12	10	1.14	4
Severe wound	16	1.13	9	1.13	4
Skin medical	12	1.13	4	1.11	3
Cardiovascular surgical	9	1.13	7	1.13	3
Stroke	14	1.13	15	1.15	2
Hematology medical	9	1.11	5	1.11	1
Ventilator	28	1.16	32	1.18	0
Frailty					
Least frail	8	1.13	1	1.10	21
Most frail	13	1.13	12	1.14	28
Cognitively impaired	11	1.12	8	1.12	21
Medically complex					
Multiple body system diagnoses	14	1.14	18	1.16	11
Severely ill	15	1.13	19	1.15	6
Chronically critically ill	15	1.12	15	1.13	5

Note: PAC (post-acute care), PPS (prospective payment system), ESRD (end-stage renal disease), HH (home health), I-PAC (institutional PAC). Separate 5 percent outlier pools were established for home health-only, I-PAC-only, and a mix of home health and I-PAC episodes. A single 5 percent outlier pool was established for all PAC stays. A payment-to-cost ratio of 1.0 indicates that the average predicted cost is equal to the average actual costs and that the model would establish accurate relative weights for a payment system. Patients' level of frailty was determined using the JEN Frailty Index. "Multiple body system diagnoses" includes patients with diagnoses involving five or more body systems who were treated in institutional PAC settings. "Chronically critically ill" stays include patients who spent eight or more days in an intensive care or coronary care unit during the preceding hospital stay or were on a ventilator in the PAC setting. "Severely ill" stays include patients who were categorized as severity of illness Level 4 based on their first I-PAC stay. Episodes were divided into "short," "medium," and "long" based on the duration of the episode. For home health-only episodes, these categories refer to the episodes in the bottom, middle, and top third of number of visits. For I-PAC-only episodes, the categories are based on the rank of days spanned by the episode. For mixed episodes, the categories are based on the combined ranks of the number of visits and days of the episode. Analysis includes 2017 PAC episodes that began between January 1, 2017, and June 30, 2017. Components may not sum to totals due to rounding.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

length. But differences seen in PCRs across episodes of different lengths reflect, to some extent, differences in patient characteristics. While the methodology adjusts payments and costs for patient risk, patients included in

the "short" group were likely to differ from those included in the "long" group.

In this analysis, we examined the incentives of an episode-based PAC PPS more closely by considering differences in

**TABLE
9-5**

Under the episode-based option for a proposed PAC PPS, a single outlier pool would target outlier payments to the highest cost beneficiaries treated in institutional PAC (2017 PAC stays) (continued)

Reporting group	PAC PPS episode-based payment with separate outlier pools for episodes with home health care		PAC PPS episode-based payment with a single outlier pool		Share of episodes
	Share of episodes qualifying as outliers	Ratio of payment to cost	Share of episodes qualifying as outliers	Ratio of payment to cost	
Other patient characteristics					
Disabled	11	1.13	6	1.13	24
Dual eligible	10	1.11	7	1.11	29
ESRD	12	1.12	9	1.12	4
Very old (85+ years old)	10	1.11	6	1.11	31
Episode type					
All HH episodes	9	1.12	1	1.07	64
Short	0	2.48	0	2.48	22
Medium	1	1.28	0	1.28	22
Long	27	0.72	3	0.63	21
All I-PAC episodes	11	1.12	17	1.16	21
Short	0	2.07	1	2.07	7
Medium	3	1.32	5	1.33	7
Long	29	0.76	45	0.82	7
All mixed episodes	15	1.12	12	1.11	15
Short	4	1.50	2	1.50	5
Medium	11	1.13	8	1.13	5
Long	30	0.92	25	0.90	5

Note: PAC (post-acute care), PPS (prospective payment system), ESRD (end-stage renal disease), HH (home health), I-PAC (institutional PAC). Separate 5 percent outlier pools were established for home health-only, I-PAC-only, and a mix of home health and I-PAC episodes. A single 5 percent outlier pool was established for all PAC stays. A payment-to-cost ratio of 1.0 indicates that the average predicted cost is equal to the average actual costs and that the model would establish accurate relative weights for a payment system. Patients' level of frailty was determined using the JEN Frailty Index. "Multiple body system diagnoses" includes patients with diagnoses involving five or more body systems who were treated in institutional PAC settings. "Chronically critically ill" stays include patients who spent eight or more days in an intensive care or coronary care unit during the preceding hospital stay or were on a ventilator in the PAC setting. "Severely ill" stays include patients who were categorized as severity of illness Level 4 based on their first I-PAC stay. Episodes were divided into "short," "medium," and "long" based on the duration of the episode. For home health-only episodes, these categories refer to the episodes in the bottom, middle, and top third of number of visits. For I-PAC-only episodes, the categories are based on the rank of days spanned by the episode. For mixed episodes, the categories are based on the combined ranks of the number of visits and days of the episode. Analysis includes 2017 PAC episodes that began between January 1, 2017, and June 30, 2017. Components may not sum to totals due to rounding.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

payments and costs across episode types that hold patient characteristics, or risk, fixed. We report what average payments and costs would be if the episodes were of average risk.

Holding patient risk constant, we find that long episodes remain unprofitable to providers. A provider furnishing a long home health episode would lose \$2,015 under

the episode-based PAC PPS, and those furnishing a long institutional PAC episode would lose \$11,452 on average (Table 9-6, p. 298). The providers furnishing a long mixed episode, say an institutional PAC stay followed by home health, would jointly lose \$4,171. Accordingly, PAC providers would have a strong financial incentive to avoid long episodes of all types. For home health and institutional PAC providers, short episodes are most

**TABLE
9-6**

Holding patient risk constant, under an episode-based option for a proposed PAC PPS, long episodes would be unprofitable and short episodes would be profitable (2017 PAC episodes)

Episode type	Payment for average-risk episode	Cost of average-risk episode	Payment-to-cost ratio	Dollar profit (loss)	Number of episodes
All PAC episodes	\$9,939	\$8,874	1.12	\$1,065	2,349,518
All HH episodes	4,417	3,944	1.12	473	1,507,595
Short	4,417	2,102	2.10	2,315	511,486
Medium	4,417	3,443	1.28	973	514,166
Long	4,417	6,432	0.69	(2,015)	481,943
All I-PAC episodes	19,869	17,740	1.12	2,129	483,730
Short	19,869	8,225	2.42	11,644	164,012
Medium	19,869	14,094	1.41	5,775	161,460
Long	19,869	31,320	0.63	(11,452)	158,258
All mixed episodes	19,773	17,655	1.12	2,119	358,193
Short	19,773	11,893	1.66	7,881	121,289
Medium	19,773	17,229	1.15	2,544	117,815
Long	19,773	23,945	0.83	(4,171)	119,089

Note: PAC (post-acute care), PPS (prospective payment system), HH (home health), I-PAC (institutional PAC). The table shows estimated payments and estimated costs for episodes of each type under an episode-based PAC PPS if the average patient were treated. Payments were not modeled with an outlier policy. PAC PPS payments do not vary by episode length. A payment-to-cost ratio of 1.0 indicates that payments equal the actual costs. Short episodes are those in the bottom third of the distributions of length of stay (for institutional PAC) and visits (for home health care). Long episodes are those in the top third of the distributions of length of stay (for institutional PAC) and visits (for home health care). A mixed episode includes home health care and institutional PAC. Analysis includes 2.3 million stays that were part of episodes of PAC that began between January 1, 2017 and June 30, 2017.

Source: Analysis conducted for the Commission by the Urban Institute (Wissoker and Garrett 2019).

profitable. Providers would face strong financial incentives to shorten the length of PAC episodes. In cases where the current payment system has incentivized unnecessarily long PAC stays, shorter PAC episodes could simply result in more efficient PAC. But there would also be incentives to stint on care, particularly if outcomes were not monitored, the disincentive for poor care was weak, or what constitutes appropriate care was not well defined.

Some PAC episodes involve transfers from one provider to another. Under current practice patterns, of the 2017 episodes comprising a single stay or pair of stays, about 12 percent involved a transfer from an institutional PAC provider to home health (Table 9-2, p. 286). Consider a patient at the beginning of an initial institutional PAC episode. The institutional PAC provider will ultimately decide how long to furnish care or whether to transfer the patient to home health care. The institutional PAC provider would realize a higher profit if it transferred

the patient to home health for a short mixed episode (the PCR for short mixed episodes is 1.66) than extending its own care to complete a medium episode (the PCR for a medium institutional PAC episode is 1.41, Table 9-6). In this case, the provider would have an incentive to transfer the patient. (In a mixed episode, we assume the payment would be split pro rata with each provider's costs and would retain the overall PCR.) But if the patient required a more extended period of care (so the episode would no longer be short), it would be more profitable for the institutional PAC provider to extend its care (establishing a medium episode, with a PCR of 1.41) than to transfer the beneficiary to home health, which would result in a medium-length mixed episode (the PCR for a medium mixed episode is 1.15).

Transfers from home health to an institutional PAC provider are even rarer and generally occur when a provider can no longer adequately or safely care for the

beneficiary (for example, about 3 percent of episodes were transferred from home health care to a SNF, shown in Table 9-2, p. 286). If a short home health episode would be insufficient for a patient, a short mixed episode involving a transfer to an institutional PAC provider would be more profitable (PCR = 1.66) than extending the home health stay to a medium-length episode (PCR = 1.28), all else being equal (Table 9-6). The overall implication is that there are some complexities in the incentives for transfers in the episode-based payment system. In some cases, incentives could encourage unnecessary transfers if the episodes were kept relatively short. In other cases, the incentives could discourage transfers that were appropriate.

An integrated PAC provider can offer both institutional PAC and home health services. In cases in which a patient could be treated with institutional PAC or with home health, an integrated provider would make the most profit on episodes that involved an institutional PAC stay if the episodes were kept to short or medium length. Under these circumstances, treatment decisions could be influenced by financial considerations rather than what would be best for the beneficiary.

Comparing stay-based and episode-based designs for a PAC PPS

Having examined both stay-based and episode-based PAC PPS designs compared with current payment policy, we compared the two design options against one another. The options differ in unit of service, thus establishing different incentives for providers. In a stay-based design, the unit of service would be a stay.¹⁴ Payments for a stay would be based on the average cost of stays across settings, with a differential for home health care to reflect this noninstitutional setting's considerably lower cost. In an episode-based design, the unit of service would include all PAC until the spell of illness ended, defined by a "clean" period when no PAC is furnished (or until a specified amount of time has elapsed). Payments would be based on the average cost of all episodes treated in the four settings, with a home health care differential.

Strengths and weaknesses of the design options

Table 9-7 (p. 300) summarizes the strengths and weaknesses of both designs. Compared with current policy, both models would increase the equity of Medicare's payments across patient categories. There would be small differences in the relative profitability across conditions and patient characteristics, which would lower a provider's incentive to selectively admit patients

with some conditions over others. However, episode-based designs would result in substantial overpayment for short episodes and underpayment for long ones. Although stays also vary by duration, the differences would be smaller and the effect on profitability would be less striking. While FFS in general encourages volume, the risk of unnecessary episodes may be lower than the risk of unnecessary stays. Under either design, the decision to initiate PAC is not controlled by a PAC provider but rather is generally made by an unrelated entity (the beneficiary's physician, in consultation with discharge planning staff when there is a prior hospital stay). However, the decision to extend care is made by the PAC provider in consultation with the supervising physician. In the case of episode-based design, the unit of service would encompass what are currently separate stays, thereby limiting PAC providers' ability to generate volume. A time-based episode design, such as a 30-day episode, would temper the volume incentive since all care within 30 days would be included in the episode. Yet providers would have an incentive to extend care beyond the time limit (in this case, 30 days) to trigger an additional episode (and payment).

Compared with current policy, both designs would result in less patient selection and stinting on care. A stay-based design could still result in some patient selection and stinting, but we would expect less compared with an episode-based design. The reason is that under an episode-based design, payments would not likely cover the cost of long episodes, thereby increasing the risk of patient selection and stinting on services to offset the high costs of long-stay episodes.

Either design would streamline the four separate PPSs into one and could lower CMS's administrative costs. Though both designs would require significant operational considerations for CMS, a stay-based design would be easier to implement: Each stay would generate a PAC PPS payment. In contrast, under an episode-based design, CMS would need to establish payment rates for episodes furnished by HHAs only and institutional PAC providers only and for a mix of HHA and institutional providers. CMS would also need a way to distribute payments across multiple providers of an episode, such as basing each provider's payment on the average stay's share of the episode cost. Further, CMS would want to consider making partial payments to providers for long episodes (with a final payment made at the end of the episode), much like current policy that allows HHAs to request anticipated payments. Partial payments would not be needed for episodes of a relatively short duration, such as 30 days.

**TABLE
9-7**

A comparison of stay-based and episode-based design options for the proposed PAC PPS

Aspect	Stay-based design	Episode-based design
Accuracy of payments	<ul style="list-style-type: none"> • Payments are aligned with costs for most patient groups 	<ul style="list-style-type: none"> • Payments are aligned with costs for most patient groups • Relative to costs, payments are high for short episodes and low for long episodes
Unnecessary volume	<ul style="list-style-type: none"> • More likely to encourage unnecessary stays 	<ul style="list-style-type: none"> • Less risk of additional episodes (episodes last as long as PAC is needed) • Would discourage unnecessary services within an episode
Patient selection	<ul style="list-style-type: none"> • Less likely to result in patient selection 	<ul style="list-style-type: none"> • More likely to result in patient selection based on how long beneficiary is likely to need PAC
Stinting on care	<ul style="list-style-type: none"> • Less likely to result in stinting if provider can generate additional stays 	<ul style="list-style-type: none"> • More likely to result in stinting
Administrative ease for CMS	<ul style="list-style-type: none"> • Streamlines four PPSs to one • Easier to implement 	<ul style="list-style-type: none"> • Streamlines four PPSs to one • Possible to prorate payments across providers • Possible to make partial payments if episode is long
Likely impact on provider behavior	<ul style="list-style-type: none"> • Involves less change for providers • Encourages shorter stays 	<ul style="list-style-type: none"> • Involves more change for providers • Encourages shorter courses of treatment • Discourages or delays transfers to get higher share of the payment
Care coordination	<ul style="list-style-type: none"> • More handoffs to other providers 	<ul style="list-style-type: none"> • Fewer patient handoffs

Note: PAC (post-acute care), PPS (prospective payment system).

Both designs would lower payments for higher cost institutional providers, such as IRFs and LTCHs, because payments would be based on the average cost across settings. Higher cost providers would need to adjust their cost structures and practice patterns.

Both designs would encourage shorter courses of PAC. Given the current HHA and SNF PPSs, which can result in unnecessary care, a reduction in service would not necessarily signal stinting. Compared with an episode-based design, a stay-based design could result in more handoffs between providers, which would expose beneficiaries to the risk of poorly coordinated care. On the other hand, an episode-based design could encourage providers to make transfer decisions for financial reasons

rather than what is best for the beneficiary, which could impair access to medically appropriate care.

A stay-based design should be pursued in combination with a PAC value-based purchasing policy and refined accountable care organization policies

In light of the tradeoffs between the two designs, the Commission contends that a stay-based design is the better initial strategy for CMS to pursue. Many uncertainties exist regarding how providers will respond to a unified payment system and concurrent changes to regulatory requirements. For these reasons, a stay-based design is the more cautious approach and would better protect beneficiaries from potential undesirable provider responses, such as adverse selection and stinting on care.

A stay-based design is likely to prompt providers to change their cost structures, practice patterns, and service offerings. As providers adapt to the new PPS, we would expect the existing range in practice patterns to narrow substantially, such that overpayments for short stays and underpayments for long ones would be smaller. At that point, the risks for beneficiaries associated with an episode-based design would become smaller and would make an episode-based design more attractive. The experience providers would gain and the many changes we would expect providers to make under a new stay-based design would be a better starting point for an episode-based design.

Because a stay-based approach could continue to expose the program to unnecessary volume, the new PAC PPS should pursue two strategies. First, the Secretary should adopt a value-based purchasing (VBP) policy that includes sufficiently large rewards and penalties to influence provider behavior. Consistent with the Commission's quality measurement principles, the VBP would include quality and value measures that are patient oriented and encourage coordination across providers and times. Possible measures include rates of potentially preventable readmissions, Medicare spending per beneficiary, and rates of discharge to community. Although a measure of the patient experience in PAC is not available, measures of care coordination (such as avoidable emergency department visits or the days elapsed between discharge from the hospital and physician encounter) could be considered. In addition to a VBP policy, monitoring provider behavior would be critical for detecting when care was either delayed or not furnished.

A second strategy would be to strengthen incentives for entities that take on the financial risk for all of the care received by their beneficiaries—specifically, accountable care organizations (ACOs). Such arrangements would encourage the use of home health care when appropriate, discourage unnecessary care, and guard against stinting that raises costs in the longer run (such as preventable readmissions). While benefits are associated with implementing the PAC PPS concurrently with an ACO, a key strategy ACOs have used to create savings has been to limit the number of days beneficiaries spend in a SNF, which would not produce savings if the PAC PPS were implemented. ACOs would need to focus on other aspects of providers' practice patterns to realize savings. If policymakers were concerned with ACOs' more limited ability to generate savings under a PAC PPS, they could

consider allowing PAC providers to engage in certain financial arrangements with ACOs to share savings in exchange for being a preferred provider for the ACO. ACOs could also be relieved of regulatory requirements barring providers from recommending PAC providers. Policy features from CMS's Next Generation ACO model could help control total program spending—for example, the prospective assignment of beneficiaries to an ACO and appropriate coding adjustments.

In addition to strategies that target unnecessary volume, ongoing maintenance of the PAC PPS (including recalibration of the case-mix weights and rebasing the level of payments) would be needed to keep payments aligned with the cost of care, particularly as providers' costs and practice patterns changed.

Evaluating patient functional assessment data reported by post-acute care providers

Beneficiaries are often referred to PAC for rehabilitation, and improving or maintaining function is a goal for many beneficiaries. Functional status and changes in function are used to establish care plans for patients, set payments, and measure quality of care. However, when payment is tied to patients' functional status, providers can report this information in ways that raise payments rather than capture patients' actual clinical care needs. And because FFS payments are used to establish payments for Medicare Advantage and alternative payment models (such as ACOs and bundled payments), the effects on payments extend well beyond traditional Medicare. Furthermore, the reported patient functional status data can improve a provider's outcome rates, thus misleading entities to include the provider in their network and beneficiaries to select a provider based on outcomes that not have been achieved. Therefore, policymakers need to reconsider whether and how functional status data are used to establish payments and gauge provider performance.

We acknowledge that other administrative data, such as diagnoses included in claims data, are also provider reported and that providers may have payment or coding incentives to misreport this information as well. However, in the analysis presented in this chapter, we examine the consistency of functional data because it is more subjective and may be more difficult to audit than

other administrative data. Medical records often support administrative data like the amount of therapy received and diagnoses, but not level of function. For payment and quality measurement, Medicare should use the best available data that can be validated.

Medicare's requirements for patient assessment information

Until recently, function was measured differently in each setting using setting-specific patient assessment instruments.¹⁵ HHAs use the Outcome and Assessment Information Set (OASIS), SNFs use the Minimum Data Set (MDS), IRFs use the IRF Patient Assessment Instrument (IRF-PAI), and LTCHs use the LTCH Continuity Assessment Record and Evaluation (CARE) data set. While the setting-specific instruments gather information on a common set of domains (such as the ability to walk or transfer), differences in how each domain is defined (such as the exact activity measured, whether average or worst performance is recorded, and the observation period) undermine our ability to make comparisons across settings. As a result, it is difficult to assess whether one PAC setting achieves better outcomes than another, how the costs of stays compare across settings since some settings use function to determine payment, and whether there are overall differences in the functional status of patients across settings.

To comply with the requirements of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT), PAC providers now submit standardized patient assessment information. These “uniform items” were added to the existing setting-specific patient assessment instruments and began to be collected in 2016 by LTCHs and IRFs, and in 2017 by SNFs; HHAs began collecting this information in January 2019.¹⁶ While uniformity allows function to be directly compared across settings, the Commission is concerned that assessments remain subjective and are unduly influenced by provider incentives to increase payments or show that the functional status of the patients they treated improved for VBP or quality reporting.

Use of functional assessment data to establish payments

The HHA, SNF, and IRF PPSs use functional assessment data based on setting-specific items to define the case-mix groups used to establish payments (Table 9-8). In each PPS, some domains of function are used to create a composite function score that contributes to

the assignment of the patient to a case-mix group for purposes of payment. HHAs, SNFs, and IRFs use 5, 4, and 11 domains of function, respectively. Toileting and transferring (e.g., chair or bed to chair) are the only domains included in all three settings, and these differ in terms of how the activities are defined, the look-back periods used, and the coding guidance (e.g., whether the assessment captures a patient's average or most dependent ability).

In these PPSs, a small difference in the function score can shift the stay (or, in the case of the per diem-based SNF PPS, the day) to a different case-mix group, resulting in higher or lower payment. For example, SNFs are paid 20 percent more for a patient assigned to an ultra-high rehabilitation case-mix group with a function score of 6 instead of a score of 5 (achieved by assessing the patient in one domain as requiring “limited assistance” instead of “supervision” or requiring “extensive assistance” instead of “limited assistance”). Similarly, an IRF is paid 15 percent more for treating a patient recovering from a stroke with a motor function score between 30.05 and 34.25 than for a patient with a motor score between 34.25 and 38.85 (indicating a lower level of disability). For first or second episodes with 10 therapy visits, HHAs are paid 7 percent more for patients assigned to the function level 2 than for patients at the function level 1.

Use of functional assessment data in quality reporting programs

Through quality reporting programs (QRPs), Medicare requires PAC providers to collect and report data used to calculate a range of quality measure results.¹⁷ As required under IMPACT, CMS developed and is incorporating into the QRPs some aligned PAC functional outcome measures. The SNF and IRF QRPs include the same four functional outcome measures—change (e.g., improvement or maintenance) in mobility and self-care, and mobility and self-care scores achieved at discharge—that are calculated using the uniform assessment items. The LTCH QRP includes a measure of change in mobility of ventilator-support patients based on the uniform assessment data. HHAs began collecting the uniform items in January 2019, so CMS can incorporate the uniform functional outcome measures in future years of the HHA QRP.

Function continues to be assessed using the setting-specific tools for HHAs and SNFs. The HHA VBP, which CMS implemented in January 2016, ties a portion of payments to performance on two composite functional

**TABLE
9-8**

Domains of function used to establish FFS payments for PAC

HHAs	IRFs	SNFs	LTCHs
• Toileting	• Toileting	• Toileting	None
• Bathing	• Bathing	• Eating	
• Walking	• Walking	• Transferring	
• Dressing	• Dressing	• Bed mobility	
• Transferring	• Grooming		
	• Eating		
	• Transferring		
	• Bladder control		
	• Bowel control		
	• Cognition		
	• Communication		

Note: FFS (fee-for-service), PAC (post-acute care), HHA (home health agency), IRF (inpatient rehabilitation facility), SNF (skilled nursing facility), LTCH (long-term care hospital). The definitions of each domain are setting specific and recorded using each setting's patient assessment tool.

outcome measures based on the OASIS assessment results, as well as other quality measures. CMS publicly reports functional outcome results for SNFs and HHAs based on the setting-specific function items on the respective Compare websites.

Reporting of functional status by IRFs and HHAs could be influenced by payment and VBP incentives

Previous Commission analyses suggested that payment systems' designs and VBP programs might influence providers' reporting of patients' functional status by IRFs and HHAs. In the IRF and HHA payment systems, payment for an individual patient is determined based on the expected costs of treatment at admission. Therefore, these PAC providers have an incentive to record the patient's functional ability as lower than it actually is so that they will be reimbursed more. Similarly, to exhibit greater gains in patient function (and thus better outcomes), providers have incentives to report a patient's level of function as lower than it actually is at admission and maximize it at discharge. We present two examples from previous Commission work on provider behavior influenced by financial incentives. High-margin IRFs may

systematically record lower patient function at admission compared with other IRFs for comparable patients. Also, HHAs may have boosted reported patient outcomes by recording lower than warranted patient function at admission and higher than warranted at discharge, or both.

Recording of function in high-margin and low-margin IRFs suggests problems with the integrity of the IRF-PAI information

In March 2016, the Commission reported on differences across IRFs in their assessment of patients' motor and cognitive function (Medicare Payment Advisory Commission 2016b). The Commission found that although patients treated in high-margin IRFs were, on average, less complex cases during the acute care hospitalizations that preceded the IRF stay (they had lower severity scores, shorter hospital stays, and were less likely to be high-cost outliers) than patients treated in low-margin IRFs, the patients at high-margin IRFs were coded as more disabled once they were admitted to these IRFs. The results were consistent across case types but particularly pronounced for stroke cases without paralysis: Stroke cases treated in the highest margin IRFs had an average motor function score at admission that was 18 percent lower than cases

**TABLE
9-9**

Nonparalyzed stroke patients in the highest margin IRFs had the same average motor impairment score as stroke patients with paralysis in the lowest margin IRFs, 2013

Type of stroke case	Average motor impairment score	
	Lowest margin IRFs	Highest margin IRFs
With paralysis	29.2	24.6
Without paralysis	35.3	29.0

Note: IRF (inpatient rehabilitation facility). Average motor impairment scores were calculated using the motor Functional Independence Measure™ (FIM™) coded by the IRF. The motor FIM measures the level of disability in motor functioning at IRF admission on a 91-point scale. Higher FIM scores indicate higher levels of function. IRFs were ranked by their 2013 Medicare margins and then sorted into five equal-sized groups (quintiles). Results for Quintiles 2, 3, and 4 are not shown. Stroke cases “with paralysis” include patients with left body involvement, right body involvement, and bilateral involvement. Stroke cases “without paralysis” include all those assigned to the impairment group for stroke patients with no paresis (Code 1.4). Cases that did not have an acute care hospital discharge within 30 days of admission to the IRF were excluded from this analysis.

Source: MedPAC analysis of Medicare Provider Analysis and Review data, Inpatient Rehabilitation Facility–Patient Assessment Instrument data, and cost report data from CMS.

treated in the lowest margin IRFs. Nonparalyzed stroke patients treated in the highest margin IRFs had an average function score (29.0) that was almost the same as the average function score for paralyzed stroke patients in the lowest margin IRFs (29.2) (Table 9-9). This finding was surprising because stroke patients with paralysis typically have worse motor function than stroke patients without paralysis. All else being equal, Medicare payment for these two types of stroke patients with a motor score of 29 would be the same—even though stroke patients with no paralysis had lengths of stay that were, on average, more than 2 days shorter than that of stroke patients with paralysis.

The findings suggest that assessment and scoring practices help explain differences in profitability across IRFs and raise questions about the integrity of the patient assessment data and the interrater reliability across IRFs. Some industry representatives have suggested that differences in staff training and resources could explain these coding differences, while others contend that some IRFs assess their patients in response to the financial incentives in the payment system. Considering these concerns, the Commission has recommended that CMS undertake activities to ensure payment accuracy and program integrity.

CMS’s impact analysis of a recent change to the IRF–PAI also indicates systematic differences in how IRFs have recorded the patient assessment items. IMPACT

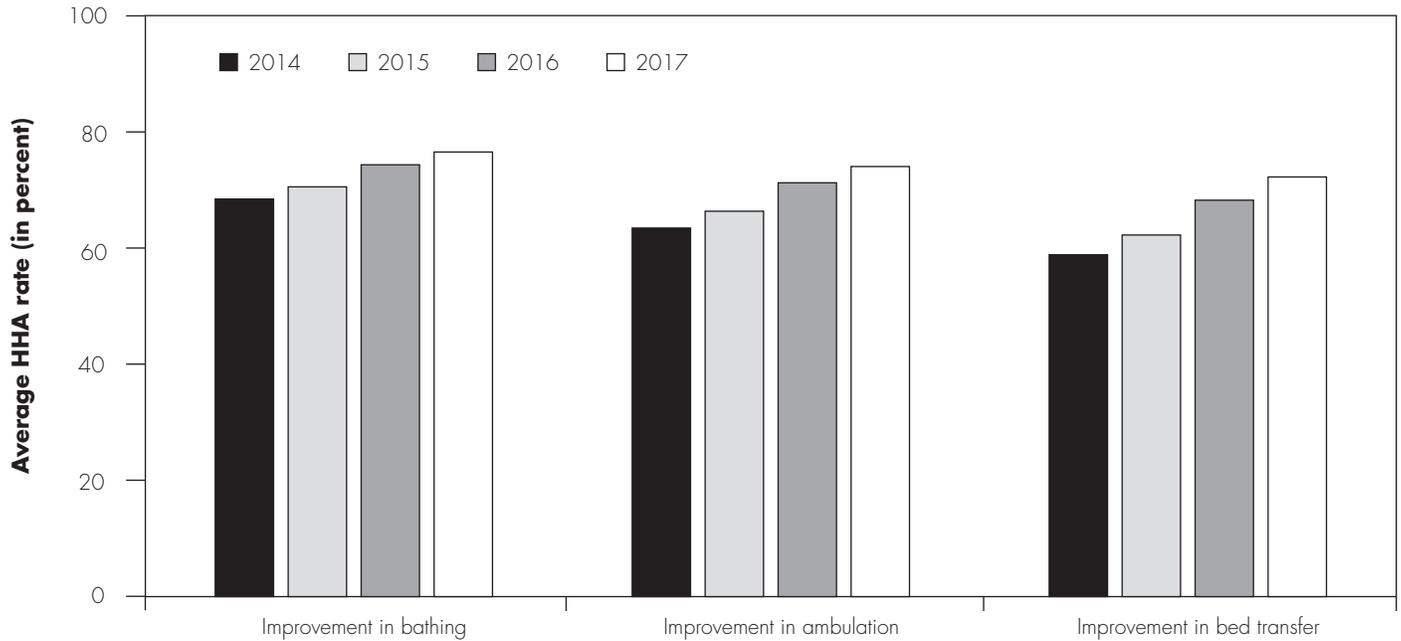
required the Secretary to replace setting-specific patient assessment items (such as those in the IRF–PAI) with the uniform PAC items as soon as practicable. In the fiscal year (FY) 2019 final rule for the IRF PPS, CMS estimated that the adoption of the new assessment items would not change aggregate payments but would have differential impacts across groups of providers—raising payments for hospital-based and nonprofit IRFs and lowering them for freestanding and for-profit IRFs (Centers for Medicare & Medicaid Services 2018c). The Commission noted that some of the differences in effects could be due to scoring differences across providers. The uniform PAC items, which to date had been used only for quality reporting, would show higher function for the same patients, which would, in turn, lower Medicare’s payments for them. The aggregate effects on groups of IRFs (e.g., by ownership and type) suggest that systematic differences exist in how functional assessment information has been recorded across IRFs. The Commission concluded that as long as payment relies on relatively subjective information such as patient functional status, problems of data accuracy will persist (Medicare Payment Advisory Commission 2018a).

Inconsistency between HHA-reported outcomes and claims-based measures raises questions about the validity of provider-reported assessment data

HHAs report changes in patients’ ability to perform activities of daily living (ADLs) using data they collect at admission and discharge with the OASIS. As of January

**FIGURE
9-1**

Average HHA-reported performance on OASIS-based measures improved between 2014 and 2017



Note: HHA (home health agency), OASIS (Outcome and Assessment Information Set). The figure shows the average performance scores for all HHAs on certain measures of function. “Improvement in bathing” indicates on average how often HHA beneficiaries got better at bathing. “Improvement in ambulation” indicates on average how often HHA beneficiaries got better at walking or moving around. “Improvement in bed transfer” indicates how often beneficiaries got better at getting in and out of bed.

Source: MedPAC analysis of Home Health Compare data.

2016, HHAs in nine states receive payment adjustments (i.e., rewards or penalties) based on their prior-year performance on quality measures, including improvement in function. Between 2014 and 2017, HHAs on average reported improvements from admission to discharge in three activities of daily living—improvement in bathing, ambulation, and bed transfer (Figure 9-1).

Yet, more objective claims-based measures of adverse hospital events showed no improvement (Figure 9-2, p. 306). The rate of emergency department use increased slightly, and the hospitalization rate remained about the same. These findings are surprising because—based on studies that have found an association between functional status and hospital use—we would expect patients with fewer limitations in ADLs to be less likely to require visits to the emergency department or unplanned hospitalizations (Ng et al. 2014, Soley-Bori et al. 2015). That is, given the improvement in the reported OASIS-based measures,

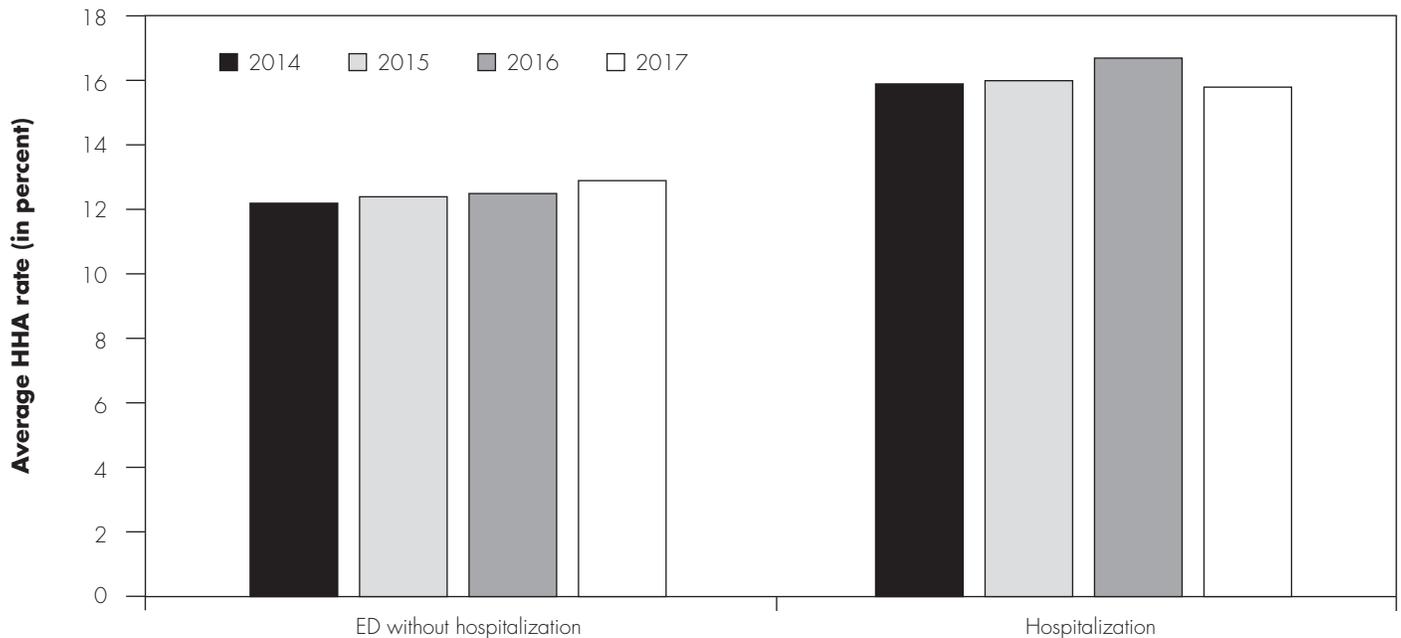
we would expect to see corresponding improvements in the claims-based measures. The contradictory findings raise questions about the validity of the provider-reported assessment data.

Similar questions about the accuracy of the function data were raised in the evaluation of the first year of the home health VBP program. CMS’s evaluator described similar trends in performance scores that indicated providers had responded to quality-reporting and VBP incentives (Pozniak et al. 2018). After the introduction of the CMS star ratings program for home health, all HHAs showed improvement in the provider-reported patient assessment-based measures (such as improvements in walking). However, larger improvements were observed among HHAs in states with mandatory participation in the VBP.

The evaluator noted that the underlying subjectivity of the patient assessments and the incentives of the VBP

**FIGURE
9-2**

Average HHA performance on claims-based measures remained the same between 2014 and 2017



Note: HHA (home health agency), ED (emergency department). The figure shows the average performance scores for all HHAs on certain claims-based measures. “ED without hospitalization” indicates on average the share of HHA beneficiaries who visited the ED without a hospital admission. “Hospitalization” indicates the share of HHA beneficiaries admitted to the hospital.

Source: MedPAC analysis of Home Health Compare data.

program influence how HHAs assess and record patient status, so that reported “improvements” in quality scores did not necessarily reflect real improvements in quality. The prevalence of patient conditions was relatively stable over time, leading the contractor to conclude that “improvements” in provider-reported outcomes were at least in part due to changes in coding practices. The evaluator acknowledged that providers’ coding could be a combination of increased accuracy (resulting from provider training, for example) and reporting lower patient functional status at admission (recording a patient’s status as worse than it was). The evaluator also found that performance on other measures not subject to provider coding, including patient experience and Medicare spending and utilization, showed either no or mixed improvement under the VBP program, raising doubts about the assessment-based “improvements.”

Provider responses to changes in payment policies portend problems using patient function data to establish payments

For years, the Commission and others have reported on changes providers have made in response to payment incentives (see text box, pp. 308–309, on changes PAC providers have made). For HHAs, changes in the coding of hypertension and the provision of therapy visits appear to have been responses to factors used to adjust payments. Similarly, SNFs increased their provision of therapy to beneficiaries and shifted their therapy modalities to qualify patients for higher payments. LTCHs extended their lengths of stay to avoid the short-stay outlier policy, which reduces payment per discharge. If providers are as responsive to payment incentives that are partly based on how they assess patients’ function as they have been to other changes in payment policy,

the assessment data will be of questionable value in accurately capturing differences in patients and the providers that treat them.

Provider responses to payment incentives are not unique to PAC providers. Over the years, the Commission has discussed changes in the coding and documentation of diagnoses by inpatient hospitals, ACOs, and Medicare Advantage plans that raised program spending even though the beneficiaries and their conditions did not change. To correct for changes in coding intensity and documentation, CMS adjusted payments. PAC providers may be even more susceptible to payment incentives due to the lack of guidelines about which beneficiaries require PAC, which setting is most appropriate for a patient, and how much care a patient should receive once admitted.

Analyses of patient functional assessment information

Given the evidence of inaccuracies associated with providers' functional status assessments and the importance of this information in gauging provider performance, we conducted several analyses to examine the consistency of the reporting of functional assessment information by PAC providers. We compared patients' functional levels with other characteristics and found that, on average, they were as expected for patients with the highest and lowest functional levels, but the patterns were less clear for other patients. However, when comparing assessments for individual patients, we found large inconsistencies in the recording of patients' function. For beneficiaries who were transferred from one PAC setting to another, the functional status recorded at discharge from one setting and at admission to the next were often different, and the differences favored reporting functional levels that would raise payments. In comparing admission assessment items used for quality reporting (the uniform items) with items used to establish payments (the setting-specific items), we found that, for the same patients, a disproportionate share of the function levels reported for quality were reported higher than the function levels reported in the payment-related items.

Our analyses reflect the current designs and incentives of the four payment systems, VPB policies, and quality reporting. Revisions of the HHA and SNF payment systems, which will be implemented in FY 2020 for SNFs and calendar year 2020 for HHAs, may alter providers' recording of patients' functional status. Likewise, as

providers gain experience using the new uniform items and as the setting-specific payment systems begin to use the uniform assessment items, the recording of those items may also change.

Our evaluation of the function assessments raises questions about using the information to establish payments, gauge provider quality (for example, improvements in function), or tie to quality payment (as in a VBP policy). Given the long history of PAC providers responding to payment incentives, the Medicare program should be cautious in using this information to adjust payments, either in the design of payment systems or a VBP policy. This caution would be consistent with the Commission's previous statements that risk adjusters should exclude factors over which providers exert control (Medicare Payment Advisory Commission 2016a). The incentives to report lower than actual functional status to raise payments coupled with evidence of inconsistent reporting raise serious questions about including this information to adjust payments.

Defining levels of function consistently across settings

Each setting-specific assessment collects information on common domains of function (such as the ability to walk or transfer), but differences in assessment tools undermine our ability to directly compare assessment information across patients treated in different settings. Assessments of the same patient by different providers can vary in part because of differences in the questions asked, the period considered in the evaluation, and the rating scales. To evaluate the consistency of the functional assessment data for these analyses, we created common levels of function across the setting instruments.

Differences in the setting-specific and uniform assessments

All PAC assessments record a patient's functional ability, but each provider type uses its own definition and rating scale. For example, to evaluate walking for SNF and IRF beneficiaries, the MDS distinguishes between walking in the corridor versus walking in the unit, the Functional Independence Measure™ (FIM™) records the distance walked or wheelchaired (e.g., less than 50 feet, between 50 and 149 feet); the LTCH CARE records the distance walked but uses different definitions (e.g., 10 feet, 50 feet with 2 turns); and the OASIS includes no specificity about distances walked.

Examples of changes post-acute care providers have made in response to payment incentives

Providers in each post-acute care (PAC) setting have made substantial changes to their practices in response to payment incentives.

Home health agencies revised their coding of hypertension and the number of therapy visits they furnished

The responsiveness of home health agencies (HHAs) to payment incentives is illustrated by agencies' coding of hypertension and the provision of therapy visits. Both were factors in the assignment of episodes to case-mix groups for payment.

In 2008, CMS implemented revisions to the case-mix system for the home health prospective payment system (PPS) that increased payments for episodes with the diagnosis of unspecified hypertension (International Classification of Diseases–Clinical Modification code 401.9). CMS observed that between 2008 and 2009, the rate of unspecified hypertension rose from 39.9 percent to 52.1 percent of episodes (Centers for Medicare & Medicaid Services 2010). CMS noted that the National Heart, Lung, and Blood Institute had revised the guidelines for reporting early-stage hypertension in 2004, but this change predated the large jump in reported unspecified hypertension by four years (prior years had smaller annual increases in the frequency of this condition in home health care). Further, CMS's broader review in 2008 of all HHA coding found that the severity of beneficiaries receiving the service had not changed significantly over time, suggesting that at least some of the increase in unspecified hypertension was due to changes in HHA coding practices. CMS then eliminated unspecified hypertension from the home health PPS case-mix system in the 2011 payment year.

The 2008 revisions to the case-mix groups also changed the way therapy visits are considered in establishing payments. Originally, the PPS had a payment adjustment that provided a single payment increase for episodes with 10 or more therapy visits. Episodes with one to nine therapy visits received no therapy visit adjustment. The 2008 revisions implemented a series of payment adjustments that

increased payment more gradually; the new system used a series of nine payment groups that incrementally adjusted payment upward as visits increased.¹⁸ The revisions lowered payments for episodes with 10 to 13 visits relative to the original system and raised payments for episodes with visits just above and below this level.

The changes to the thresholds resulted in the swiftest one-year shifts in therapy utilization since the PPS was implemented. In 2008, the number of therapy episodes whose payments were reduced under the new system—those in the range of 10 to 13 therapy visits—dropped by about 28 percent. Conversely, payment for episodes with six to nine visits increased by 30 percent. Payment for episodes with 14 or more therapy visits increased by 26 percent. The immediate change in utilization demonstrates that HHAs can quickly adjust services to payment changes associated with the therapy visit thresholds, even though the amount of services should reflect patients' medical conditions and care needs, in much the same way that patients' functional assessments should document patients' care needs.

Skilled nursing facilities intensified the amount of therapy and modalities of treatment

Since 2002, the amount of therapy furnished to beneficiaries in skilled nursing facilities (SNFs) has substantially increased. Between 2000 and 2017, days assigned to the ultra-high rehabilitation case-mix groups rose from 8 percent to 62 percent of all SNF days, while days assigned to the high rehabilitation case-mix groups dropped from 44 percent to 9 percent. This intensification far outpaced changes in the characteristics of beneficiaries (Medicare Payment Advisory Commission 2018c, Office of Inspector General 2015).

The distribution of therapy-minute counts within case-mix groups strongly suggests that therapy was provided for financial rather than resident care needs (Centers for Medicare & Medicaid Services 2018d). Given the lack of medical evidence regarding the amount of therapy patients should receive, one would expect a broad distribution of minutes across the range of minutes

(continued next page)

Examples of changes post-acute care providers have made in response to payment incentives (cont.)

that define each case-mix group. However, CMS found that for a given case-mix group, the number of therapy minutes provided was concentrated near the “floor” of the range in minutes required for the days to be assigned to a case-mix group. Providers appear to provide just enough therapy to qualify the days for the particular case-mix group.

Although activities of daily living (ADLs) are factored into the assignment of a SNF day into a case-mix group, SNFs do not appear to have pursued this strategy to increase payments. In our analysis of Minimum Data Set data, we found small changes between 2012 and 2017 in the assignment of days based on ADLs (holding the amount of therapy furnished constant) and small differences by ownership. Our results are consistent with a study that examined upcoding attributable to providing more therapy minutes versus the upcoding of patient functioning (in this case, recording patients as less able in order to garner higher payments). After controlling for differences in patient mix, it found “highly suggestive evidence” of upcoding of therapy practices but no evidence of upcoding related to patients’ functional status (Bowblis and Brunt 2014). The authors concluded that the lack of clinical guidelines makes it relatively easier for SNFs to upcode therapy than to upcode ADLs.

Another example of SNF responses to payment policy was the mix of therapy modalities used—therapy furnished in group (a therapist treats up to four patients engaged in the same activity at the same time), concurrently (a therapist treats two patients who are engaged in different activities at the same time), or individual therapy. To correctly reflect resources required to furnish services, CMS allocated

concurrent (for FY 2011) and group (for FY 2012) therapy minutes to qualify days into case-mix groups. Following these rule changes, the use of the modalities shifted dramatically in response to the changes in the payment rules. Before the rule changes, concurrent therapy made up one-quarter of therapy minutes; after the rule change, the share dropped to 0.8 percent in FY 2011 and has stabilized at 0.4 percent (Centers for Medicare & Medicaid Services 2018b). The share of group therapy minutes was less than 1 percent before the rule change for concurrent therapy; then group therapy grew to 7.4 percent of minutes in FY 2011. After the allocation rule for group therapy was imposed, this modality dropped down to 0.1 percent of minutes, where it has remained.

Lengths of stay in long-term care hospitals reflect the definitions of short-stay outliers

In the long-term care hospital (LTCH) payment system, Medicare adjusts payments for cases with short stays so that payments are more comparable with those made for similar cases treated in acute care hospitals.¹⁹ Until FY 2018, this payment structure created large payment cliffs between the short stay outlier (SSO) payment and the full LTCH payment, creating an incentive for LTCHs to keep patients long enough so the stay exceeded the SSO threshold and qualified for full payment.²⁰ We found that a disproportionate share of cases were discharged immediately following the condition-specific lengths of stay required to qualify for a full LTCH payment (Medicare Payment Advisory Commission 2017b). This pattern held true across the LTCH case-mix groups and for every category of LTCH provider. The data strongly suggest that LTCHs’ discharge decisions are influenced by financial incentives in addition to clinical indicators. ■

Regarding the ability recorded, the MDS and the FIM assess the patient’s lowest level of function observed over an assessment period (seven days in the case of patients in SNFs, three days in the case of IRF patients). The LTCH CARE assesses function over a three-day assessment period and records the patient’s usual function observed

when they are allowed to be as independent as possible and are not limited by pain. The HHA OASIS records the level of function observed at one point in time (the day of the assessment).²¹ Therefore, differences in a patient’s function across providers could be explained by differences in the assessment tools and the level of

**TABLE
9-10****When patients are transferred between settings, differences in the assessment tool instructions could explain some variation in the function recorded**

Settings involved in patient transfer	Functional ability recorded	
	At discharge from first setting	At admission to second setting
IRF to HHA	Most dependent	Single point in time
SNF to HHA	Most dependent	Single point in time
LTCH to HHA	Usual	Single point in time
IRF to SNF	Most dependent	Most dependent
LTCH to SNF	Usual	Most dependent

Note: IRF (inpatient rehabilitation facility), HHA (home health agency), SNF (skilled nursing facility), LTCH (long-term care hospital). "Most dependent" refers to the patient's lowest level of function. "Single point in time" refers to function level at the time of the assessment. "Usual" refers to the patient's usual function observed over a three-day period when he or she is as independent as possible and not limited by pain.

Source: MedPAC review of Minimum Data Set, Functional Independence Measure™, Outcome and Assessment Information Set, and LTCH Continuity Assessment Record and Evaluation assessments.

function (e.g., lowest or average) that providers are instructed to record (Table 9-10). For example, when a patient transfers between an IRF and an HHA, the IRF completes a discharge assessment that records the most dependent (i.e., lowest) level of function observed while the HHA completes an admission assessment recording the level of function at a single point in time. When a patient transfers between an LTCH and a SNF, the LTCH completes a discharge assessment that records the usual level of ability observed and the SNF completes an admission assessment that records patients at their most dependent.

We should note that even within a setting, assessments for similar patients can vary due to the ambiguity in the definitions of the levels of assistance patients require. For example, the FIM distinguishes between total and maximal assistance needed to walk based on whether the patient requires a one-person or two-person assist. However, the level of assistance provided could vary based on the strength of the person assisting. In other domains, for which the level of assistance is based on the share of the activity the patient is able to complete, differences likely exist in the estimates across assessors.

As a part of IMPACT, there are now uniform assessment items in each of the four settings' assessment instruments.²² These items and abilities recorded differ from the setting-specific assessment items for the same domains. For example, the MDS instrument collects information about ability to transfer to bed and to a chair combined into 1 item with 8 different codes to denote the level of function and frequency of occurrence of the activity (or an indication that the activity did not occur), while the uniform items use 4 separate items to assess transferring with 10 different codes to denote level of function, the type and amount of assistance, or why the activity was not attempted. As a result of the differences, the recording of function using the setting-specific items may differ from those using the uniform items, even for the same patients in the same setting.

Creating common levels of function

For our PAC PPS design analysis, we compared assessments across settings by creating broad levels of function for four domains—eating, transferring, toileting, and walking. For each assessment tool, we mapped each functional ability recorded (such as "independent" or "requiring moderate assistance") to a defined set of points for each of the four domains, where higher points

**TABLE
9-11**

An example of creating common levels of function for the eating domain across PAC setting assessments

Eating domain	SNF	IRF	HHA	LTCHs
High function (10 points)	Performs functions independently or with supervision	Complete or modified independence (with device) or supervision	Performs functions independently	Performs functions independently or supervised without touching
Medium function (5 points)	Limited support	Minimal or moderate assistance	Performs function independently but requires meal set-up or intermittent supervision from another person or modified consistency of food	Requires partial/moderate assistance or supervision
Low function (0 points)	Extensive support	Maximal assistance	Requires assistance or supervision throughout meal	Substantial or maximal supervision

Note: PAC (post-acute care), SNF (skilled nursing facility), IRF (inpatient rehabilitation facility), HHA (home health agency), LTCH (long-term care hospital). "With device" means patient can eat independently with assistive eating devices such as weighted utensils or straws. SNFs use the Minimum Data Set (MDS), IRFs use the IRF Patient Assessment Instrument (IRF-PAI), HHAs use the Outcome and Assessment Information Set (OASIS), and LTCHs use the LTCH Continuity Assessment Record and Evaluation (CARE) data set. We mapped items and values from each setting's assessment to common levels of high, medium, or low function. For simplicity, in the table we present the meaning of the level of function from the assessments and not the individual item and value.

Source: MedPAC cross-walk of levels of function across setting-specific assessments.

represented higher levels of function. Then, for each assessment, we assigned points corresponding to the patient's level of function recorded. For example, a patient in a SNF was assigned 10 points for the eating domain if he or she was independent or simply required supervision, and 0 points if he or she required extensive support (Table 9-11 shows an example of the common definitions we created for one function domain). We based the total points for each domain on the Barthel index.²³

Our analysis included assessments at admission (but not at reentry) and discharge assessments for planned discharges when return was not anticipated. To evaluate the broad levels for each domain, we compared the distributions of the number of assessment items assigned with each broad group for the setting-specific items and the uniform items, at both admission and discharge. We found relatively similar distributions of high, medium, and low function levels across the setting-specific and uniform items, and the variation and direction of the distributions were also what we would expect (e.g., more assessments with higher function at discharge compared with at admission, lower function levels for LTCH patients compared with HHA patients).

We added the number of points assigned for each of the 4 domains to create a total function-level score for each patient assessment, which ranged from 0 points (for a totally dependent patient) to 50 points (for a completely independent patient). We grouped each patient into five overall function categories (highest, high, medium, low, and lowest) based on the total number of points assigned. We believe that using these broad definitions of functional ability and examining total points (rather than any single domain) allows us to examine the consistency of the reporting of functional assessment data across and within settings. Further, by limiting our comparisons of discharge and admission assessments to those conducted within three days of each other, we limited the potential discrepancies in the levels of function recorded for the same patient.

Our analyses were limited by the assessment information collected by providers and reported to CMS. HHAs are not required to submit discharge assessments for patients discharged to institutional PAC settings. As a result, our analyses of sequential stays did not include transitions between HHAs and institutional settings. These are rare in any case. HHAs only recently began collecting the full set of uniform assessment items (January 2019), so

**TABLE
9-12**

Reported levels of patient function were associated with other patient characteristics, 2017

Patient characteristic	Broad function level at admission				
	Highest	High	Medium	Low	Lowest
Average age	73	77	79	79	78
Average risk score	1.77	1.75	1.85	2.00	2.24
Share of stays with:					
Multiple body system conditions	10%	13%	12%	13%	29%
Cognitive impairment	9	12	15	19	30
Highest severity of illness indicator	13	11	11	11	22

Note: Results include all post-acute care stays with complete patient assessments at admission. Each patient assessment is categorized into one of five levels of function (scored by the Commission based on a modified Barthel index). The “highest” function level refers to beneficiaries who are independent or require supervision. “Lowest” function level refers to beneficiaries who are dependent or who need extensive assistance. “Highest severity of illness indicator” refers to Level 4 (out of 4).

Source: MedPAC analysis of 2017 Minimum Data Set, Functional Independence Measure™, Outcome and Assessment Information Set, and LTCH Continuity Assessment Record and Evaluation assessments.

our comparisons of the differences in functional status reported for payment and quality reporting did not include HHAs. We excluded LTCHs from our comparison of function levels reported for quality and payment purposes because LTCHs collect only the uniform assessment items and do not consider function in their case-mix methodology.

Missing assessment data

Our analyses of the PAC assessment data found that a large portion of the data was incomplete or missing. Many patient assessments were removed from our analysis because the information for any given assessment was incomplete: Either it was missing patient identifiers used to match assessments or it was missing one or more of the four function items. HHAs had the most incomplete information, such that about 30 percent of assessments were removed, many of them missing eating and toileting hygiene item responses. SNFs had the most complete information, with less than 1 percent of assessments removed for incomplete data.

For patients who transfer between PAC settings, there should be an assessment completed at discharge from one PAC provider and another completed at admission by the next PAC provider.²⁴ Many patients were missing either a discharge or an admission assessment. The percent of

unmatched discharge and admission patient assessments from 2017 ranged from 10 percent (for transfers between LTCHs and HHAs) to 27 percent (for transfers between LTCHs and SNFs). Until this information is more complete, we would be reluctant to gauge provider performance using it.

Reported levels of patient function were associated with other patient characteristics

In examining the consistency of the 2017 patient assessment data, we compared the characteristics of the patient population with their level of function. As expected, we found that beneficiaries in the lowest function group had higher severity of illness and beneficiaries with the highest function had lower severity.

The highest functioning beneficiaries were younger, with an average age of 73 years compared with 78 years for the lowest functioning group (Table 9-12). The highest functioning beneficiaries also had a lower risk score, on average (1.77), compared with the lowest functioning beneficiaries (2.24). A smaller share of beneficiaries in the highest functioning group also had diagnoses that involved multiple body systems, cognitive impairment, and the highest severity of illness (Level 4 out of four levels), compared with the lowest functioning group.

**TABLE
9-13**

Levels of function assessed across sequential PAC stays were inconsistently reported, 2017

Share of function-level assessments at admission to a PAC setting that differed from the previous setting's function-level assessments at discharge by:

PAC settings of sequential stays	Number of paired assessments	Two or more levels lower	One level lower	At same level	One level higher	Two or more levels higher
IRF to HHA	17,930	66%	26%	7%	1%	0%
LTCH to HHA	8,319	46	28	22	3	1
SNF to HHA	301,246	26	40	26	7	1
IRF to SNF	31,164	21	37	32	9	1
LTCH to SNF	17,750	10	24	52	12	2

Note: PAC (post-acute care), inpatient rehabilitation facility (IRF), HHA (home health agency), LTCH (long-term care hospital), SNF (skilled nursing facility). The “number of paired assessments” is the number of PAC stays with complete patient assessments at discharge from one PAC stay and admission to the sequential PAC stay. Each patient assessment is categorized into one of five broad levels of function defined by the Commission based on a modified Barthel index for four domains of function (eating, transferring, toileting, and walking). “Two or more levels” refers to those patients whose broad level of function at admission to the next PAC setting differed by at least two levels from the broad level assessed at discharge from the prior PAC stay.

Source: MedPAC analysis of 2017 Minimum Data Set, Functional Independence Measure™, Outcome and Assessment Information Set, and LTCH Continuity Assessment Record and Evaluation assessments.

These results suggest that, for groups of patients, provider-reported functional assessment information generally reflects other patient characteristics, particularly for patients assigned to the highest and lowest functioning groups. The relationships are less clear for patients assigned to the middle three groups (high, medium, and low function levels). However, as described in the next sections, the differences in recorded function for the same patient give us concerns about the consistency of the information.

Levels of function assessed across sequential PAC stays were inconsistently reported, with differences that would predominantly raise payments

Our comparison of the broad categories of function recorded with setting-specific assessments at discharge from one PAC setting and at the sequential admission to another PAC setting in 2017—for the same patients—found considerable differences between the two assessments. The share of discharge assessments evaluated at the same broad function level (e.g., highest or high) at admission to the next PAC setting ranged from 7 percent (from IRFs to HHAs) to 52 percent (from LTCHs to SNFs) (Table 9-13).

Differences in function levels assessed using our broad levels of function favored one direction. When patients were discharged to another PAC setting, a much larger share of beneficiaries was assessed as having lower function at admission to the next setting compared with those assessed with a higher level of function. Among patients discharged from IRFs and then admitted to HHAs, 66 percent were rated as having two or more levels lower function at admission to the HHA, compared with 0 percent assessed with function two or more levels higher. The large share of assessments that varied two or more broad levels especially raises questions about consistency because the magnitudes of these differences are less likely to be due to differences in the assessment tools. Similarly, in transfers between SNFs and HHAs, patients were more likely to be assessed at a lower level of function at admission to an HHA than at a higher level of function relative to the SNF discharge assessment (26 percent were assessed at two or more levels lower at admission vs. 1 percent assessed at two or more levels higher). Yet, considering differences in assessment tool rules, we would have expected patients to be assessed at a higher level at admission to HHAs than at discharge from a SNF or IRF because the OASIS records patients’ ability at one point in time (e.g., admission), whereas

the IRF and SNF assessments record patients' ability at their most dependent (see Table 9-10, p. 310). Even if that one point in time caught the patient at his or her most dependent and that level was worse than the level recorded at discharge from the preceding IRF stay, it seems unlikely that these circumstances existed for such a large share of assessments.

For transition between providers that record patient function at their most dependent (IRFs to SNFs), a much larger share—21 percent—of patients were assessed at two or more levels lower at admission to the next setting compared with 1 percent assessed at two or more higher levels of function. Differences in the assessment periods (seven days in the case of the SNF MDS, three days for IRF assessments) might account for some, but not all, of the difference. Reasonably consistent assessments would include similar shares of mismatches in both directions between the discharge and admission assessments. The much higher share of lower assessments at admission suggests that the function data recorded by providers are biased toward raising payments.

Some transfers involve settings in which differences in the assessment tools would likely produce broad function levels at admission to the second setting that are lower than function levels at discharge from the first setting. For example, patients transferred from LTCHs to SNFs involve the discharge assessment recording the usual status function of the patient, whereas the admission assessment records the most dependent. For these transfers, we expected and found a larger share of patients assessed at a lower function level (34 percent) compared with a higher function level (14 percent).²⁵

The function levels recorded by HHAs can be explained to some extent by the financial incentives of the HHA PPS. HHAs receive a higher payment rate for patients assessed with lower function at admission. The data could also be inconsistent because providers are assessed on their ability to improve or maintain patients' function during a PAC stay, so they have an incentive to assess patients as having low function at admission and high function at discharge.

In addition, some of the differences in function levels recorded could be attributable to differences in assessment tools—the questions, patients' ability recorded, and time frames of the observation period—or some degree of subjectivity of the assessors in their evaluations of patients. But the magnitude and bias of the differences (some of which went against expectations) raise questions about the

consistency of the data and whether it is ready to be used to evaluate provider quality.

Function levels based on uniform items used for quality reporting were inconsistently reported across sequential PAC stays

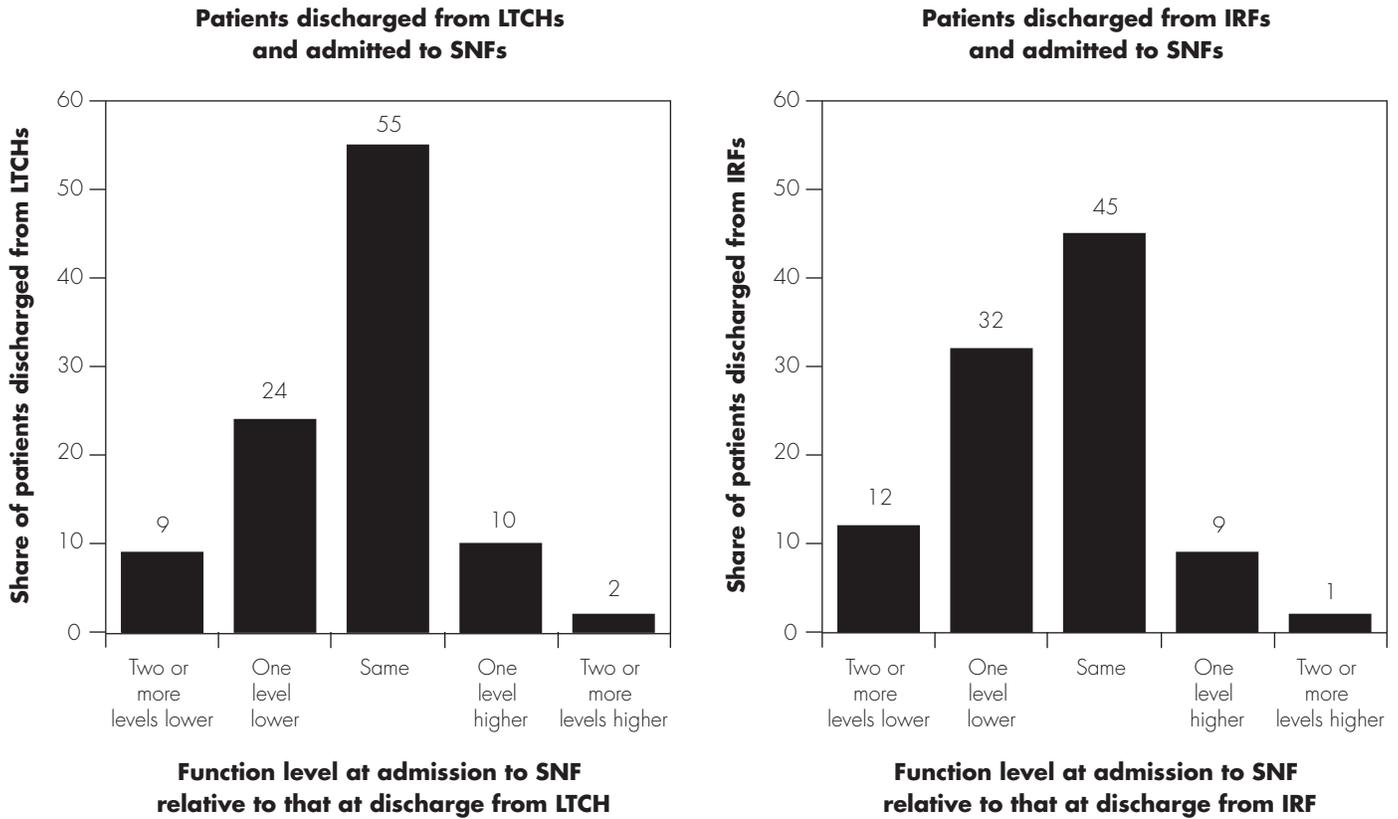
For beneficiaries who transition between institutional PAC providers, uniform assessment items are directly comparable.²⁶ For these uniform items, there are no differences between the settings in the activities assessed, the timing of the assessment, or the ability recorded. Therefore, we would expect the discharge and admission assessments to assign the same broad function category and for there to be few mismatches of two or more levels' difference. Furthermore, because results from uniform items are not used to adjust payments, we would expect the discharge assessments to be similar to the admission assessments and for the mismatches to be evenly distributed between those that were higher and those that were lower. These comparisons are limited by the relatively low volume of transfers between institutional PAC providers (e.g., IRF to SNF or LTCH to SNF).

Nevertheless, using the uniform items, we found inconsistencies in the function levels assessed at discharge and admission (from LTCHs to SNFs and IRFs to SNFs) in 2017. These differences are noteworthy because rating results from the uniform items are used for quality measurement, but not payment.²⁷ Only about half of discharge assessments (45 percent to 55 percent) were assessed at the same function level at admission to the second PAC setting (Figure 9-3). The mismatches predominantly included functions being assessed lower at admission to the second setting. For example, 24 percent of LTCH discharges were assessed one level lower at admission to a SNF compared with only 10 percent assessed one level higher at admission to a SNF. We found larger disparities in the assessments between IRF discharges and SNF admissions.

The uniform items are used to calculate provider-level quality performance measures, such as change in mobility. The data may be inconsistent because providers want to perform well on the quality measures, so they report higher function at discharge (to show improvement) and lower function at admission (to leave themselves more opportunity to improve). In addition, some providers may report improvements in function to potential or contracting partners. Appearing to have achieved large improvements in functional status may help secure referrals from them.

**FIGURE
9-3**

Uniform assessment items were recorded inconsistently across providers, 2017



Note: LTCH (long-term care hospital), SNF (skilled nursing facility), IRF (inpatient rehabilitation facility). Each patient assessment was categorized into one of five broad levels of function based on a modified Barthel index for four domains (eating, transferring, toileting, and walking). “Two or more levels” refers to those patients whose broad level of function at admission to the next post-acute care (PAC) setting differed by at least two from the broad level assessed at discharge from the prior PAC stay. The number of paired assessments included in the analyses was 17,030 for the LTCH-to-SNF comparison and 31,185 for the IRF-to-SNF comparison.

Source: MedPAC analysis of 2017 patient assessment data submitted to CMS.

Admission levels of function recorded by the uniform items matched the setting-specific items less than half the time

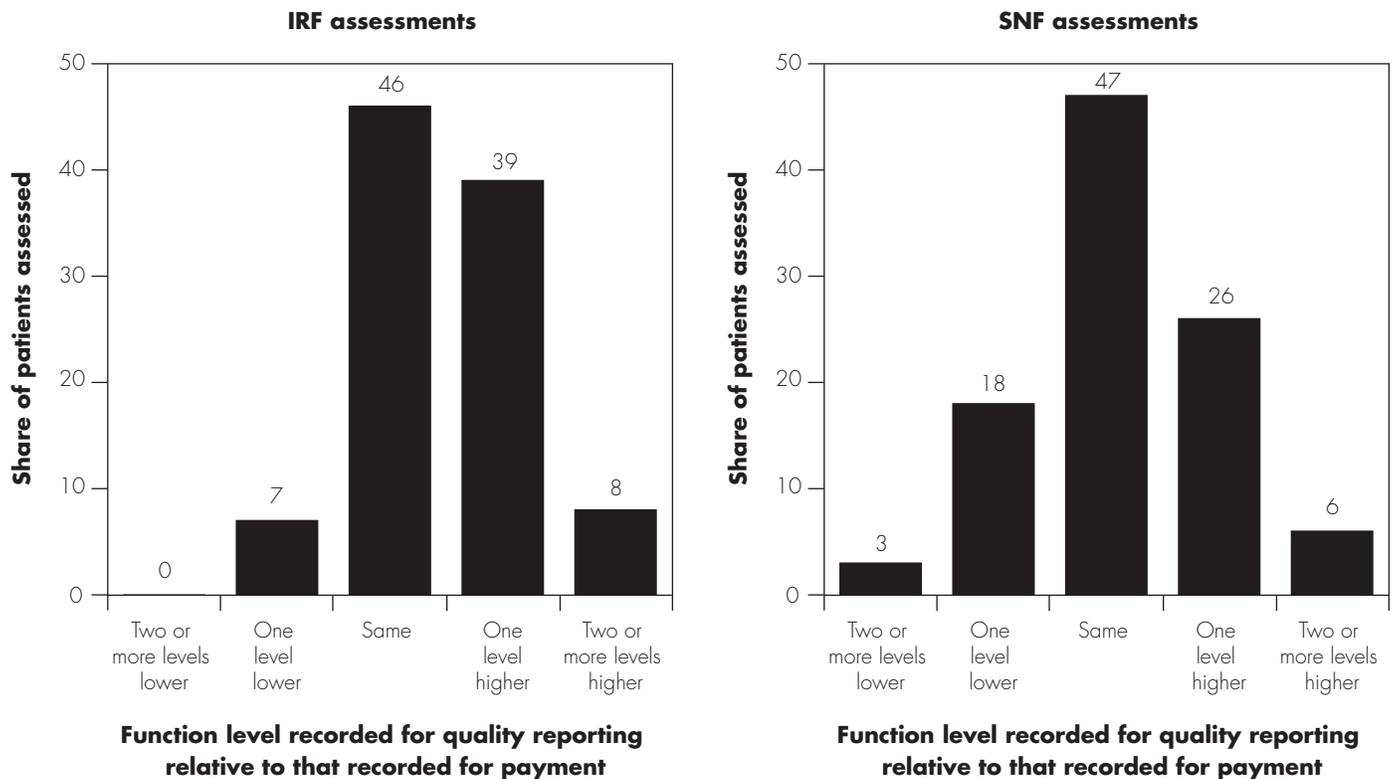
Within each setting, we also examined the internal consistency of reporting of function items for patients at admission. We examined assessments for IRFs and SNFs because uniform item data are not yet available for HHAs, and LTCHs do not record setting-specific items. We compared the broad function categories that are used for payment (the setting-specific instruments) with those used for quality reporting (the uniform items). Because the instructions for the setting-specific assessments and the uniform items differ—the uniform items record a patient’s usual performance, while the setting-specific items record a patient’s most dependent performance—the broad function

categories might differ. The function category assigned by the uniform items might, on average, be higher than those recorded by the setting-specific items. However, we would not expect the uniform items to be lower.

We found that, for both IRFs and SNFs, less than half of the admission assessments recorded the same function category in the information used for quality reporting (the uniform items) and the setting-specific items used for payment (Figure 9-4, p. 316). The data used for quality reporting were more likely to be recorded one function level higher (more independent) than the information used to establish payments (39 percent for IRFs and 26 percent for SNFs). A small share of the assessment items had function levels that were two or more levels higher or

**FIGURE
9-4**

Admission levels of function recorded by uniform items matched the setting-specific items less than half the time, 2017



Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility). Each patient assessment was categorized into one of five broad levels of function based on a modified Barthel index for four domains (eating, transferring, toileting, and walking). “Level higher” indicates that the functional ability recorded in the quality reporting data was higher (more independent) than what was recorded in the data used for payment purposes. “Level lower” indicates that functional ability recorded in the quality reporting data was lower than what was recorded in the data used for payment purposes. Uniform items are the common GG items that are collected by IRFs and SNFs. These uniform items are often called the “GG items,” referring to Section GG of the assessment tool. The number of paired assessments was 459,923 for the IRF comparison and 1,868,312 for SNF comparison.

Source: MedPAC analysis of 2017 Minimum Data Set and Functional Independence Measure™ assessment data.

lower. In our comparison of uniform and setting-specific items by ownership and type of provider (e.g., hospital based, freestanding), we found that the share of admission assessments for which uniform items were assessed two or more function levels higher was slightly higher in for-profit and hospital-based IRFs. We did not see as much of a difference with the SNF assessments.

We do not know what share of patients’ usual performance (recorded for the uniform items) differs from the most dependent performance (recorded for the IRF and SNF specific items) or by how much. These results indicate

that the majority of patients’ usual performance is at least one broad level different from their most dependent. To the extent that these differences reflect the variation in performance between usual and most dependent functioning, the differences are not concerning. But if they reflect payment incentives, then as the uniform items are used to adjust payments, we would expect the recording of patient function to resemble the levels of function recorded by the setting-specific items. Also, as providers gain experience using the new uniform items, the recording of those items may also change.

Strategies to improve and alternatives to PAC provider-completed assessments

The inconsistency of the patient functional assessment data undermines our confidence in and the desirability of using provider-reported function data for payment. However, maintaining and improving function is a key outcome measure for Medicare beneficiaries, so it is incumbent on CMS to improve the provider-completed assessments or explore alternative measures of function.

The Commission has considered several strategies that could improve the accuracy of the patient function assessment data and/or provide alternatives to the provider-reported data, but each comes with caveats (see text box, pp. 318–319, for additional detail on the strategies). First, CMS could improve its monitoring of provider-reported assessments and conduct on-site audits of providers that have submitted aberrant data. Under such audits, meaningful penalties, such as civil monetary penalties, could be imposed on providers whose data submissions are either inaccurate or not supported by adequate documentation. Conditions of participation could also be expanded to require sufficient documentation in the medical record to support the recorded functional status.

A second strategy would keep the patient’s assessment at discharge from the first setting as the assessment for subsequent PAC providers. For example, if a patient were discharged from an IRF and subsequently admitted to an HHA, the patient’s functional status at admission would remain what was recorded at discharge from the IRF. If the HHA disagreed with the IRF’s assessment, the HHA and IRF would need to come to a consensus on the patient’s functional status or work with a third-party reviewer to determine the correct functional status. Given the large volume of PAC stays, using third-party reviewers would be resource intensive.

A third strategy would require acute care hospitals to complete assessments of patients when they are discharged. This requirement could be useful for validating the PAC provider-reported assessment information but would raise hospitals’ costs. However, because the majority of PAC stays are not preceded by a hospital stay, this strategy has limited applicability. Also, some function domains would not align across settings: For example, a patient’s ability to dress in a hospital gown is different from being able to dress in clothing. Furthermore, hospitals with affiliated PAC providers would have a financial incentive to consider how they report this functional assessment information.

A fourth strategy would be to gather patient-reported outcomes (PROs) (see text box, p. 320–321, on PROs). PROs would sidestep the problem of providers’ financial incentives influencing their reporting of patients’ functional status. However, currently no PROs are collected in PAC settings or included in PAC quality reporting programs. Further, many PAC patients have a high severity of illness and cognitive impairments that would affect the ability to collect accurate PRO results. The use of proxies to gather this information would need to be an integral part of developing this option.

Aligning regulatory requirements across PAC providers

Because a unified PAC PPS would establish a common payment system, Medicare’s current setting-specific regulations would need to be aligned so that PAC providers face the same set of requirements—though some requirements would continue to differ for HHA since it does not involve facility-based care. The Commission has proposed that a common set of requirements be developed for all PAC providers, with additional requirements specified for providers that opt to treat patients who require specialized resources (Medicare Payment Advisory Commission 2016a). Requirements would thus shift from being based on setting to being defined by individual patients’ care needs.

Current statutory and regulatory requirements for PAC providers

Medicare has numerous statutory and regulatory requirements for providers that define benefit coverage, payment requirements, and administrative and operational requirements. To better understand federal requirements for Medicare PAC providers, we worked with a contractor to compile and review the conditions of participation (COPs) and other program requirements for the four sectors.²⁸

Our review studied the COPs more closely because these establish the basic responsibilities for PAC providers in the Medicare program. The COPs are designed to ensure adequate and appropriate oversight and provision of care, and they generally cover five domains:

- services and staffing, including staff credentials;

Strategies to improve PAC provider-completed assessments and create alternatives

The Commission considers three strategies that could improve the accuracy of patient function assessment data and challenges associated with implementing them. Another strategy, not included here, would keep the patient's assessment at discharge from the first setting as the assessment for subsequent post-acute care (PAC) providers.

Improve monitoring of provider-reported assessments

To help ensure the accuracy of the patient function data, CMS could monitor provider-reported function data to detect unusual patterns and implement an audit program to follow up on aberrant results. Currently, PAC providers attest to the accuracy of the data they report, but Medicare does not audit the accuracy of the assessment data through medical record review or real-time review (e.g., an independent assessor and a provider perform a patient assessment at the same time and compare results). (Currently, Medicare administrative contractors compare the coding on inpatient rehabilitation facility (IRF) patient assessment instruments with the documentation in the IRF medical records and are authorized to deny IRF claims if the medical record does not support the claim. However, this type of review does not examine the accuracy of the level of function documented.) CMS offers providers comprehensive training on how to properly collect assessment data and operates a help line to answer providers' questions about the interpretation and correct coding of assessment items.

As part of a monitoring program to detect unusual patterns, CMS could assess the completeness of assessment data, the function scores reported, and improvement in function both within and across providers. CMS could conduct comparative analyses similar to the ones we performed but at the provider level. For example, CMS could look for providers that show large improvements in function that do not coincide with other beneficiary characteristics such as comorbidities, average age, and risk scores. CMS could also monitor whether providers have a high share of assessments with large differences (e.g.,

two or more levels) in the discharge function level assessed compared with the function level assessed at a sequential admission. Because these comparisons would raise questions about the provider discharging the patient and the subsequent admitting provider, CMS would need to examine the assessments completed by both providers. CMS could also require, as part of the state survey and certification programs, that state evaluators be trained to conduct patient assessments and determine interrater reliability between evaluator and provider staff assessments on a sample of the provider's patients.

To follow up on providers flagged by the monitoring program, CMS could expand an audit program of those providers that have submitted what appear to be aberrant patient functional assessment data. Audits can include reviewing medical records for beneficiaries treated by PAC providers with aberrant patterns. For example, a recovery audit contractor (RAC) or quality improvement organization (QIO) could conduct on-site audits of those providers with large differences between discharge-setting assessments and admission-setting assessments. The audit would examine a sample of medical records to evaluate whether it includes sufficient documentation, such as therapy notes, to confirm the accuracy of the provider's reported functional status levels. If many of the medical records do not match the assessment's level of function, CMS could take corrective action, including assessment of penalties.

The auditing program would be consistent with those that investigate other provider practices. (The Government Accountability Office (GAO) has concluded that regular audits are needed to ensure the accuracy and comparability of nursing home quality data (Government Accountability Office 2018).) Currently, RACs focus on underpayments and overpayments made to providers. RAC programs also examine the medical necessity of home health care and skilled nursing facility care to ensure stays meet Medicare coverage criteria. Despite the numerous problems associated with RACs raised by the Commission and others (such as the burden imposed

(continued next page)

Strategies to improve PAC provider-completed assessments and create alternatives (cont.)

on providers), staff could explore whether the role for RACs could be expanded to validate provider-reported assessment data. QIOs could also be a vehicle for auditing the accuracy of the assessment data. QIOs have the authority to perform case reviews of PAC and other providers that include denial of payment for admission, changes in diagnosis related groups, and the identification of confirmed quality of care concerns.

Require hospital discharge assessments

One way to confirm the quality of the function information submitted by PAC providers would be to require acute care hospitals to complete a short assessment of patients discharged to PAC. This information would allow CMS and stakeholders to compare the functional status of patients at discharge from the preceding hospital stay with an assessment completed at admission to PAC. Systematic differences between the two could trigger program integrity efforts. However, because community-admitted beneficiaries would not have a prior hospital stay, this approach would not address the quality of assessment information collected for them. Also, a number of institutional PAC providers are hospital based, so such hospitals would have an incentive to downgrade reported function levels for patients moving on to affiliated PAC providers.

Gather patient-reported outcomes

Patients' perspective on their level of function is valuable, but research and experience with use of patient-reported outcomes (PROs) in PAC settings

are limited (see text box on PROs, pp. 320–321). CMS has done some initial testing of using patient-reported depression, anxiety, and global health status in the standardized PAC patient assessments and found the items to be valid and reliable, but with lower feasibility for PAC settings (RAND Corporation 2018). One recent study testing PROs in IRFs found it feasible to collect health status data during and after an IRF stay from persons with neurological disorders, although a substantial proportion of patients would likely require assistance in completing the survey (Heinemann et al. 2018). The majority of patients used a tablet computer and were willing to complete the survey one month after discharge, although multiple reminders and telephone interviews were required. The authors note that more research is needed to evaluate strategies to integrate PRO collection into routine care, maximize response rates during and following IRF hospitalization, and assess the use of proxy respondents in cases when patients are unable to report their experience of care. The Commission has also discussed concerns that many PAC patients, particularly long-term care hospital patients, have high severity of illness levels and cognitive impairment that would impact the ability to collect accurate PRO results. Patients can also refuse to complete a patient instrument. More research is also needed to determine the sample size required to achieve acceptable reliability to compare improvement or decline in function within and across PAC providers. The Medicare program could consider supporting continued research and testing of PROs in PAC settings for potential use as a quality measure. ■

- care planning, including requirements related to care coordination, patient assessment, and admission, transfer, and discharge of patients;
- administration, including administrative staff and activities, such as planning and budgeting, and other operational requirements, such as certification;
- quality and safety; and
- patients' rights while under the care of the provider, such as the requirement to be informed of their rights and the right to privacy and confidentiality.

SNFs' and HHAs' requirements set the basic requirements for institutional and in-home PAC

The requirements for SNFs and HHAs allow these settings to serve a broad range of patients, and these settings are the most frequently used PAC services by Medicare

Patient-reported outcome measures

Patients are a valuable and, arguably, authoritative source of information on outcomes. An alternative to relying on provider-completed patient assessments is to collect function data for quality measurement through patient-reported outcome (PRO) tools. Currently, no PROs are included in post-acute care (PAC) quality programs. However, the use of PRO measures elsewhere in Medicare and other health systems can provide lessons for the potential use of PRO measures in PAC settings. PRO measures generally fall into one of three categories: (1) summary health-related quality of life results (e.g., improved physical or mental health); (2) intervention-based tools (e.g., item-response tools); and (3) patient experience (e.g., overall rating of care, communication with nurses). We focus our discussion on the first two categories since they are currently used to assess function.

Two of the most common, validated PRO tools to assess a patient's summary health status are the 12-item and 36-item Short Form Health Surveys (SF-12 and SF-36).²⁹ The surveys ask questions related to eight health concepts: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. For example, the survey asks patients to rate their health as excellent, very good, good, fair, or poor, as well as whether and how much their health limits their ability to complete certain activities (such as walking, climbing a flight of stairs, bathing, and dressing). Some of the SF-36 questions about physical health overlap with the current functional assessment domains used to establish payment for PAC providers (see Table 9-1, pp. 284–285), but some of the PAC functional domains are not included in the SF-36 (e.g., toileting, eating, bed mobility). The individual survey results of the SF surveys are scored using a standardized scoring key, and high scores define a more favorable health state.

Medicare has some experience using PRO measures to assess summary health-related quality of life results for larger populations of beneficiaries. Medicare Advantage (MA) plans are required to collect Health Outcomes

Survey (HOS) responses from a random sample of their Medicare beneficiaries and, two years later, survey the same beneficiaries again. (The HOS includes questions from the Veterans RAND 36-Item Health Survey, which is adapted from the SF-36). HOS results are used to calculate plan-level measures of improved or maintained physical health and mental health, which are scored as a part of the MA star rating program. In its March 2010 report to the Congress, the Commission observed that, as applied to detect changes over time in MA plan enrollees' self-reported physical and mental health status, the HOS often produced results showing no significant outcome differences among MA plans (i.e., a floor and ceiling effect). Recent literature suggests that CMS should consider increasing the sample size for stable, reliable measurement of functional status through the HOS responses (Rose et al. 2019). The Commission recommended that the Secretary address concerns with the survey and collect the HOS responses for fee-for-service and MA plans in order to compare quality within local market areas (Medicare Payment Advisory Commission 2010).

Medicare accountable care organizations (ACOs) use the Consumer Assessment of Healthcare Providers and Systems[®] to collect a small number of items on patient-reported health status and functional status from a sample of their beneficiaries, although ACOs are not yet scored on these measures. A small number of functional status measures are included in the measure set that clinicians can choose to report to meet Merit-based Incentive Payment System requirements. These measures are targeted to a narrower population and are often collected by specialty registries (e.g., functional status change for patients with elbow, wrist, or hand impairments).

Outside of the Medicare program, there is growing support from clinicians and researchers to embrace the use of PRO measures in clinical care as a part of interventions. We present two examples of large health systems using PRO measures in clinical care and a health plan incentivizing the use of PRO measures through pay-for-adoption programs. At the University of Rochester Medical Center, patients use Wi-Fi-

(continued next page)

Patient-reported outcome measures (cont.)

enabled tablets to answer an average of four to seven questions from a validated data collection tool regarding physical function, pain interference, and depression. The tool uses computer adaptive technology and item-response theory, so each question is selected using a patient's previous responses, allowing the system to assign a score from a limited amount of information. Physicians can instantly view the scores, compare them with scores from a reference population, and use the scores to support shared decision-making with the patient (Baumhauer 2017). Partners HealthCare collects PRO measures for patients treated in orthopedics, urology, psychiatry, and cardiac surgery. They use that information for real-time clinical care and for measuring, comparing, and improving care as a system (Wagle 2017). These systems had to work through several challenges to adopt PRO measures, including the need to implement technology to rapidly administer surveys and calculate results and to change clinician workflow to administer the survey. Blue Cross Blue Shield of Massachusetts is incentivizing clinicians to collect PRO results for joint degeneration and depression in three phases: (1) paying for adoption, data sharing, and shared learning; (2) using the collective information to inform clinical treatment choices and shared decision-making with patients; (3) using PRO results for accountability (more work is needed before

moving to the third phase) (Massachusetts Medical Society 2018).

The National Quality Forum (NQF) has called for more research on best practices associated with the use of PRO measures and on several method-related challenges, such as aggregating patient data to measure performance at multiple levels of analysis (e.g., provider, setting) and use of proxy respondents (National Quality Forum 2013). As a practical matter, there is also limited infrastructure to routinely capture PRO data in provider settings, so the use of PRO measures to collect PAC functional status for Medicare is not ready for immediate implementation but has potential in the future. Because CMS has prioritized patient-reported functional outcome measures in its Meaningful Measures Initiative, there is potential for more effort to develop and implement PRO measures in Medicare quality programs (Centers for Medicare & Medicaid Services 2018a). The NQF measure incubator is researching the development of PRO measures for five clinical areas, including chronic obstructive pulmonary disease and multiple sclerosis. Also, the National Committee for Quality Assurance is testing the feasibility of an approach to individualized measurement for complex populations that is based on measuring how well organizations are helping individuals achieve personalized goals (that can be tied to function) for their health and life. ■

beneficiaries. Some SNF and HHA requirements are intended to serve as a check on unnecessary admissions, but, in application, the rules permit a range of practice patterns (Table 9-14, p. 322–323) (Medicare Payment Advisory Commission 2017c).

Major SNF requirements Medicare covers SNF care only after an inpatient hospital stay of at least three days and requires that a patient have a need for skilled care (such as nursing or rehabilitation services).³⁰ Medicare SNF care is intended to be a posthospital service for patients who require acute nursing care but at a lower level of intensity than typically found in an inpatient setting. This requirement acts as a barrier to prevent nursing homes

from recertifying long-stay residents as Part A–covered SNF stays to receive higher Medicare SNF payments. Because of this requirement, only beneficiaries who are sick enough to be hospitalized can receive coverage for more intensive SNF care. SNFs are also required to have a medical director who oversees operations and the quality of care provided. Patients in SNFs are required to have a physician visit within the first 30 days of a beneficiary's admission and 1 visit every subsequent 60 days.

SNFs must provide 24-hour nursing services by a licensed nurse and have a registered nurse working in the facility for at least 8 consecutive hours a day. In 2016, CMS

**TABLE
9-14**

Selected federal regulatory requirements for staffing and services, by PAC setting (continued next page)

Staffing/ services	LTCHs	IRFs	SNFs	HHAs
Physician services	<p>A physician must supervise medical care of each patient. Physician conducts daily examination of patient.</p> <p>A physician must be on duty or on call at all times.</p>	<p>A physician must supervise medical care of each patient. Patient is examined by a physician three times a week.</p> <p>A physician must be on duty or on call at all times.</p> <p>The facility must have a physician serving as director of rehabilitation on a full-time basis (part time in rehabilitation units).</p> <p>A physician must establish, review, and revise as needed a plan of treatment for each patient.</p> <p>Patients must have at least 3 face-to-face visits per week by a physician.</p>	<p>A physician must supervise medical care of each patient.</p> <p>The facility must provide or arrange for the provision of physician services 24 hours a day, in case of an emergency.</p> <p>Patients must be seen by a physician at least once in the 30 days after admission and at least once every subsequent 60 days.</p>	<p>A physician must establish, review, and revise the plan of treatment for each patient.</p> <p>Medicare requires a face-to-face visit by a physician or nurse practitioner in the 90 days before or 30 days after the initiation of home health care.</p>
Nursing services	<p>The facility must provide 24-hour nursing services furnished or supervised by a registered nurse.*</p>	<p>The facility must provide 24-hour nursing services furnished or supervised by a registered nurse.*</p>	<p>The facility must provide 24-hour nursing services by a licensed practical nurse and must use the services of a registered nurse for at least 8 consecutive hours a day, 7 days a week.</p>	<p>A registered nurse must make the initial evaluation visit, regularly reevaluate the patient's nursing needs, initiate the plan of care and necessary revisions, and furnish those services requiring specialized nursing skill. Other nursing services may be furnished by a licensed practical nurse.</p>

Note: PAC (post-acute care), LTCH (long-term care hospital), IRF (inpatient rehabilitation facility), SNF (skilled nursing facility), HHA (home health agency), N/A (not applicable).
*Except for rural hospitals that have a 24-hour-nursing waiver.

Source: Linehan 2017.

revisited its staffing requirements for nursing homes but declined to impose a requirement for a specific number of staff or hours of nursing care per resident (Centers for Medicare & Medicaid Services 2016). Instead, CMS opted for a “competency-based” staffing approach. In addition to having sufficient staff to provide nursing care to each resident in accordance with his or her care plan and individual needs, each facility also must ensure that

the staff has the appropriate competencies and skill sets to assure resident safety. Each facility is required to determine what constitutes sufficient staffing—both the number and necessary competencies and skill sets—for the facility given the number, acuity, and diagnoses of its residents.

When needed by a beneficiary and under the written order of a physician, SNFs must provide physical therapy

**TABLE
9-14**

Selected federal regulatory requirements for staffing and services, by PAC setting (continued)

Staffing/ services	LTCHs	IRFs	SNFs	HHAs
Physical/ occupational therapy	Services must be provided by qualified physical therapists, physical therapist assistants, occupational therapists, and occupational therapy assistants.	Services must be provided by qualified physical therapists, physical therapist assistants, occupational therapists, and occupational therapy assistants. The facility must use a coordinated interdisciplinary team approach in the rehabilitation of each inpatient, with team conferences held at least once a week to determine appropriateness of treatment.	If needed and under the written order of a physician, services must be provided by qualified personnel.	Any services must be provided by a qualified therapist or by a qualified therapy assistant under the supervision of a qualified therapist.
Respiratory care services	If such services are provided, the facility must have a director of respiratory care who is a physician and who serves on a full- or part-time basis.	If such services are provided, the facility must have a director of respiratory care who is a physician and who serves on a full- or part-time basis.	If needed, services must be provided under the written order of a physician by qualified personnel.	N/A
Pharmacy services	The facility must have a pharmacy directed by a registered pharmacist or a drug storage area under competent supervision. A full-time, part-time, or consulting pharmacist must be responsible for developing, supervising, and coordinating all the activities of the pharmacy services.	The facility must have a pharmacy directed by a registered pharmacist or a drug storage area under competent supervision. A full-time, part-time, or consulting pharmacist must be responsible for developing, supervising, and coordinating all the activities of the pharmacy services.	The facility must provide or obtain routine and emergency drugs and biologics needed by patients. The facility may permit unlicensed personnel to administer drugs if state law permits, but only under the general supervision of a licensed nurse. The facility must employ or obtain the services of a licensed pharmacist.	N/A

Note: PAC (post-acute care), LTCH (long-term care hospital), IRF (inpatient rehabilitation facility), SNF (skilled nursing facility), HHA (home health agency), N/A (not applicable).
*Except for rural hospitals that have a 24-hour-nursing waiver.

Source: Linehan 2017.

and occupational therapy by qualified personnel. SNFs are permitted to provide therapy to beneficiaries on an individual, concurrent (two or more beneficiaries working with a therapist on different therapeutic activities), or group basis (group therapy involves a therapist instructing

a group of beneficiaries on a single activity). CMS has always wanted individual therapy to represent the majority of therapy services, and it recently tightened limits on the amount of group or concurrent therapy a beneficiary can receive.³¹

Major HHA requirements Medicare beneficiaries must have a need for skilled care—either nursing or rehabilitation services—and be homebound to receive home health benefits. Home health care requires that nursing care be delivered by a registered nurse (RN) or a licensed practical nurse under the supervision of an RN. An RN or physical therapist must make the initial evaluation visit, initiate the plan of care, and regularly reevaluate beneficiary needs. There is no 24-hour or after-hours coverage requirement for home health services, but some HHAs provide these services.

Medicare regulation requires that home health care be provided under the supervision of a physician, who is also responsible for determining the need, length, and mix of services for home health care. Medicare requires a face-to-face visit with the ordering physician, which can occur up to 90 days before or 30 days after the initiation of home health care. However, there is no requirement for a physician in-home visit during a home health episode. Many beneficiaries have an office visit with a physician during their home health stay, though it is not required by Medicare.³² HHAs are permitted to have medical directors, but it is not a requirement.

Definitions of IRFs and LTCHs evolved from the need to distinguish PAC settings from acute care hospitals

The definitions and payment categories for IRFs and LTCHs were established because of the development and implementation of the inpatient PPS (IPPS) in 1983. Hospitals with very long average lengths of stay and those that served primarily patients needing intensive inpatient rehabilitation were excluded from the IPPS because their patient costs could not be accurately predicted by the IPPS patient classification system and weights. For almost two decades, IRFs and LTCHs continued to be paid under cost-based reimbursement systems but eventually transitioned to their own PPSs.³³

Major requirements for IRFs To receive payment under the IRF PPS, a provider must satisfy a compliance threshold known as the “60 percent rule.” This rule requires that no less than 60 percent of a facility’s patients (Medicare and other) have as a primary diagnosis or comorbidity at least 1 of 13 conditions and require intensive inpatient rehabilitation.³⁴ IRFs are licensed as hospitals and are required to meet the Medicare COPs for inpatient hospitals.

Medicare’s coverage criteria also require that beneficiaries admitted to IRFs need active and ongoing therapy in at least two modalities, one of which must be physical or occupational therapy. Beneficiaries must also need and be reasonably expected to actively participate in intensive therapy—generally interpreted as at least 3 hours of therapy a day or 15 hours a week. This requirement is intended to ensure that beneficiaries admitted to IRFs can tolerate and benefit from the intensive level of therapy that IRFs are presumed to provide (and for which Medicare pays). IRFs can provide therapy to beneficiaries on an individual, concurrent (two beneficiaries working with a therapist), or group basis (group therapy involves a therapist instructing a group of beneficiaries). There has been concern that group therapy and concurrent therapy are less appropriate in IRFs because the nature of intensive rehabilitation would suggest that the use of individual therapy would be warranted, and CMS has indicated that those other modalities should be used on a limited basis.

IRF nursing requirements are governed by the inpatient hospital COPs, which require 24-hour nursing services supervised by an RN. Patients in IRFs are required to receive three physician visits a week, and IRFs are required to have a physician medical director with rehabilitation expertise who oversees the care provided in these facilities.

Major requirements for LTCHs To qualify as an LTCH for Medicare payment, a facility must meet Medicare’s conditions of participation for acute care hospitals and, for certain Medicare patients, have an average length of stay of greater than 25 days. In FY 2016, CMS began phasing in a payment change for LTCH cases that do not meet certain criteria specified in the Pathway for SGR Reform Act of 2013. Under this new dual payment-rate structure, Medicare cases are paid the standard LTCH PPS rate if the patient had an immediately preceding acute inpatient hospital stay that included 3 or more days in an intensive care unit, or if the patient received mechanical ventilation services for at least 96 hours in the LTCH. These cases are reimbursed under the LTCH PPS and are used to determine that a facility’s average length of stay meets the 25-day minimum requirement. LTCH cases not meeting that specified criteria receive a “site-neutral” rate based on the lesser of an IPPS-comparable amount or 100 percent of the cost of the case. Beginning in FY 2020, at least half of an LTCH’s

cases must meet the criteria to continue to be paid the standard LTCH PPS rate for eligible cases.

Beginning in FY 2016, LTCHs receive a full payment under this setting's PPS only for Medicare patients who meet certain criteria.³⁵ The so-called "site-neutral" policy requires that a patient have a prior acute care hospitalization that includes at least 3 days in an intensive care unit or that the beneficiary receive at least 96 hours of mechanical ventilation in the LTCH. Cases that meet these criteria are paid under the LTCH PPS, while those that do not meet the criteria receive a lower payment based on the IPPS. Only Medicare's FFS patients who meet these criteria are included in the calculation of a facility's average length of stay. LTCHs are licensed as hospitals.

Patients are required to receive daily physician visits for treatment or care management, and LTCHs must have a leader of the medical staff who oversees the facility's operations and organization of the clinical workforce—effectively, a physician medical director. A physician must be on duty or on call at all times. LTCHs are required to provide 24-hour RN services. These clinical staffing and supervision requirements are intended to make the medical capabilities of LTCHs proportionate to the expected level of severity of these cases.

Many program requirements are similar across PAC settings

Program requirements for many areas, such as governance, emergency preparedness, patient rights, infection control, and quality assurance programs have similar purposes or requirements across PAC settings. In some cases, such as policies requiring compliance with applicable federal, state, and local laws, the responsibilities of the four settings are identical. The definition and licensure of physical therapists, occupational therapists, and speech-language pathologists and the nursing requirements are generally similar across the four settings.

In some instances, the requirements create similar basic responsibilities but differ in specific requirements. For example, the infection control COPs require all sectors to have a systematic approach to infection control, but the SNF requirements are more specific than the requirements for other PAC sectors. Requirements for provider governance constitute another area in which the requirements are similar, and harmonization is likely possible. When requirements in one setting are more

rigorous than similar requirements in other settings, Medicare could consider applying the requirement to a cross-setting PPS.

Some program requirements differ across PAC settings

Some requirements differ significantly across the settings and could require significant development efforts under a unified system. The most critical of these pertain to physician supervision and nurse staffing as well as ancillary needs, such as pharmacy services. For example, physicians are required to visit LTCHs daily and IRF patients three times a week; in contrast, a SNF beneficiary needs a visit after 30 days. Beneficiaries receiving home health care are not required to visit with a physician during the home health episode.³⁶ Home health care does not have certain requirements because the services covered under the benefit are more restrictive than in the institutional setting. For example, the home health care benefit does not cover prescription drugs, so there are no HHA requirements for pharmacy services. In addition, HHAs do not have requirements for condition of facilities or dietary services because HHAs do not operate residential facilities or provide room and board.

An approach to aligning requirements for PAC providers

With the implementation of a unified PAC PPS, Medicare could establish new patient-centered definitions of PAC providers that link program requirements to the types of patients a provider opts to treat. New COPs for a PAC provider could establish two tiers of requirements. Basic, or first-tier, criteria would apply to all PAC providers, while a second tier would apply to providers opting to offer specialized services to treat patients with more complex care needs. Certain requirements would be different for institutional care and home health care since providing care in a beneficiary's home differs from providing care in an inpatient setting. The new requirements should not necessarily be based on the least restrictive or least burdensome requirement for the existing settings. Rather, the requirements should be based on the minimum conditions needed to ensure patient safety. Medicare follows a similar tiered approach for suppliers of durable medical equipment (DME). A general set of requirements applies to all DME suppliers that participate in Medicare, while there are separate requirements for suppliers that offer more sophisticated DME products, such as respiratory devices, manual and power wheelchairs, and orthotic and prosthetic devices.

A new regulatory approach for PAC providers could follow a similar approach. The first tier would establish the basic competencies necessary to treat the majority of PAC patients. This tier would establish requirements for services that most moderate to less severely disabled or impaired patients receive, such as the level of nursing, rehabilitation therapy, physician supervision, and other frequently furnished services. Providers meeting the first-tier requirements could serve any PAC patient who does not have a specialized care need, as delineated by the second tier.

A second tier would establish condition-specific requirements for providers opting to treat patients with specialized or very high care needs, such as patients with clinical conditions that require ventilator support, high-cost drugs, high-cost wound care, or dialysis and patients with spinal cord or traumatic brain injuries. This approach shifts COPs from setting-specific requirements to patient-focused requirements specific to each special care need. A single set of requirements would apply to all providers opting to treat a special condition or care need. A provider opting to treat multiple complex conditions or special care needs would be required to meet each set of condition-specific requirements. Such an approach would be akin to licensing by service line. Medicare would periodically need to update the conditions assigned to the second tier to reflect changes in medical practice.

Tier 1: Core requirements for all PAC providers

The first tier would establish the core clinical services for patients who do not require specialized care. This tier's requirements would define the levels of physician supervision and nursing services and the rehabilitation services required by the most common conditions treated in PAC, such as patients with pneumonia or urinary or kidney infections or patients recovering from hip and knee surgeries. The Tier 1 requirements would delineate the licensure requirements and professional qualifications of nurses, aides, and therapists.

This tier would also establish common operational requirements that would not differ significantly across institutional or home settings, such as requiring patient assessment and specifying patient rights, leadership and administrative responsibilities, emergency preparedness, training, quality assurance, compliance and ethics, and infection control programs.

There would be a common set of requirements for institutional PAC providers that are not relevant to home

health care. These requirements would address the condition of facilities and services commonly provided in institutional settings, such as dietary, laboratory, and pharmacy services.

Physician requirements A key component of the Tier 1 requirements would be for a physician medical director. All institutional PAC providers are currently required to have some form of clinical leader or medical director. Policymakers would have to determine whether this requirement should continue for institutional providers and whether it should be extended to HHAs. The requirement could also set a cap on the number of separate facilities or agencies a medical director could oversee as a way to ensure more meaningful involvement with the care of each provider.

Medicare would also have to determine the intensity or frequency of physician involvement that it considers appropriate for patients in PAC settings. Because the first-tier requirements would not address the more specialized care needs associated with the second tier of requirements, it might be appropriate to require a regular visit, such as weekly, to assess the status of care. This requirement would be more frequent than the current SNF standard but less frequent than the physician visits in the IRF and LTCH settings. Establishing a requirement for an examination by a doctor during a home health episode would be a new requirement, but closer clinical management could also benefit patients.

Nursing service requirements The current PAC settings generally use similar definitions for the licensure and roles of nurses but have significant differences in staffing levels. Policymakers would need to decide on the required level of nursing presence. Studies in the health services literature have found a positive correlation between RN staffing and quality of care in nursing homes, although other studies have found no relationship between staffing and quality or have found mixed results (Castle 2008, Harrington et al. 2016). Some evidence suggests that hours of nursing care must exceed a minimum number before a positive correlation between staffing levels and quality can be observed (Harrington et al. 2016). In addition, there is some literature recognizing that the skill mix of the nursing staff also matters (Bowblis 2011). Staff need to have requisite qualifications and professional competencies for the care they provide. Policymakers should consider requiring a minimum standard of RN coverage, such as 24 hours a day, 7 days a week, for institutional PAC providers. Round-the-clock coverage

is likely to reduce adverse events such as preventable hospitalizations. Higher minimums could be established for providers that treat patients requiring special care (considered in the Tier 2 requirements). To align requirements, HHAs could be required to provide 24-hour access to an RN by telephone.

In response to a proposed rule, CMS received many comments urging the agency to require an RN to be in every long-term care facility 24 hours a day, 7 days a week (Centers for Medicare & Medicaid Services 2016). However, the agency was concerned that establishing a staff-time threshold could result in unintended consequences, such as staffing to the minimum, reducing other staffing not covered by any requirement, and task substitution (shifting work from staff not subject to the staff-time threshold to staff that are). CMS was also concerned about stifling the development of innovative care options, particularly smaller, more home-like settings. In addition, CMS worried that geographic disparity in the supply of RNs could make it challenging for some providers in rural and underserved areas to meet a mandate for the continuous presence of an RN. A new standard would have to include some flexibility for circumstances that could limit a provider's ability to have 24-hour RN presence, such as allowing on-call RNs or telehealth for care after hours or for low-volume providers or providers located in remote areas.

Our review of nursing home employment data suggests that increasing the requirement to 24 hours a day, 7 days a week would be a significant change. Payroll data indicate that virtually all nursing homes had an RN on duty for at least 8 hours a day for 360 days of the 2017 calendar year. However, the average number of nursing (including RNs and licensed practical nurses) hours per patient varied widely across facilities.³⁷ For example, in 2017 the nursing home at the 25th percentile provided 32 minutes per resident day, while the nursing home at the 75th percentile provided 90 minutes of nursing per resident day. The variation could reflect differences across facilities in patient needs but could also indicate that nursing homes differ in the clinical services and level of nursing service they offer. Under a unified PPS, some facilities that sought to serve patients with higher care needs would have to increase the amount of nursing services they provide.

The Secretary would also need a way to ensure that providers comply with any staffing requirement. For many years, CMS used self-reported data from nursing homes to measure staffing levels in these facilities. In

2016, CMS implemented a statutory requirement that nursing homes report payroll staffing data that would permit more accurate measurement of staffing levels. A follow-up analysis found that 7 in 10 nursing homes had, on average, 12 percent lower staffing levels in the payroll-based data than in the self-reported data (Rau 2018). The analysis also noted that nursing homes with lower staffing (when measured using the payroll data) tended to have more health code violations. Under a revised set of requirements for PAC providers, Medicare could consider requiring providers subject to a staffing requirement to submit payroll-based data, as is now required of nursing homes. The Secretary could then consider these data in its quality ratings of providers (as is currently done in the star ratings of nursing homes) or impose monetary penalties on providers not meeting the staffing COPs.

Defining rehabilitation services Many PAC users require rehabilitation services, so a relatively high level of service should be available to patients before referral to more specialized providers. Staffing requirements should address physical therapists, occupational therapists, and speech–language pathologists and the supervision of aides. Similar to existing requirements, facilities could be required to have the skill mix and staffing level appropriate for the patients they serve.

Medicare allows institutional settings to provide therapy on an individual, concurrent, or group basis. Though the use of concurrent or group therapy can improve efficiency, it can also reduce quality of care when patients require the intensity or attention of individual therapy. Under the revised requirements for a unified PAC PPS, Medicare could establish limits on the mix of individual, group, and concurrent therapy minutes a patient receives and set a cap on the number of patients who can be treated at the same time.

Tier 2: Additional requirements for providers opting to treat patients who require specialized care

The second tier of requirements would define the capabilities expected of a PAC provider opting to treat patients with specialized care needs. Medicare would identify categories of patients with conditions or treatments that require higher levels of staffing, clinical expertise, or ancillary services. Several criteria could be used to identify these categories, such as reviewing current trends in specialized PAC care, expert panel reviews, and clinical markers such as conditions associated with significantly higher hospitalization risk. Establishing

unique requirements for different clinical conditions could also improve discharge planning for patients with specialized needs because it would be easier to identify PAC facilities that offer services related to a particular condition. Specialized facilities may not be as broadly available as PAC providers meeting Tier 1 requirements, and beneficiaries with these care needs may have to travel farther from home to receive appropriate care. However, these requirements would protect beneficiaries from receiving substandard care in facilities that lack appropriate capabilities.

In establishing these categories, Medicare would have to consider the extent to which existing utilization patterns should be used for identifying the need for specialized care, whether the category can be manipulated by providers, and whether to rely on definitions developed by technical expert panels or other consensus processes. For example, if patients who require unusually high rehabilitation therapy requirements are included in the Tier 2 conditions, the definition should be clinically based rather than based on current practice patterns. Given the financial incentives of the current HHA and SNF PPSs to furnish therapy, high utilization patterns may not reflect patient need.

Possible categories for specialized requirements are described below.

- Chronically critically ill (CCI) patients: Ensuring adequate posthospital care for patients with severe medical conditions is an important function of PAC. A clinical category defining CCI patients could rely on the length of their intensive care unit (ICU) stay since much of the literature suggests that a prior ICU stay is an important signifier of CCI status (Carson 2012, Wienczek and Winkelman 2010). The Commission's analysis of CCI patients concluded that patients with eight days in an ICU were more likely to have the types of conditions clinicians considered appropriate for LTCHs, and we recommended this standard in our March 2014 report to the Congress (Medicare Payment Advisory Commission 2014). Facilities that seek to serve these patients could be required to have additional nursing staff, provide daily physician examination, deliver respiratory care when needed, and have—on-site or under arrangement—the ancillary, laboratory, and pharmacy services typically required by CCI patients.
- Patients who require prolonged ventilator service or specialized respiratory care: Patients who need these

treatments require specialized staff with expertise in managing ventilator-dependent patients (including ventilator and tracheostomy care) and experience successfully weaning patients off this care when possible. These patients may require specialized equipment, including ventilator services, tracheostomy services, and continuous positive airflow pressure. Some states have established special requirements for providers that serve ventilator patients (New Jersey Department of Health and Senior Services 2004, State of New York 2018). For example, the District of Columbia requires that staff have clinical competency in cardiopulmonary care and ventilator operation (District of Columbia 2019). The regulations require that a doctor with specialized training and experience in treating ventilator patients supervise care and that the staffing levels and staff clinical competencies be sufficient for the severity of patients receiving ventilator care.

- Patients with serious infections and patients who are receiving chemotherapy: This group would include patients with septicemia or other infections that have proven difficult to control and oncology patients receiving chemotherapy. These patients may require considerable physician and nursing oversight, and staff should be trained to identify symptoms of adverse drug reactions or ineffective treatment. These providers would also require readily available pharmacy services.
- Patients who require intensive rehabilitation: The intent of a specialized category would be to identify patients with very complex or specialized rehabilitation needs well beyond those that would be available in the first tier of requirements. Patients who require this level of intensive rehabilitation would include patients with severe limitations due to severe stroke, complex joint replacement (such as patients recovering from bilateral joint replacement who are obese), brain and spinal cord injury, and major joint trauma. The rehabilitation care for these patients would often include multiple therapy disciplines (physical therapy, occupational therapy, and speech–language pathology services). The expectation would be that these patients would receive the majority of their therapy services in one-on-one care, not in group or concurrent therapy. The requirements could also specify that providers offer the appropriate laboratory and pharmacy services for patients typically requiring this level of rehabilitation.

- Patients who require dialysis for end-stage renal disease (ESRD): Ensuring quality care for beneficiaries receiving dialysis requires specialized staff and equipment not commonly found at PAC facilities. Medicare has established conditions for coverage (CFCs) for outpatient dialysis facilities that indicate the capabilities expected of these facilities (42 Code of Federal Regulations §494). For example, the CFCs establish that facilities should have an interdisciplinary team to treat ESRD patients. The infection control program should, in addition to standard precautions, include efforts to address infections specific to patients with ESRD. The CFCs also set standards for maintaining clean water, dialysate, and hemodialyzers. These standards could be modified to establish standards for PAC providers that provide dialysis.

Policymakers would have to consider any incentive created by having separate requirements for different clinical groups. PAC providers could avoid specialized requirements by changing their diagnostic coding practices. PAC providers have changed their coding practices in response to past changes in payment policy. For example, in 2008, CMS implemented a new case-mix system that increased payments to HHAs for patients with hypertension, and in this first year, the reported rate of unspecified hypertension increased by 12 percentage points.

Maintaining and aligning coverage requirements

Policymakers will also have to consider Medicare's policies intended to ensure appropriate use of PAC, such as the three-day-stay requirement for SNFs and the homebound requirement for home health care. These requirements are intended to help ensure that the care is medically necessary, which will be equally important under a unified PAC PPS. Revisions to providers' requirements should not lower the standards for receiving PAC; otherwise, program spending could increase for care of questionable value.

The three-day prior hospital stay is a unique requirement for SNFs that would need to be aligned (at a minimum) with the requirements for other institutional PAC care. Requiring all patients to have a prior hospital stay to receive institutional PAC would tighten safeguards for appropriate use but would eliminate Medicare coverage for beneficiaries without a prior hospital stay. Fewer

than 15 percent of the beneficiaries admitted to IRFs and LTCHs have no prior hospital stay. Access for these beneficiaries could be addressed by establishing exceptions to the requirements for the prior hospital stay if a patient's conditions suggested the need for institutional PAC. For example, the requirement could be waived for patients with care needs identified in the second tier of requirements.

ACOs, MA plans, or other reform policies that place providers at risk for the efficient delivery of care could also be an exception. Because ACOs are at financial risk for their assigned beneficiaries, current regulations permit them to waive the three-day-stay requirement for SNFs, though there are minimum quality standards that a SNF has to meet to receive patients under this waiver. A revised three-day-stay requirement for institutional PAC could also permit up to two observation days to count toward satisfying the three-day-stay requirement, as the Commission previously recommended for the existing requirement for SNF care (Medicare Payment Advisory Commission 2015).

The homebound requirement is unique to home health care, and continuing this requirement for noninstitutional PAC would help ensure that only patients who have difficulty accessing ambulatory care in the community are served in the home. As the Commission has noted in its reports, ensuring the appropriate use of home health care is challenging, and there is significant geographic variation in the use of this service (Medicare Payment Advisory Commission 2018c). This variation and the recurring fraud, waste, and abuse issues arising from this benefit suggest that fewer safeguards would be imprudent.

Implementation of aligned regulatory requirements

The alignment of regulatory requirements across PAC settings is a large undertaking and could take years to complete. The Commission appreciates the scope of the efforts that will be required both by CMS and stakeholders. The time line for implementation could be incremental, with changes phased in gradually over time, or the revised requirements could be implemented at once. The key difference between the two options is how much of the alignment needs to be completed before the PAC PPS is implemented. The incremental approach would allow the program to begin implementing some of the regulations sooner, for example, where the current differences in setting-specific regulations are not large and

the cost to a provider for aligned regulations would not be high. Requiring that the program resolve all of the cross-setting regulatory issues before implementing any changes could delay the implementation of a PAC PPS. At the same time, a unified PPS will affect many providers' payments, so alignment of those regulations that substantially affect a provider's costs will need to be completed before the PPS is in place.

An initial set of revisions could implement common requirements for all providers to meet that address areas where the existing requirements do not differ substantially across the four settings and would be relatively more simple to align. This initial set could include requirements for patient assessment, licensure of staff, governance, patients' rights, infection control (for institutional PAC providers), quality assurance, and emergency preparedness. The first set of requirements could also consider eliminating setting-specific requirements that would no longer make sense under a unified PPS, such as the 60 percent rule and intensive therapy requirements for IRFs and the requirement of a 25-day stay for qualifying stays in LTCHs.

A second set of requirements could be implemented at a later date to address the areas that will be more difficult to align, such as clinical staffing levels and physician presence. This later set could also include the requirements specific to each special care need included in Tier 2. Some of these requirements could raise the operating costs for some providers. For example, if all institutional PAC providers are required to have an RN on site 24 hours every day, the costs for SNFs will increase.

In addition to federal regulatory requirements, PAC providers must meet licensure, certificate-of-need, or other regulations imposed by the states in which they are located. Some state requirements are more stringent than federal ones. For example, PAC providers in states with mandated staffing ratios (such as California) must meet those requirements. Since many states have their own requirements for licensure and operations, providers will have to meet separate state and federal requirements, just as they do now. Providers required to meet more restrictive state regulations may have less flexibility than providers in other states to adapt to a unified PAC PPS (Linehan 2017). ■

Endnotes

- 1 CMS eliminated the downside risk in the first five quarters for all participants because of concerns about the accuracy of the target prices. CMS later eliminated downside risk for physician group practice episodes because of episode attribution errors (Dummit et al. 2018).
- 2 Across the 67 model-participant clinical episode combinations analyzed, Medicare payments per episode declined for 50, and the change was statistically significant for 27.
- 3 Beneficiaries would retain their freedom of choice of PAC provider, including whether to remain or be transferred to a different provider.
- 4 In this work, we simplified our estimates of routine costs per stay and made minor refinements to some of the risk factors. The following factors were used to predict the cost of stays: the patient's age, disability status, comorbidities (and the number of body systems involved), severity of illness, Medicare Advantage risk score, cognitive status, and impairments; the primary reason to treat; the length of stay in an intensive care unit during the prior hospital stay (if any); and the use of select high-cost services (such as dialysis and mechanical ventilation). The model included an adjustment for stays provided by HHAs because of their much lower costs and two outlier policies—one for unusually high-cost stays and another for unusually short stays. Stays that were part of PAC episodes that began between January 1, 2017, and June 30, 2017, were included in the analysis.
- 5 Beginning in fiscal year 2016, CMS eliminated some of the diagnosis codes from the list that can be used to determine whether cases qualify for the compliance threshold that at least 60 percent of all patients admitted to an IRF have as a primary diagnosis or comorbidity at least 1 of 13 conditions. In 2017, CMS began phasing in a dual payment-rate structure for LTCHs that lowered payment rates for cases that do not meet the LTCH criteria specified in the Pathway for SGR Reform of 2013.
- 6 The predictive model explained 52 percent of the differences in costs across stays, though this measure of accuracy is not very meaningful since much of its power came from the indicator for the home health setting.
- 7 We considered defining an episode using a fixed period of time, such as 30 days, which would limit the underpayments and overpayments. However, like a stay-based design, this definition of an episode would be likely to create volume incentives to extend PAC to qualify for an additional episode.
- 8 The intensity of the setting is based on the following hierarchy: LTCHs were considered the most intensive, followed by IRFs, then SNFs, and home health care as the least intensive.
- 9 The predictive model explained 55 percent of the differences in costs across stays, which is not a very meaningful measure given that much of its power comes from the indicator for the home health setting.
- 10 The PCR for a stay-based design that included only single and pairs of stays was 1.12.
- 11 Short single stays would likely be paid under a short-stay outlier policy that bases payments on cost per day or per visit. Therefore, excluding these stays from the analysis would not affect the comparison of stay-based and episode-based payments.
- 12 Current billing rules establish definitions of stays. In a home health stay, an intervening hospital or institutional PAC stay that occurs entirely during a home health care stay does not change the counting of the 60 days that define a home health stay and does not establish separate stays for the care before and after the intervening stay. For SNF stays, an intervening hospital or PAC stay establishes separate SNF stays, one before the intervening event and another after. In IRFs, the duration of the interruption (for a hospital or PAC stay) and whether the beneficiary returns to the same facility establishes whether the original IRF stay continues after the intervention. If the intervening event is three days or less and the beneficiary returns to the same facility, the original IRF stay continues. If the intervening event is longer than three days or the beneficiary goes to a different facility after the intervening event, there are two IRF stays—one before the event and another after the event. In LTCHs, the duration of the interruption and whether the beneficiary returns to the same LTCH define whether a separate stay is established. An LTCH stay is counted as one if the intervening stay is in an acute hospital and shorter than 10 days, in an IRF and is shorter than 28 days, or in a SNF and is shorter than 46 days. If the intervening stay is longer than the above limits or if the beneficiary is transferred to a different LTCH, there are two LTCH stays.
- 13 Severe wound care includes patients with a nonhealing surgical wound, a wound for a patient who is morbidly obese, a fistula, or a Stage III, Stage IV, or unstageable pressure wound.

- 14 In home health care, the stay is a 60-day episode. In 2020, the home health PPS will change the unit of service to a 30-day episode.
- 15 PAC providers are required to complete patient assessments on FFS Medicare and Medicare Advantage beneficiaries. However, where relevant, FFS payments and quality measures reflect only assessments from FFS beneficiaries.
- 16 The uniform assessment items are based on items developed as a part of CMS's PAC Payment Reform Demonstration (PAC-PRD). The PAC-PRD evaluators concluded that the items' interrater reliability results showed very good agreement on most items and that the items could be used to measure a patient's progress in a standardized way across an episode of care that involved providers in different settings (Gage et al. 2012). Their reliability testing compared assessments done on the same patient by different assessors within the same setting, in different settings, and from different disciplines (e.g., physical therapy or occupational therapy).
- 17 If providers fail to submit the required quality data, they receive a 2 percentage point reduction to their annual payment update.
- 18 The 9 therapy payment groups use the following thresholds: 0 to 5 visits, 6 visits, 7 to 9 visits, 10 visits, 11 to 13 visits, 14 to 15 visits, 16 to 17 visits, 18 to 19 visits, and 20 or more visits.
- 19 Short stays are defined as having a length of stay less than or equal to five-sixths of the geometric mean length of stay for the case type.
- 20 Beginning in FY 2018, CMS adopted a policy that better aligns payments for short stays with their costs (by paying a rate equal to an amount that is a blend of the inpatient PPS amount for the Medicare severity–diagnosis related group and 120 percent of the LTCH per diem payment amount up to the full LTCH PPS standard federal payment rate).
- 21 For home health, clinicians cannot observe the patient doing every activity during a visit, so there is more reliance on observing simulations of certain activities and relying on self-report from the patient or his or her caregiver. In contrast, in institutional PAC, the patients perform most daily activities most days, and observation of the activity is more feasible.
- 22 These uniform items are often called the “GG items,” referring to Section GG of the assessment tool.
- 23 The Barthel index is an ordinal scale used to measure performance in multiple activities of daily living. A patient's performance on each item is rated on this scale, with a given number of points assigned to each level. Within each domain, there are three or four levels.
- 24 Because HHAs are not required to assess function when patients are discharged to SNFs, IRFs, or LTCHs, we did not include these transfers in our analysis of sequential assessments.
- 25 We also analyzed the discharge to admission assessments by ownership and found some small differences. For example, 71 percent of discharge assessments conducted by for-profit IRFs were assessed two or more levels lower when admitted to for-profit HHAs, compared with 66 percent for all IRF to HHA stays.
- 26 HHAs did not collect this information until January 1, 2019.
- 27 There were small differences by ownership, with for-profit providers having a larger share of assessments with function rates two or more levels lower than the preceding discharge assessment. We also compared the discharge and admission assessment for individual domains of function, and the trends were relatively consistent. Walking was the most consistently assessed domain, which makes sense because the inability to walk, which characterizes a fair share of SNF and LTCH patients, is unambiguous.
- 28 COPs (referred to as requirements of participation in long-term care facilities and skilled nursing facilities) are regulations that must be met to participate in the Medicare program. These regulations address a wide variety of domains, including services and staffing, care planning, administration, quality and safety, and patients' rights. Failure to comply with COPs can result in sanctions, fines, or—in relatively rare cases—exclusion from the Medicare program. COP requirements must be met to receive a payment from Medicare. Failure to comply can result in denial of a claim for payment (or, if payment has already been made, in a demand for any overpayment to be refunded to the federal government). A claim can be eligible for payment even if the provider is out of compliance with one or more COPs as long as the conditions of payment are met at the time the claim is submitted.
- 29 The Short Form Health Survey was developed for the Medical Outcomes Study, a multiyear study of patients with chronic conditions. The resulting short-form survey instrument provides a solution to the problems faced by many investigators who must restrict survey length. The instrument was designed to reduce respondent burden while achieving minimum standards of precision for purposes of group comparisons involving multiple health domains.

- 30 The three-day inpatient hospital stay requirement for coverage of SNF care is specified in statute. In June 2015, the Commission recommended that the Congress review the requirement to allow for up to two outpatient observation days to count toward meeting the criteria (Medicare Payment Advisory Commission 2015).
- 31 The FY 2019 SNF PPS payment rule finalized a requirement that no more than 25 percent of a beneficiary’s therapy may be furnished in a group or concurrently. In concurrent therapy, two patients are engaged in different therapy activities at the same time. In group therapy, multiple patients are engaged in the same therapy activity at the same time. The previous rule set separate limits for group and concurrent therapy.
- 32 The homebound requirement for home health care allows exceptions for medical visits, religious services, and infrequent personal errands or social events.
- 33 The Balanced Budget Act of 1997 required the establishment of PPSs for all four PAC settings. All IRFs had to be paid under a PPS by September 1, 2002, and cost-based reimbursement for LTCHs ended September 1, 2003.
- 34 The Secretary has the authority to define inpatient rehabilitation facilities, including a compliance rate (although by law, if CMS applies a compliance threshold, it cannot be higher than 60 percent). The Secretary has specified that the 13 conditions that count toward the 60 percent rule are stroke; spinal cord injury; congenital deformity; amputation of a lower limb; major multiple trauma; hip fracture; brain injury; certain other neurological conditions, such as multiple sclerosis, Parkinson’s disease, and neuromuscular disorders; burns; three arthritis conditions for which appropriate, aggressive, and sustained outpatient therapy has failed; and hip or knee replacement when it is bilateral, the patient’s body mass index is at least 50, or the patient is age 85 or older. If an IRF does not meet the compliance threshold, Medicare pays for all its cases based on the acute care hospital prospective payment system rather than the IRF prospective payment system.
- 35 The requirement that LTCHs maintain an average length of stay of 25 days or greater is specified in statute. Beginning in FY 2016, LTCHs must maintain an average length of stay of 25 days or greater only for certain Medicare cases. For FY 2016 and beyond, LTCHs receive higher LTCH payment rates only for beneficiaries who had an acute care hospital stay immediately preceding the LTCH admission, if the acute care stay included at least three days in an intensive care unit or if the patient requires prolonged ventilator services. All other LTCH discharges—including any discharges assigned to psychiatric or rehabilitation Medicare severity long-term care diagnosis related groups, regardless of intensive care unit use—are paid a “site-neutral rate,” an amount based on Medicare’s inpatient hospital prospective payment system or 100 percent of the costs of the case, whichever is lower. Cases paid a site-neutral rate are excluded from the calculation of the LTCH’s average length of stay. Beginning in FY 2020, an LTCH must have no more than 50 percent of its cases paid at the site-neutral rate to receive the LTCH prospective payment system rate for eligible cases.
- 36 Beneficiaries are required to have a “face-to-face” examination with the physician ordering home health care, but this visit can take place in the 90 days before or up to 30 days after the initiation of care.
- 37 These statistics include services provided by RNs and licensed practical nurses and are for all patients (i.e., those covered by Medicare, Medicaid, and other insurers). On average, about two-thirds of the nursing time is provided by licensed practical nurses.

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CHAPTER

10

**Mandated report:
Changes in post-acute
and hospice care after
implementation of the
long-term care hospital dual
payment-rate structure**

Mandated report: Changes in post-acute and hospice care after implementation of the long-term care hospital dual payment-rate structure

Chapter summary

The most medically complex patients frequently need hospital-level care for extended periods of time, and some of these high-need patients are treated in long-term care hospitals (LTCHs). LTCHs are defined by Medicare as hospitals with an average length of stay exceeding 25 days. Because LTCHs are intended to serve very sick patients, per case payments under the LTCH prospective payment system (PPS) are very high. However, until 2016, lack of meaningful criteria for admission resulted in admissions of less complex cases that could be cared for appropriately in other settings.

The Pathway for SGR Reform Act of 2013 fundamentally changed how Medicare pays LTCHs for certain types of cases by creating a “dual payment-rate structure.” Under this structure, certain LTCH cases continue to qualify for the standard LTCH PPS rate (“cases meeting the criteria”), while cases that do not meet a set of criteria are paid a lower, “site-neutral” rate. The site-neutral rate is either a cost-based payment or a rate based on the inpatient PPS that is used to pay acute care hospitals (ACHs), whichever is lower. The impact of this policy on LTCHs was expected to be substantial, with possible secondary effects on other post-acute care (PAC) and hospice providers, the Medicare program, and Medicare beneficiaries, given that the base ACH payment rate is 85 percent lower than the LTCH base payment rate. The Congress, therefore, requested that the Commission report on the effect that the policy has had on LTCHs, other PAC and hospice providers, and

In this chapter

- Background
- Impact of changes in payment policy on LTCH services
- Impacts of changes in payment policy on the use of other PAC and hospice services
- Necessity of the 25 percent rule
- Conclusion

beneficiaries. The Commission was also asked to opine on the necessity of the 25 percent rule, which sets a limit on the share of cases that can be admitted to certain LTCHs from a referring ACH. The Secretary eliminated the 25 percent rule in fiscal year 2019.

In response to the congressional request, the Commission conducted quantitative analyses on administrative data sets—in addition to qualitative analyses through site visits and interviews—to better understand what effect implementation of the dual payment-rate structure has had on beneficiaries, LTCHs, and other PAC and hospice providers.

From 2015 through 2017, the Commission found reductions in LTCH spending, in the number of LTCH stays, and in the number of LTCH facilities, but an increase in the share of LTCH cases meeting the criteria for the standard LTCH PPS payment rate. Although nearly 50 LTCHs have closed since fiscal year 2016, most of these closures occurred in markets with multiple LTCHs. In aggregate, LTCHs that closed had a lower share of Medicare discharges that met the criteria and a lower occupancy rate in their last year of operation compared with the facilities that remained open. Because the payment rate for cases not meeting the criteria is substantially lower than that for cases that meet the criteria, an LTCH's financial stability under Medicare relies, in part, on the share of cases that meet the criteria. LTCHs with more than 85 percent of their Medicare population meeting the criteria continued to have positive financial performance under Medicare in 2017.

The LTCH quality program is relatively new, with few risk-adjusted measures currently appropriate for longitudinal comparisons. However, for cases cared for in an LTCH, our examination of unadjusted measures—even after focusing on cases that met the criteria—did not find evidence that quality has been negatively affected by the dual payment-rate structure. Given the relatively small number of LTCH referrals, observing meaningful changes in discharge patterns of PAC and hospice in response to the implementation of the dual payment-rate structure remains challenging. We did, however, observe some small differences in certain Medicare severity–diagnosis related groups, including those involving wound care and, in some markets, tracheostomy.

In sum, the Commission observed changes in the LTCH setting consistent with the policy objectives of the dual payment-rate structure since its implementation for cost reporting periods beginning on or after October 1, 2015. Given the decades of concern regarding increases in LTCH use and the relatively high cost of LTCH services without a clear benefit for many case types, the trends we observed in the LTCH sector align with the Commission's goal of paying for expensive LTCH care

only for the sickest patients. Changes in the trends of LTCH use and spending after the policy's implementation were expected, and the Commission expects to see further continuation of these trends as the dual payment-rate structure becomes fully implemented in 2020. Given the current partial policy phase-in, the Commission will continue to monitor changes in use and trends across post-acute care and hospice providers, LTCH facility closures, and quality of care metrics for LTCH providers.

In regard to the 25 percent rule, the Commission posits that even under the LTCH dual payment-rate structure, ACHs continue to have an incentive to reduce their costs by shortening lengths of stay and shifting costly patients to LTCHs (and other PAC providers). Our analysis of data through 2017 suggests that, since 2016, the trends in LTCH use have begun to shift toward cases meeting the criteria, which indicates a general shift away from lower severity cases and an underlying change in admission patterns in LTCHs, reducing the necessity for the 25 percent rule. The Commission expects additional changes in ACH referrals to LTCHs as the dual payment-rate structure is fully phased in, further reducing the need for the 25 percent rule. ■

Mandate: Section 1206(a) of the Pathway for SGR Reform Act of 2013

(2) MedPAC study and report on impact of changes.

(A) STUDY. —The Medicare Payment Advisory Commission shall examine the effect of applying section 1886(m)(6) of the Social Security Act, as added by the amendment made by paragraph (1) on —

- (i) The quality of patient care in long-term care hospitals;
- (ii) The use of hospice care and post-acute care settings;
- (iii) Different types of long-term care hospitals; and

(iv) The growth in Medicare spending for services in such hospitals.

(B) REPORT.—Not later than June 30, 2019, the Commission shall submit to Congress a report on such study. The Commission shall include in such report such recommendations for changes in the application of such section as the Commission deems appropriate as well as the impact of the application of such section on the need to continue applying the 25 percent rule described under sections 412.534 and 412.536 of title 42, Code of Federal Regulations. ■

Background

The most medically complex patients, including those who exhibit metabolic, endocrine, physiologic, and immunologic abnormalities that result in profound debilitation and often ongoing respiratory failure, frequently need hospital-level care for extended periods of time. Some of these high-need patients are treated in long-term care hospitals (LTCHs). These facilities can be freestanding or colocated with other hospitals as hospitals within hospitals (HWHs) or satellites. To qualify as an LTCH for Medicare payment, a facility must meet Medicare’s conditions of participation for acute care hospitals (ACHs) and, for certain Medicare patients, have an average length of stay greater than 25 days.¹ In 2017, the average length of stay in an LTCH was just over 26 days while, by comparison, the average Medicare length of stay in ACHs was about 5 days. In 2017, Medicare spent \$4.5 billion on care provided in LTCHs nationwide. About 103,000 beneficiaries had roughly 116,000 LTCH stays. On average, Medicare fee-for-service (FFS) beneficiaries accounted for about two-thirds of LTCHs’ discharges (Medicare Payment Advisory Commission 2019).

LTCHs are intended to serve very sick patients, so per case payments under the LTCH prospective payment

system (PPS) are very high. However, until 2016, lack of meaningful criteria for admission resulted in admissions of less complex cases that could be cared for appropriately in other settings. The Commission and CMS have long been concerned that caring for lower acuity cases in LTCHs increases spending without demonstrated improvements in quality or outcomes.

The Pathway for SGR Reform Act of 2013 fundamentally changed how Medicare pays LTCHs for certain types of cases, creating a “dual payment-rate structure.” Under this structure, certain LTCH cases continue to qualify for the standard LTCH PPS rate (“cases meeting the criteria”), while cases that do not meet a set of criteria are paid a lower, “site-neutral” rate. The site-neutral rate is either a cost-based payment or a rate based on the inpatient PPS (IPPS) that is used to pay ACHs, whichever is lower. Because the base ACH payment rate is 85 percent lower than the LTCH base payment rate, the impact of this policy on LTCHs was expected to be substantial, with possible secondary effects on other post-acute care (PAC) and hospice providers, the Medicare program, and Medicare beneficiaries. The Pathway for SGR Reform Act of 2013 therefore directs the Commission to evaluate the effects of the payment changes on LTCHs, the quality of care they provide, the use of other PAC and hospice services,

Analytic approach to the congressional mandate

For this report, we conducted quantitative analyses on administrative data sets in addition to qualitative analyses through site visits and interviews to better understand the effect of the implementation of the dual payment-rate structure on beneficiaries, long-term care hospitals (LTCHs), and post-acute care (PAC) and hospice providers. Because the phase-in of the dual payment-rate structure continues through 2020, our analyses and results reflect a partial phase-in of the policy. We expect that the magnitude of the policy's effect will increase once the dual payment-rate structure is fully implemented.

Quantitative analyses

We used administrative data (e.g., provider claims) to analyze the effect of the dual payment-rate structure on LTCHs, other PAC providers, and hospice providers. Except where noted, we have excluded from this analysis any stays or episodes that were not immediately preceded by an acute care hospital (ACH) discharge because over 85 percent of LTCH admissions originate with an ACH stay and because a covered skilled nursing facility (SNF) stay requires a three-day ACH stay. These excluded stays substantially affect the number of home health agency (HHA) episodes

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and program spending (see text box on the congressional mandate, p. 343). The mandate also directs the Commission to consider the need for the continued application of a policy that limits the share of referrals from a single ACH, known as the 25 percent rule, which CMS eliminated in its fiscal year 2019 LTCH PPS final rule.

The congressional mandate requires that the Commission report to the Congress on the implementation of the new patient-level criteria no later than June 30, 2019. The original statutory provision enacted in 2013 required full implementation of the new LTCH patient-level criteria by fiscal year 2019. However, a subsequent statutory amendment delayed full implementation until fiscal year 2020. Given the delay of full implementation and the timing of data availability, this analysis reflects the partial implementation to date of the policy across all LTCHs. For this report, we conducted quantitative analyses on administrative data sets in addition to qualitative analyses through site visits and interviews (see text box on the analytic approach to fulfilling the mandate). Given the relatively low share of beneficiaries who use LTCH care, geographic variation in availability of LTCHs, and variation in the use of LTCH care, we focused some of the analyses on subsets of LTCH providers and subsets of LTCH cases.

LTCH payment system

Medicare's special payment policies for LTCHs came about when the IPPS for ACHs was implemented in 1983.

Forty hospitals with average lengths of stay greater than 25 days were excluded from the IPPS because their patient costs could not be accurately predicted by the IPPS patient classification system and weights (Liu et al. 2001). These LTCHs, as they came to be called, had predominantly begun as tuberculosis and chronic disease hospitals. Medicare continued to pay LTCHs on a cost basis in accordance with the payment system established in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) until CMS implemented an LTCH PPS in fiscal year 2003. Beginning in 1983, as the number of LTCHs climbed, the types of patients treated by LTCHs changed dramatically to focus on patients with other respiratory conditions and septicemia (Medicare Payment Advisory Commission 2014). The growth in LTCHs from 1983 until 2010 was largely attributable to growth in the number of for-profit entities. The number of LTCHs peaked in 2010 with nearly 425 paid under the LTCH PPS. In 2017, about 80 percent of the 398 LTCHs were for profit.

Medicare's payment method for LTCHs itself contributed to growth in the use of their services. Medicare paid LTCHs under TEFRA rules for about 20 years. Consequently, several flaws inherent in cost-based payment under TEFRA led to growth in supply, utilization, and expenditures over time. Under TEFRA, each LTCH was paid on the basis of its average cost per discharge, up to a facility-specific limit. The limit was set at the LTCH's average cost per discharge in a designated base

Analytic approach to the congressional mandate (cont.)

that are eligible for inclusion in this analysis. For each ACH discharge occurring in a given fiscal year, we used a seven-day window to look for any admission to an LTCH, inpatient rehabilitation facility (IRF), SNF, HHA, or hospice after the ACH stay.

LTCHs historically have constituted about 1 percent of PAC use. The total number of Medicare LTCH discharges in 2017 (roughly 116,000) is small in comparison with the 2.3 million covered SNF stays, 2.2 million home health episodes preceded by a hospitalization or other PAC stay, 380,000 IRF discharges, and 1.5 million hospice users (Medicare Payment Advisory Commission 2019). The relatively low volume of hospital discharges to LTCHs creates difficulty in detecting changes in the use of other PAC providers. Therefore, in certain cases we focused the analysis on a set of ACH diagnoses where we would most likely be able to detect changes in ACH discharge patterns.

While there is a wide variation in severity of illness across ACH diagnoses, we identified six ACH Medicare severity–diagnosis related groups (MS–DRGs) in which at least 10 percent of Medicare beneficiaries were discharged to an LTCH (Table 10-1).² For example, about 62 percent of beneficiaries requiring a tracheostomy and more than 96 hours of ventilator support in an ACH were discharged to an LTCH (the average of MS–DRGs 004 and 003), as were about 16 percent of beneficiaries with either septicemia or respiratory failure requiring mechanical ventilation for more than 96 hours in the preceding ACH stay (the average of MS–DRGs 870 and 207).

LTCH volume also varies substantially across geographic areas, in large part because LTCHs are not distributed uniformly across the country. Some areas have no LTCHs, underscoring the fact that medically complex patients can be treated appropriately in other

(continued next page)

**TABLE
10-1**

Share of ACH cases discharged to LTCHs varied by MS–DRGs, 2017

ACH MS–DRG	Description	Number of live ACH discharges	Share discharged to an LTCH
004	Tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth & neck without major OR procedure	12,076	65%
003	ECMO or tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth and neck with major OR procedure	12,314	59
870	Septicemia or severe sepsis with MV 96+ hours	20,464	16
207	Respiratory system diagnosis with ventilator support 96+ hours	12,911	15
853	Infectious and parasitic diseases with OR procedure with MCC	67,886	10
463	Wound debridement and skin graft except hand, for musculo-connective tissue disorders with MCC	5,813	10
Subtotal of select ACH MS–DRGs		131,464	21
All ACH MS–DRGs		8,864,084	1

Note: ACH (acute care hospital), LTCH (long-term care hospital), MS–DRG (Medicare severity–diagnosis related groups), MV (mechanical ventilation), OR (operating room), ECMO (extracorporeal membrane oxygenation), MCC (major complication or comorbidity). Includes ACH MS–DRGs with more than 500 discharges to an LTCH.

Source: MedPAC analysis of Medicare claims data.

Analytic approach to the congressional mandate (cont.)

settings or travel to receive care in an LTCH. At the same time, some areas have many LTCHs. In part because of state certificate-of-need programs that prevent or limit the opening of certain types of health care facilities, many new LTCHs have located in markets where LTCHs already exist instead of in markets with few or no direct competitors (Figure 10-1). This concentration has financial implications for the Medicare program. Before the implementation of the dual payment-rate structure,

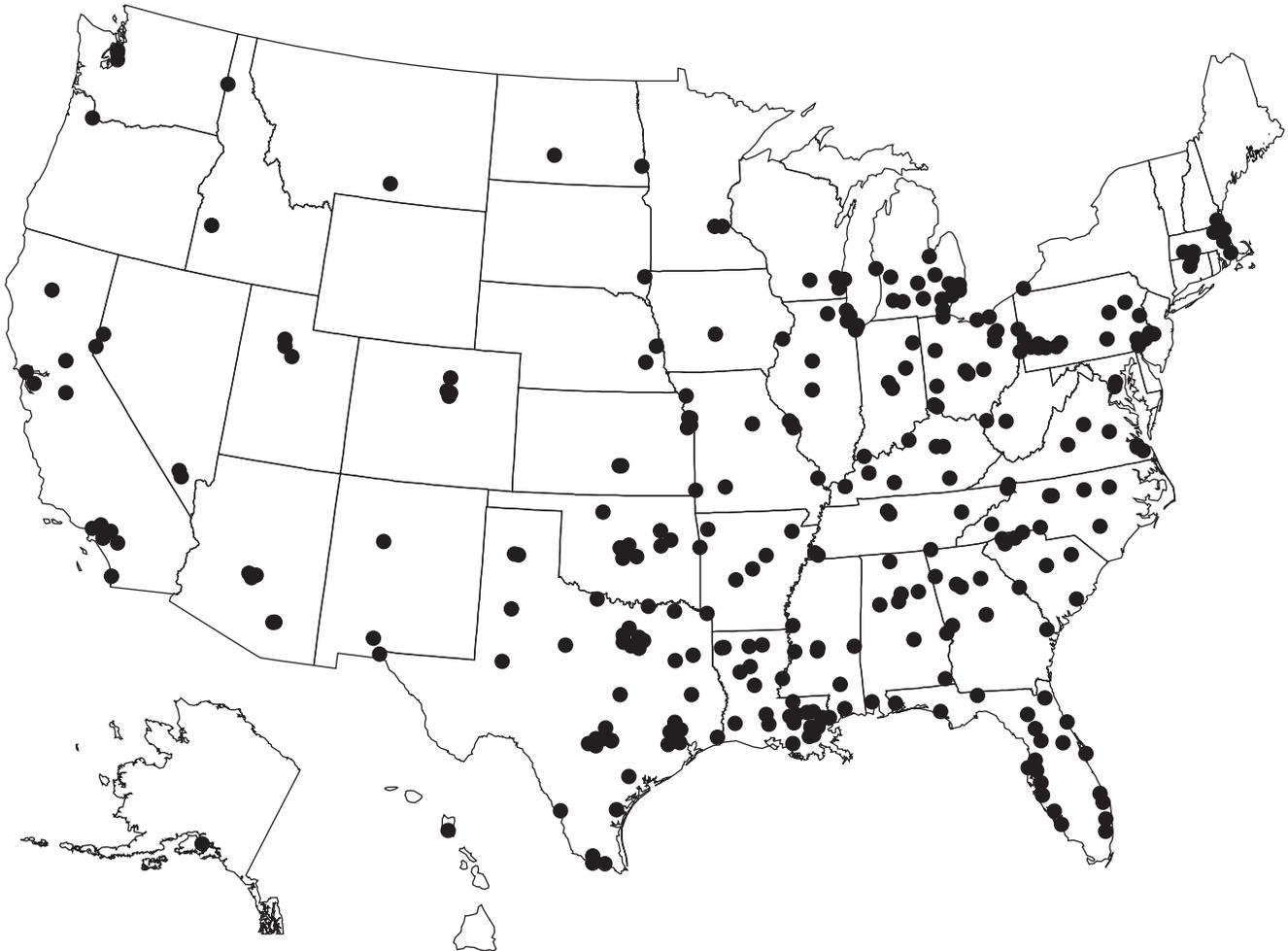
LTCHs in certain markets admitted less complex cases that could appropriately be treated in less costly settings, resulting in higher Medicare spending for those beneficiaries.

Even with the clustered distribution of LTCHs, most beneficiaries have access to LTCH services. A recent study found that 90 percent of Medicare beneficiaries live within 80 miles of an LTCH, and 80 percent reside

(continued next page)

**FIGURE
10-1**

Long-term care hospitals are not distributed evenly across the nation



Source: MedPAC analysis of the December 2018 version of Medicare's Provider of Services file.

Analytic approach to the congressional mandate (cont.)

in a hospital referral region with at least one LTCH (National Association of Long Term Care Hospitals 2017). In our March 2018 report, the Commission found that, at the median, beneficiaries traveled about 17 miles to receive LTCH care (Medicare Payment Advisory Commission 2018d).

To isolate the effect of the dual payment-rate structure on changes in PAC, we analyzed discharge patterns from ACHs in selected market areas with historically high or low LTCH use. We identified the 20 markets with the highest per beneficiary LTCH use in 2015.³ In 2015, these 20 areas accounted for about 5 percent of Medicare fee-for-service (FFS) beneficiaries and nearly a quarter of Medicare FFS cases in LTCHs (26,700 LTCH discharges in 2015). For comparison, we also considered the 20 MedPAC areas with the lowest per beneficiary LTCH use in 2015, requiring a minimum threshold of 25 FFS Medicare LTCH cases. These low-use areas accounted for 12 percent of Medicare FFS beneficiaries and less than 2 percent of LTCH cases (1,900 LTCH discharges in 2015).

The share of ACH cases discharged to an LTCH varied considerably across our high-use and low-use areas. In 2017, 3.8 percent of Medicare ACH cases were discharged to an LTCH in our 20 high-use areas, in aggregate. Alternatively, in our 20 low-use areas, 0.2 percent of Medicare ACH cases were discharged to an LTCH, in aggregate.

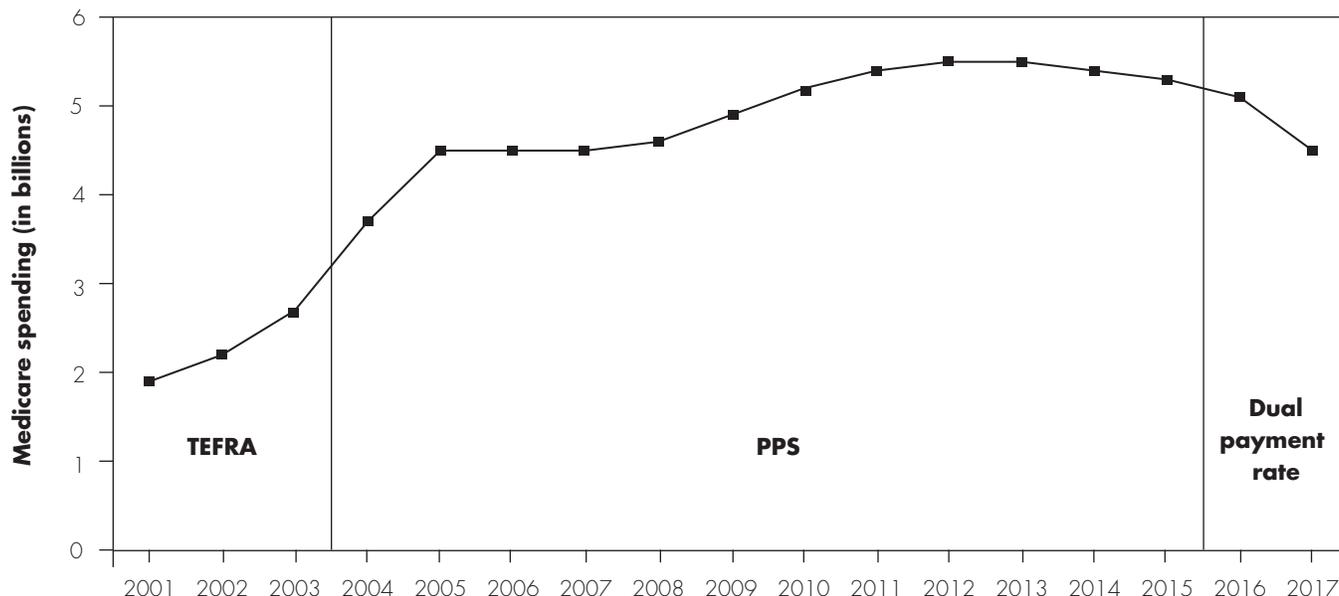
For some analyses of the financial impact of the dual payment-rate structure on LTCHs, we report data on the entire LTCH population and a subgroup of LTCHs with a high share of cases that meet the criteria, consistent with the goals of the dual payment-rate structure. Because there is a financial disincentive for LTCHs to admit cases that do not meet the criteria, we would expect wide differences in financial performance between LTCHs that admit a high share of cases meeting the criteria and those with a lower share of cases meeting the criteria. Resulting from conversations with industry representatives and stakeholders, we defined LTCHs with a “high share of cases meeting the criteria” as a cohort of LTCHs with more than 85 percent of their Medicare cases meeting the criteria

in 2017. The 85 percent threshold was conveyed as a reasonable threshold for facilities to achieve financial stability for their Medicare population.

Qualitative analyses

Commission staff conducted a series of site visits and interviews to understand the effects of the implementation of the dual payment-rate structure on LTCHs’ admissions, staffing, and operations, as well as the impact on ACHs’ patterns of referral to PAC providers. Additionally, we sought to understand the various strategies LTCHs pursued in response to the dual payment-rate structure (e.g., whether facilities changed their admission practices to accept only cases that meet the new criteria for payment under the LTCH PPS).

We conducted interviews with staff from nine LTCHs, three SNFs, and seven ACHs, either in person or by telephone. These included in-person interviews with representatives from facilities in California, Connecticut, the District of Columbia, Florida, New York, and Texas. We also spoke by telephone with facility representatives from Iowa and from several areas in California and New York. These areas exhibit a wide range of provider and market characteristics. Each market represented varying degrees of Medicare managed care penetration, accountable care organization penetration, physician employment structure, state regulations, ACH occupancy rates and bed availability, and LTCH and other PAC bed availability. The facilities we spoke with varied in size, ownership, Medicare payer share, and degree of integration with other health care providers (e.g., providers that were fully integrated into a large health care system and those that were part of a separate chain). We spoke with facility administrators, physicians, clinical staff, discharge planners, and staff members representing the facility’s admissions, case management, care coordination, and quality improvement teams. We also included in our site visits and interviews markets without LTCHs. Analyzing these areas of the country provided insight regarding discharge patterns of the most complex patients in areas without an easily accessible LTCH. ■

**FIGURE
10-2****Medicare spending on LTCH services increased rapidly after implementation of the PPS and has fallen since the dual payment-rate structure began**

Note: LTCH (long-term care hospital), PPS (prospective payment system), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982).

Source: MedPAC analysis of Medicare claims data from CMS.

year and updated annually for inflation. LTCHs that kept their average costs per discharge below their limits could receive bonus payments. This payment system proved to be financially attractive to new providers. New LTCHs could maximize their costs in their first years of operation, thereby establishing a high facility-specific limit. The new entrant could then quickly reduce its costs below its limit, resulting in payment of its full costs plus bonus payments.

Since October 2002, Medicare has paid LTCHs prospective per discharge rates based primarily on the patient's diagnosis. Under this PPS, LTCH payment rates are based on a patient classification system that groups patients primarily according to diagnoses and procedures. Medicare severity long-term care diagnosis related groups (MS-LTC-DRGs) include the same groupings used in ACHs paid under the IPPS but have a base rate and relative weights specific to LTCH patients. These relative weights reflect the average relative costliness of cases in the group compared with that of the average LTCH case. The LTCH PPS has outlier payments for patients who are extraordinarily costly. The LTCH PPS pays differently

for short-stay outlier cases (patients with shorter than average lengths of stay), reflecting CMS's contention that Medicare should adjust payment rates for patients with relatively short stays to reflect the reduced costs of caring for them.⁴

For cost reporting periods beginning on or after October 1, 2015, for cases to qualify for the standard LTCH PPS payment rate, beneficiaries must have a prior stay in an ACH and either (1) stay in the intensive care unit (ICU) of the referring ACH for a minimum of 3 days or (2) receive mechanical ventilation for 96 or more hours in the LTCH. Cases with a psychiatric diagnosis or rehabilitation-based LTCH DRG assignment and other cases not meeting the criteria are paid a site-neutral amount. As defined by statute, the site-neutral rate is either a cost-based payment or a rate based on the IPPS that is used to pay ACHs, whichever is lower. The site-neutral payment rate is being phased in over a four-year period that began in fiscal year 2016. In cost reporting periods beginning on or after October 1, 2015, through September 30, 2019, cases not meeting the specified criteria receive a blended rate,

one-half the standard LTCH payment and one-half the site-neutral payment. In cost reporting periods beginning on or after October 1, 2019, these cases will receive 100 percent of the site-neutral payment rate. Given LTCHs' varying cost reporting periods, the Commission expects fiscal year 2021 to be the first full year in which this policy is completely phased in for all LTCHs. Our analyses, therefore, use data that reflect a partial phase-in of the policy.

Although the Congress intended the LTCH PPS to create better incentives for providers to control their costs, evidence suggests that base payments under the PPS were initially set too high. Given the inflationary incentives of TEFRA, using aggregate costs generated under that payment system to establish budget-neutral prospective payment rates resulted in overly generous payments. In the last years of cost-based payments under TEFRA, Medicare spending (which reflected underlying costs) for LTCH services was growing at an average annual rate of about 18 percent (Medicare Payment Advisory Commission 2014).⁵ This growth accelerated in the years after the implementation of the PPS, averaging 27 percent annually from 2003 through 2005 (Figure 10-2). This growth was fueled by the relatively high PPS rate that created an attractive payment environment for both existing LTCHs and new LTCH entrants.⁶ After 2005, growth in Medicare spending for LTCH services moderated as regulatory and legislative changes to the PPS were implemented but continued to increase until it peaked at \$5.5 billion in 2012 (see text box on regulatory efforts to mitigate LTCH spending growth, pp. 350–351). After 2012, spending began to decrease and, in 2017, after the phase-in of the dual payment-rate structure (which reduced payments) began, totaled \$4.5 billion.

Payment per case also grew rapidly in the first three years of the PPS, increasing from 2003 through 2005 by almost 10 percent per year. This growth reflects a real increase in case mix, improvement in documentation and coding, and increases in payment rates (generally due to the market basket updates) (Medicare Payment Advisory Commission 2007). A CMS study suggested that most of the change in case mix represented improvement in documentation and coding rather than a real increase in patients' severity of illness (Centers for Medicare & Medicaid Services 2006). LTCH cost growth increased rapidly as well, albeit slower than the per case payment growth. From 2001 to 2005, LTCH Medicare margins increased substantially, from –0.1 percent to 11.9 percent.⁷

Payment disparities across settings contributed to growth in use of LTCHs

Although LTCHs have positioned themselves as providers of PAC for chronically critically ill and other medically complex patients, most of these patients nationwide are cared for in ACHs with subsequent care provided in skilled nursing facilities (SNFs) after discharge. Additionally, many LTCH patients are less acutely ill (Centers for Medicare & Medicaid Services 2013, Dalton et al. 2012a, Kahn et al. 2010, Medicare Payment Advisory Commission 2013). But Medicare's payments to LTCHs are typically far higher than those made for similar patients in other settings (Gage et al. 2007, Kahn et al. 2013, Kandilov and Dalton 2011).

CMS has long been concerned that incentives under the ACH PPS and the LTCH PPS encourage hospitals to transfer costly patients to LTCHs (Centers for Medicare & Medicaid Services 2013). Unnecessary transfer of patients to LTCHs increases costs to the Medicare program by triggering two inpatient payments—one for the ACH stay and one for the LTCH stay—for what otherwise might have been one inpatient stay (or one inpatient stay and one less costly stay in a SNF or other PAC setting). As a prudent payer, Medicare must ensure that its payments to providers are properly aligned with the resource needs of beneficiaries. In addition, the Commission has held that payment for the same set of services should be comparable, regardless of where the services are provided, ensuring that beneficiaries receive appropriate, high-quality care in the least costly setting consistent with their clinical conditions. The Commission and others have raised concerns that the lack of meaningful criteria for admission to LTCHs resulted in these providers admitting less complex patients who could be cared for appropriately in less expensive settings.

Research literature on the value of care provided in LTCHs

Paying more for LTCH care might be warranted if such care produced better outcomes for beneficiaries or LTCH use reduced Medicare spending for other services. However, studies comparing LTCH care with that provided in alternative settings have failed to find a clear advantage across LTCH users.

Readmission and mortality rates

Several studies have considered outcome measures including readmissions and mortality for patients who

Regulatory and legislative efforts to mitigate long-term care hospital spending growth

Long-term care hospitals (LTCHs) have a complicated regulatory history. Beginning in 2005, the Congress and CMS implemented a number of policy changes in an effort to reduce spending growth, including limiting the share of cases that can be admitted to an LTCH from certain referring acute care hospitals (ACHs), reducing payments for short-stay cases, and establishing moratoria on the development and expansion of LTCHs. While the short-stay policy remains in place, the moratoria have expired, and the limitation on the cases admitted from a single ACH has been eliminated, it is important to understand the rationale behind (and the Commission's past positions on) these policies.

Payment adjustments for short-stay cases

Since the implementation of the LTCH prospective payment system, CMS has paid differently for cases with shorter lengths of stay. CMS defined these cases, known as short-stay outliers (SSOs), as having a length of stay less than or equal to five-sixths of the geometric mean length of stay for the case type. The SSO policy reflects CMS's contention that patients with lengths of stay similar to those in ACHs should be paid at rates comparable with cases paid under the ACH inpatient

prospective payment system (IPPS). The SSO policy has evolved considerably since fiscal year 2003 but currently pays LTCHs a rate equal to a blend of the IPPS rate for the Medicare severity diagnosis related group and 120 percent of the LTCH per diem rate up to the full LTCH prospective payment system rate.⁸ As the length of stay for the SSO increases, the blended payment rate includes an increasing share of payment attributable to the LTCH per diem. The longer the length of stay, the more closely payment resembles the full LTCH PPS amount.

25 percent rule

In fiscal year 2005, CMS established the 25 percent rule to set a limit on the share of cases that can be admitted to certain LTCHs from a referring ACH and reduced payments for some LTCHs that exceed the threshold. CMS established the 25 percent rule in an attempt to prevent LTCHs from functioning as de facto step-down units of ACHs; decisions about admission, treatment, and discharge in both ACHs and LTCHs were to be made for clinical rather than financial reasons. Medicare's IPPS and LTCH payment policies create strong incentives for ACHs to shift costly patients to LTCHs (and other post-acute care (PAC)

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received care in LTCHs and other settings. Regarding readmissions, several studies have found lower risk-adjusted rates of readmission among some LTCH users compared with similar patients in alternative settings (Gage et al. 2011, Medicare Payment Advisory Commission 2004b). A more recent industry-sponsored study found that Medicare beneficiaries who used LTCHs had lower risk-adjusted rates of readmission to the ACH for 17 of 24 major conditions compared with beneficiaries who did not use LTCHs (Koenig et al. 2013). This outcome is not unexpected since LTCHs are certified as hospitals and have the capabilities to provide a higher level of care than other PAC providers. However, another study found that LTCH cases were more likely than other PAC

cases to be readmitted to an ACH on day 30 and beyond (Morley et al. 2011).

Research regarding mortality rates for LTCH users has been mixed. One study conducted in three states with a history of high LTCH use (Louisiana, Oklahoma, and Texas) found that risk-adjusted mortality was lower for the most complex ventilator-dependent patients who used an LTCH compared with those who used an alternative PAC setting (Kennell and Associates Inc. 2010). This study also found that the most complex ventilator-dependent patients who used LTCHs were more likely to be discharged home compared with similar patients who did not use LTCHs. But for the least complex ventilator

Regulatory and legislative efforts to mitigate long-term care hospital spending growth (cont.)

providers) and for LTCHs to expand capacity. Under the IPPS, per case payments encourage ACHs to reduce their costs by shortening lengths of stay. The incentive to reduce the length of stay at an ACH may result in additional use of PAC services. The 25 percent rule reduced payments for patient discharges exceeding the threshold to create disincentives for LTCHs to admit a large share of their patients from a single ACH.

The 25 percent rule initially applied only to LTCH hospitals within hospitals (HWHs) and LTCH satellites.⁹ In July 2007, CMS extended the rule to apply to freestanding LTCHs. The Congress and CMS delayed full implementation of this policy so that most HWHs and satellites were paid standard LTCH rates for eligible patients admitted from their host hospitals as long as the share of Medicare admissions from the host hospital did not exceed 50 percent. CMS eliminated the 25 percent rule in its fiscal year 2019 final rule.

Moratoria

The Congress implemented two separate moratoria in an attempt to slow the growth of new LTCH facilities and new beds in existing LTCHs. First, the Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA) and subsequent legislation imposed a limited moratorium on new LTCHs and new beds in existing LTCHs from December 29, 2007, through

December 28, 2012. During that time, new LTCHs were able to enter the Medicare program only if they met specific exceptions to the moratorium.¹⁰ However, many hospitals were already being built or had obtained a certificate of need before the enactment of MMSEA, which resulted in almost 60 hospitals being certified as LTCHs through the exceptions process during the time of the moratorium.

Between the end of December 2012 and April 2014, the moratorium was lifted and new LTCHs were able to obtain Medicare provider numbers and expand beds in existing facilities. Given the regulatory uncertainty with the prior moratoria and policy discussions regarding patient and facility criteria, only four hospitals became certified as LTCHs during this time. After this 16-month period, the Pathway for SGR Reform Act of 2013 and subsequent legislation implemented a new moratorium from April 1, 2014, through September 30, 2017. That moratorium originally provided exceptions that allowed the establishment of new LTCHs and new LTCH satellites (that is, the law permitted certain new LTCHs in their entirety); however, the 21st Century Cures Act expanded the exceptions to also permit increases in the number of certified beds in existing facilities.¹¹ Over 20 new LTCHs were certified during the time of this moratorium through the exceptions process. ■

cases, the researchers found that outcomes were worse for beneficiaries who used LTCHs. In yet another study, Kahn and colleagues examined claims data from 2002 through 2006 for beneficiaries who required mechanical ventilation and spent at least 14 days in an ACH ICU. This research found no differences in mortality one year after discharge for beneficiaries who were subsequently transferred to an LTCH compared with those who were not (Kahn et al. 2013). An industry-sponsored study also found no difference in one-year survival rates for ventilator-dependent patients who used LTCHs compared with those who did not, but did find lower risk-adjusted rates of mortality one year after discharge for LTCH patients with 9 of the 24 major conditions studied (Koenig

et al. 2013). Further research of five major diagnostic categories found significantly lower mortality rates for patients who used LTCHs compared with those who did not, and significantly lower mortality rates across four of the diagnostic categories when the beneficiary had a prior ICU stay of three days or longer. Condition categories with a lower 365-day mortality rate included circulatory, musculoskeletal, infectious, and respiratory diagnoses. Of note, this research found lower risk-adjusted mortality rates for beneficiaries with a digestive condition without an ICU stay of three days or longer who used LTCHs (Koenig et al. 2015). A recent working paper assesses changes in spending and certain patient outcomes, including mortality, after an LTCH opening in

a market area from 1998 to 2014. This research did not find reductions in time spent in an institutional care setting or improvements in 90-day mortality using data through 2014 (Einav et al. 2018). A recent analysis of beneficiaries with severe wounds found a reduction in LTCH use after the implementation of the dual payment-rate structure. This reduction was associated with increases in sepsis and 60-day readmissions for certain beneficiaries (Demiralp et al. 2019).

PAC episode spending

Paying more for LTCH care might also be a good use of Medicare dollars if LTCH use reduced Medicare spending for other services; however, there has not been any consensus across the literature to date. An analysis of 2004 claims data for beneficiaries in Louisiana, Oklahoma, and Texas found that for the most complex ventilator-dependent patients, Medicare payments for the episode of care were the same or lower for those who used an LTCH than for those who did not. However, for the least complex ventilator-dependent patients, Medicare payments were considerably higher for the beneficiaries who used LTCHs than for those who did not (Kennell and Associates Inc. 2010). By contrast, Kahn and colleagues found that transfer to an LTCH was associated with lower total provider costs but higher total Medicare payments for beneficiaries requiring mechanical ventilation who spent at least 14 days in an ACH ICU between 2002 and 2006 (Kahn et al. 2013). Other research found lower total risk-adjusted episode payments for LTCH users for only a subset of conditions studied (circulatory, digestive, and nervous system conditions and injuries/poisoning/toxic effect of drugs), representing about 20 percent of LTCH patients (Koenig et al. 2013). Further research showed reduced risk-adjusted spending over a 180-day episode for patients with digestive diagnoses. However, when other factors, including the presence of multiple organ failure or spending 3 or more days in an ICU, were taken into account, spending for beneficiaries using LTCHs was lower for the 180-day period for beneficiaries with circulatory, digestive, and musculoskeletal conditions (Koenig et al. 2015). The lack of clear evidence on costs raises questions about the value of Medicare expenditures on LTCH care.

Defining an LTCH patient

For almost two decades, given the variation in LTCH use across the country and the relatively high cost of providing care to Medicare beneficiaries in LTCHs, policymakers

and researchers alike have attempted to define the type of patient most appropriate for the LTCH setting. Recent research using data from 2012 showed that about half of the variation in LTCH use is explained by regional and hospital factors, including the proximity of a beneficiary's discharging ACH to an LTCH (Makam et al. 2018c, Makam et al. 2018b).

Defining the most medically complex patients who might be the most appropriate for LTCH-level care has been elusive. Some clinicians have described these patients as exhibiting metabolic, endocrine, physiologic, and immunologic abnormalities that result in profound debilitation and often ongoing respiratory failure (Nierman and Nelson 2002). Many of these abnormalities and debilities in hospital patients are not readily identifiable using available administrative data. However, the research literature is consistent in describing such patients as having long ACH stays with heavy use of intensive care services. Another study defined LTCH-appropriate patients as patients who are ventilator dependent with major comorbidities, patients who have multiple organ failures, and patients with septicemia and other complex infections (Dalton et al. 2012b).

Analysis of findings from the Post-Acute Care Payment Reform Demonstration, which tested the use of a standardized patient assessment tool in various PAC settings, revealed meaningful differences between LTCH users and other PAC users in the intensity of nursing care and nutritional, rehabilitation, and physician services. Length of time in an ICU during an immediately preceding ACH stay was a distinguishing characteristic of patients who used LTCHs compared with patients who used only SNFs, inpatient rehabilitation facilities (IRFs), or care provided by home health agencies (HHAs). PAC episodes that had a preceding ACH ICU stay of seven days or more were found only among LTCH users (Gage et al. 2011).

LTCH care is also commonly used for other, less acutely ill patients. These patients may require lengthy hospitalizations and subsequent PAC, but they do not have (or no longer have) intensive nursing care needs (Centers for Medicare & Medicaid Services 2013). Research has consistently shown that caring for these lower acuity patients in LTCHs increases Medicare expenditures without demonstrable improvements in quality of care or outcomes (Koenig et al. 2015). Yet such patients have historically made up a substantial share of cases in most LTCHs.

Concerns about the relative costliness and growth in use of LTCHs are not new for the Commission. Over the past 15 years, the Commission has maintained that LTCHs should serve only the most medically complex patients. The Commission has long held that payments to providers should be properly aligned with patients' resource needs and should be comparable regardless of where the services are being provided.

The Commission's recommendation for LTCH patient-level criteria

Because of the concerns about lower acuity patients using LTCHs at a relatively high cost to the Medicare program, the Commission sought to define the level of medical complexity appropriate for LTCH use and improve the accuracy of Medicare's payments for LTCH services for patients not meeting that definition. The Commission focused on how to use available data to identify the patients who require costly, extended hospital-level care and how to direct LTCH payments for them while paying more appropriately for patients who are less severely ill. Since ICU days are positively associated with case severity, a definition of the most medically complex cases could use a threshold of ICU days. If the ICU-day threshold is set too low, CMS would overpay for many less complex cases that could be cared for appropriately in other PAC settings at a lower cost to the Medicare program.

The Commission's analysis of IPPS claims found that 6 percent of Medicare IPPS discharges included eight or more days in an ICU; these cases had a geometric mean cost per discharge that was four times that of IPPS cases with seven or fewer ICU days. Further, these cases were concentrated in a small number of Medicare severity–diagnosis related groups (MS–DRGs) that correspond to the appropriate type of LTCH patients described by LTCH representatives and critical care clinicians (Dalton et al. 2012b). In addition to the ICU use criteria, the Commission wanted to ensure that beneficiaries who require prolonged mechanical ventilation but did not have an ICU stay of eight days or longer have appropriate access to specialty weaning services offered by many LTCHs.

To reduce incentives for LTCHs to admit lower acuity patients—who could be appropriately cared for in other settings at a lower cost to Medicare—the Commission recommended in its March 2014 report to the Congress that standard LTCH payment rates be paid only for LTCH patients who meet certain criteria at the point of transfer

from an ACH. Those cases should have (1) spent eight or more days in an ICU during the IPPS stay or (2) received mechanical ventilation for 96 hours or more during the IPPS stay. The Commission recommended that Medicare pay for all other cases admitted to LTCHs using IPPS-based rates.

To improve equity across the LTCH PPS and the IPPS, the Commission included additional inpatient outlier payments for the most medically complex cases in ACHs as part of this recommendation. As discussed in our March 2014 report, the outlier payments for IPPS cases meeting the criteria could be calculated using a lower fixed loss amount with Medicare paying a higher share of the hospital's costs above the outlier threshold (Medicare Payment Advisory Commission 2014). Since June 2016, to encourage equitable payments for similar services across PAC settings, the Commission has recommended a unified PAC PPS that includes LTCH care (see text box on the Commission's recommendations for a unified PAC PPS, p. 354). The dual payment-rate policy included in the Pathway for SGR Reform Act of 2013 reflects the Commission's intent of reducing incentives for LTCHs to admit beneficiaries with lower severity levels; however, the Act uses a three-day ICU stay in a referring ACH as the threshold to qualify for the standard LTCH PPS rate.

Impact of changes in payment policy on LTCH services

The Commission expected that changes in LTCH admission patterns would begin immediately after the implementation of the new payment policy, given the industry's well-documented responsiveness to previous payment changes. To assess and characterize the impact of the new dual payment-rate structure, we examined changes in Medicare spending on LTCH services, supply, operational strategies, admission patterns, financial profitability, and quality.

Medicare spending on LTCH services

Between 2012, when LTCH spending peaked, and 2015, LTCH spending decreased from \$5.5 billion to \$5.3 billion, in part due to payment reductions mandated by the Patient Protection and Affordable Care Act of 2010. Beginning in 2016, the dual payment-rate structure began reducing payments to LTCHs, and spending further decreased to \$5.1 billion. Total LTCH spending again

The Commission's recommendations for a unified post-acute care prospective payment system

Because the need for post-acute care (PAC) is not well defined and there is considerable overlap in the types of patients treated in different PAC settings, the Commission has most recently focused on transitioning payment for all PAC providers to a unified PAC prospective payment system (PPS). In June 2016, the Commission developed a PPS spanning skilled nursing facilities, inpatient rehabilitation facilities, long-term care hospitals (LTCHs), and home health agencies as mandated by Section 2(b)(1) of the Improving Medicare Post-Acute Care Transformation Act of 2014. This work established the feasibility of implementing a single payment system across all four PAC settings. Using 2013 data, the consolidated PAC PPS redistributes payments to providers, reducing payments for cases that are predominantly for physical rehabilitation and increasing payments for medically

complex stays.¹² The Commission's unified PAC PPS design accounted for a variety of patient characteristics, including patient's length of stay in an intensive care unit, severity of illness, risk score, and comorbidities. The Commission's recommendations to the Congress regarding the unified PAC PPS include care provided in LTCHs and adjusted payments for several patient characteristics common to LTCH users, including indicators for respiratory needs, such as ventilator care, tracheostomy care, and continuous positive airflow pressure (Medicare Payment Advisory Commission 2016a). The Commission's ongoing work to establish a unified PAC PPS and address implementation issues continues to include LTCHs in our analysis (Medicare Payment Advisory Commission 2018c, Medicare Payment Advisory Commission 2017a). ■

decreased in 2017 to about \$4.5 billion as the number of cases that did not meet the criteria fell, while the volume of cases that met the criteria rose slightly. In 2017, Medicare paid over \$3.4 billion for discharges that met the criteria, and the remaining spending was for cases that did not meet the criteria.

In 2016, payment per Medicare LTCH discharge totaled about \$41,700, higher than the 2012 per discharge payment of about \$39,500. Although a reduction in payments per discharge may have been expected from 2015 to 2016, the annual payment update (1.7 percent), timing of the policy phase-in, and the shift of cases to those that qualified for the standard LTCH PPS payment rate resulted in little change to total per discharge payments during this time.¹³ The phase-in of this policy was based on each LTCH's cost reporting period, which varies across LTCHs. About half of LTCHs have cost reporting periods starting in the last quarter of the fiscal year, while 37 percent of LTCHs have periods beginning on September 1. For the latter LTCHs (which represent about half of LTCH cases), the dual payment-rate structure was in effect for only one month in fiscal year 2016. Therefore, as expected, aggregate payment per Medicare

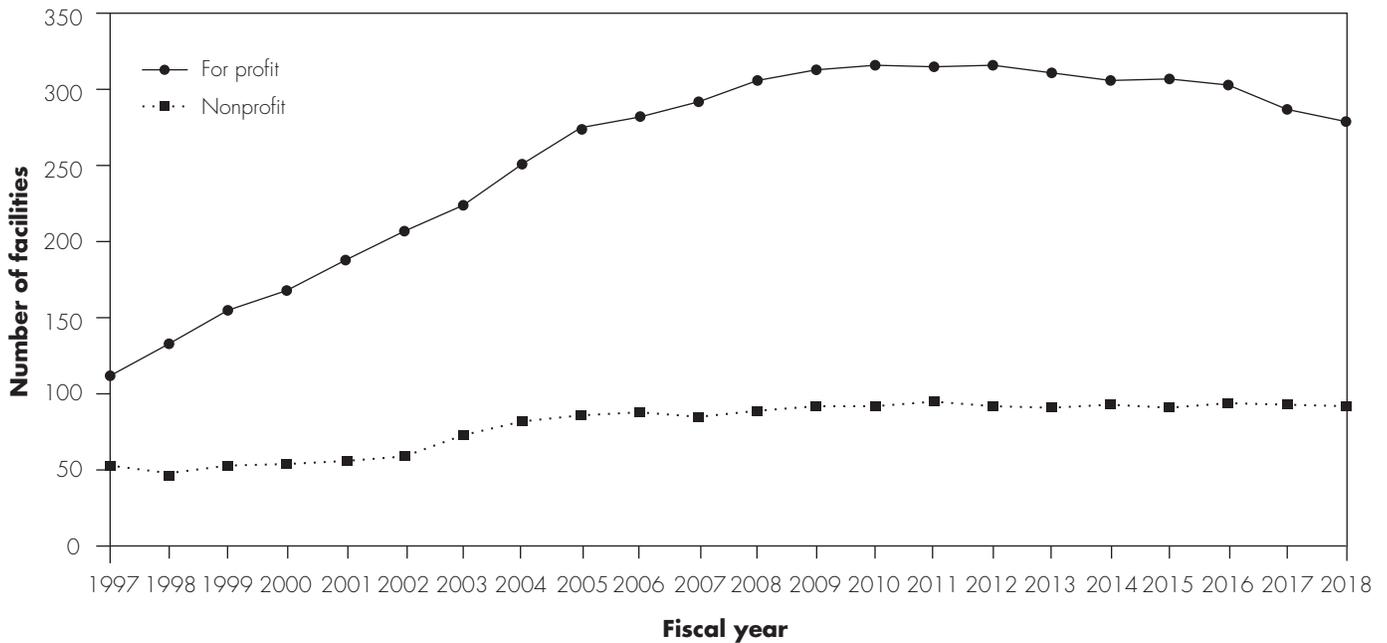
discharge decreased to \$38,253 in 2017, reflecting the phased-in dual payment-rate structure across all LTCHs. Payment per case was higher for cases meeting the criteria, due to their greater complexity, even before the new policy was implemented. In 2017, Medicare paid about \$46,127, on average, for cases that met the criteria compared with about \$24,173 per discharge for cases that did not.

LTCH supply

The supply of LTCHs has changed significantly over the past two decades. In 1997, there were fewer than 200 LTCH facilities and 20,000 LTCH beds. The incentives of the cost-based payment system followed by the implementation of the LTCH PPS in 2003 encouraged rapid LTCH industry growth, largely due to growth in the number of for-profit entities. From 1997 to 2010, the number of nonprofit LTCHs almost doubled, from 53 to 96, while the number of for-profit facilities almost tripled, from 112 to 316 (Figure 10-3). The industry expanded to over 420 LTCHs paid under the LTCH PPS in 2010 through 2012. Yet at its peak in 2012, some areas of the country still had no LTCHs, underscoring the fact that medically complex patients can be treated appropriately in

**FIGURE
10-3**

The number of LTCH facilities peaked in 2012



Note: LTCH (long-term care hospital).

Source: MedPAC analysis of data from the Provider of Services files from CMS.

other settings or travel to receive care in an LTCH. After 2012, however, the LTCH industry began contracting, in part due to uncertainty regarding possible changes to Medicare’s regulations and legislation governing LTCHs.

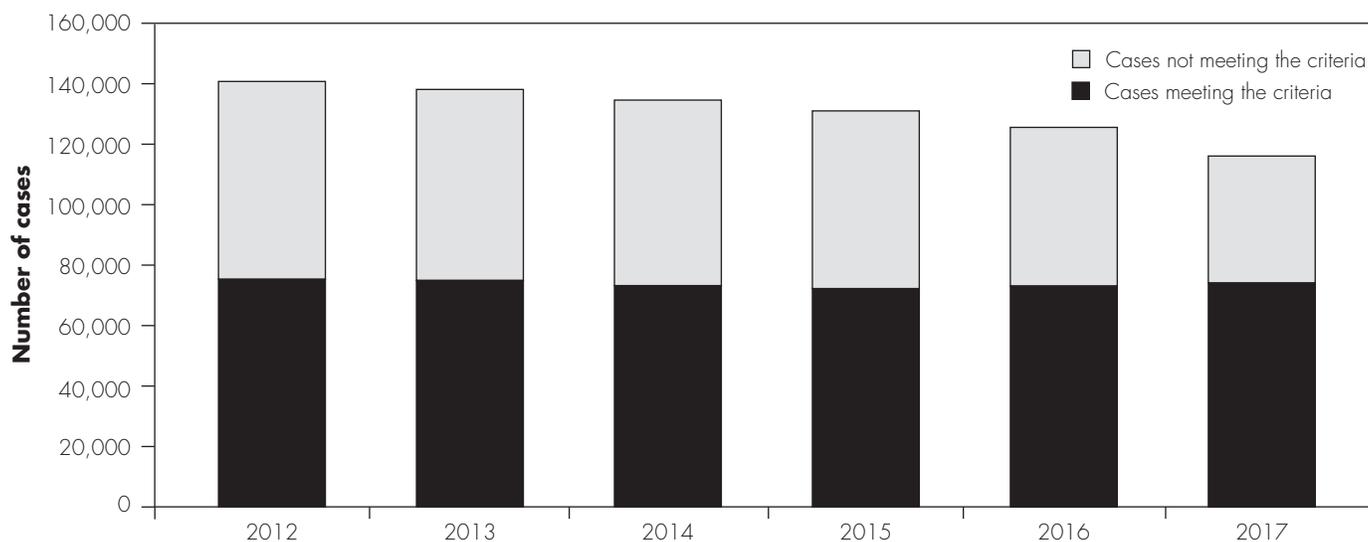
Since implementation of the dual payment-rate structure began on October 1, 2015, over 50 LTCHs have closed, representing over 10 percent of LTCH facilities and beds. Several LTCHs have also opened, resulting in a net loss of about 40 LTCHs.¹⁴ The closures primarily occurred in market areas with multiple LTCHs. As of December 2018, there was at least 1 other LTCH in 29 of the 37 MedPAC areas where an LTCH closure occurred. In the remaining eight areas, the next closest LTCH was within about two driving hours of the LTCH that closed. Eighty-five percent of the closures were for-profit facilities. In aggregate, during their last year of operation, LTCHs that closed had a lower share of Medicare discharges that met the criteria (59 percent vs. 65 percent of cases at LTCHs that remained open in 2017) and a lower occupancy rate (43 percent vs. 64 percent at LTCHs that remained). The aggregate

Medicare margin for closed facilities was also lower in the last year of operation relative to that of facilities that remained open in 2017 (about –10 percent compared with about –2 percent) due to higher standardized cost per discharge and lower average payment per case.

LTCHs’ operational changes in response to implementation of the dual payment-rate structure

In response to the implementation of the dual payment-rate policy, LTCHs have changed several operations-related strategies—including admission patterns, facility capabilities, and staffing. In interviews, LTCH staff cited changes to their admissions practices, focusing on the extent to which cases that do not meet the criteria continue to be admitted to the facility.

Staff at several LTCHs reported that their facilities no longer admit cases that do not meet the criteria and therefore do not qualify to receive the standard LTCH payment rate. LTCH administrative staff explained that

**FIGURE
10-4****The share of LTCH discharges not meeting the criteria fell from 2012 to 2017**

Note: LTCH (Long-term care hospital). “Cases meeting the criteria” refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 for the standard LTCH prospective payment system rate. “Cases not meeting the criteria” refers to Medicare discharges that do not meet the criteria specified in the Pathway for SGR Reform Act of 2013.

Source: MedPAC analysis of Medicare claims data.

both financial and practical reasons drove these changes. Some administrative staff explained that, even with the blended rate under the partial phase-in of the policy, payments have not been adequate to cover their costs. Strategies the staff reported using to maintain a profitable average daily census of cases that meet the criteria include (1) expanding referral regions and (2) educating physicians and case managers at referring ACHs on the facility’s capabilities and the types of patients they accept. LTCH administrators reported working to build additional relationships with case managers in the referring ACHs. To expand the mix of patients and payers, some LTCH staff reported increased attempts to contract with private payers, including Medicare Advantage plans. Several interviewees explained that focusing admissions on Medicare beneficiaries who meet the criteria is helpful to referring ACHs because this approach provides clear guidance regarding the types of patients who are appropriate for LTCH referral.

In contrast, some LTCHs we interviewed continue to admit cases that do not meet the criteria while attempting to increase the share of admissions that meet the criteria.

These facilities reported targeting admissions that have lower expected costs of treatment relative to the reduced payment rate. However, staff expressed concern about the viability of this approach as the policy becomes fully phased in during fiscal year 2020. Facilities reported various reasons for continuing to accept these cases: treating patients who would benefit from their services, maintaining relationships with referring ACHs, and believing that shorter stay cases that do not meet criteria could be financially profitable and help cover certain facility costs. Several facilities discussed their admission of patients with an expected short length of stay (seven days or less) and the expectation that the cost of treating these beneficiaries would be covered by the blended payment rate. Toward this end, one facility created treatment protocols that were designed to provide intense treatment and discharge after five to seven days. However, this facility reported challenges with executing these protocols because most of the cases admitted were more acute than expected and therefore required longer stays and more resources than were anticipated based on the treatment protocols.

While facilities differed in admitting cases that do not meet criteria, LTCH staff interviewed consistently reported operational and staffing changes that occurred because of the increased patient acuity that resulted from primarily admitting cases that do meet the criteria. Across most facilities we spoke with, staff discussed implementing operational and administrative changes to handle these higher acuity patients, including adding services or increasing staff capabilities. For example, LTCHs described adding ICU beds, bariatric beds, and telemetry services to accommodate the higher acuity of patients discharged from an ACH to the LTCH. To accommodate these higher average acuity patients, facilities have increased staff skill levels through additional training, including critical care training for registered nurses to ensure that ICU-level care can be provided. Facility staff also discussed increased training at all staff levels to facilitate more vigilant monitoring and earlier patient ambulation. Some facility staff discussed a focus on retaining staff through training programs for licensed practical nurses to become registered nurses. In addition to training, facility staff also reported hiring more nurses to increase nurse-to-patient ratios.

Even with the admission and operational changes, staff members at several LTCHs pointed to declining occupancy rates as an effect of the dual payment-rate policy. To mitigate occupancy declines, some facilities reported plans to repurpose beds as inpatient psychiatry, inpatient rehabilitation, or skilled nursing beds. Another facility stopped staffing one entire floor, essentially “closing” those beds to patients, while another facility reduced the number of beds it leases from its host ACH. Most ACHs and LTCHs we spoke with noted LTCH closures in their region; however, in markets with multiple LTCHs, these closures were sometimes strategic. For example, two major for-profit LTCH chains have shifted their portfolios through closures and sales since 2015. One chain reduced the number of LTCHs in its portfolio from 95 to 82, while the other reduced the number of LTCHs it operates from 109 to 104. During 2016, the two major LTCH chains acquired a total of eight LTCHs from each other. In addition, in October 2016, one of the major chains completed an agreement to sell 12 LTCHs (a total of 783 licensed beds) to a smaller chain (Kindred Healthcare 2016a, Kindred Healthcare 2016b, Select Medical 2016).

In general, LTCH officials interviewed agreed that they do not admit certain cases even if the beneficiary meets the criteria, which to some extent was true before the dual payment-rate structure was implemented. LTCHs

reported admitting only patients they expected to discharge to a lower level of care within a four- to six-week period. For example, many facilities interviewed stated that they would not admit patients who are both ventilator dependent and on dialysis because of difficulty discharging these patients to the next level in the care continuum, even though these cases would meet the criteria based on ventilator use.

LTCH admission patterns

Between 2012—when Medicare FFS beneficiaries’ use of LTCHs peaked—and 2015, Medicare cases dropped from just over 141,000 cases to about 131,000 cases, about a 2.4 percent reduction per year on average (Figure 10-4). The pace of the decline increased after the dual payment-rate structure was implemented. From 2015 through 2017, the number of LTCH cases dropped to about 116,000, an average reduction of about 6 percent per year. This reduction in discharges was largely due to fewer cases admitted to LTCHs that did not meet the criteria (nearly a 16 percent reduction). During this period, the volume of cases that met the criteria increased by 3 percent. However, because of the reduced volume of cases not meeting the criteria, the share of cases that met the criteria between 2015 and 2017 rose from about 55 percent to 64 percent.

LTCH use by type of market

In our analysis of geographic areas with the highest and lowest LTCH use, we found varying effects from the implementation of the dual payment-rate structure. In aggregate, LTCH use declined in high-use areas and rose in low-use areas. From 2012 through 2017, high-use areas experienced decreasing volume across all LTCH cases. However, the average annual reduction was lower from 2012 through 2015 than from 2015 through 2017. After the implementation of the dual payment-rate structure, from 2015 through 2017, LTCH volume in high-use areas dropped 6.3 percent annually, compared with a 4.6 percent decrease annually before the implementation of the dual payment-rate structure (from 2012 to 2015) (Table 10-2, p. 358). In that same period, the volume of cases that did not meet the criteria fell in high-use areas by almost 8 percent, compared with the 4 percent reduction in cases that did meet the criteria.

During the 2012 to 2017 period, the volume of cases meeting the criteria in low-use markets increased 6.4 percent annually. The growth in volume in low-use markets primarily occurred from 2015 through 2017, with

**TABLE
10-2**

Changes in LTCH volume have varied by market area since 2012

	Average annual change	
	2012-2015	2015-2017
Total		
Low-use areas	2.7%	6.8%
High-use areas	-4.6	-6.3
Cases that met the criteria		
Low-use areas	2.4	12.9
High-use areas	-5.4	-4.0
Cases that did not meet the criteria		
Low-use areas	3.5	-6.2
High-use areas	-4.1	-7.9

Note: LTCH (long-term care hospital). "Cases that met the criteria" refers to Medicare discharges that met the criteria specified in the Pathway for SGR Reform Act of 2013 for the standard LTCH prospective payment system rate. "Cases that did not meet the criteria" refers to Medicare discharges that did not meet the criteria specified in the Pathway for SGR Reform Act of 2013. "Low-use areas" were identified as the 20 areas of the country with the lowest per beneficiary LTCH use in 2015, requiring a minimum threshold of 25 fee-for-service Medicare LTCH cases. "High-use areas" were identified as the top 20 areas of the country with the highest per beneficiary LTCH use in 2015.

Source: MedPAC analysis of Medicare claims data.

an average annual increase of nearly 13 percent for cases that met the criteria (Table 10-2). During this time frame, the volume of cases that did not meet the criteria fell by 6.2 percent annually, contributing to the increasing share of LTCH patients from low-use markets who met the criteria in 2017 compared with 2015 (74 percent vs. 66 percent; data not shown). Consistent with other research, we found that beneficiaries admitted to LTCHs from low-use areas tended to have higher severity levels of illness, higher risk of mortality, and more frequent and longer ICU stays compared with beneficiaries from high-use areas, suggesting a higher threshold of illness for LTCH use in low-use areas (Makam et al. 2018a). For example, in 2017, the share of beneficiaries in low-use markets who were admitted to LTCHs after ICU stays of eight days or longer was more than double the share of beneficiaries in high-use markets who had similarly long ICU stays (56 percent vs. 21 percent; data not shown).

Changes in LTCH admission by type of LTCH

The share of cases that met the criteria and the degree to which these shares changed over time varied by LTCH

facility characteristics (Table 10-3). We compared the share of beneficiaries meeting the criteria by LTCH location (large urban, other urban, and rural), ownership (for profit and nonprofit), region (New England, Middle Atlantic, South Atlantic, East North Central, East South Central, West North Central, West South Central, Mountain, Pacific), and facility size (number of beds).¹⁵ Urban facilities and nonprofit facilities tended have a higher share of Medicare FFS beneficiaries meeting the criteria than did their rural and for-profit counterparts. These facilities also increased the share of discharges that met the criteria from 2015 through 2017 more than rural and for-profit facilities. The urban/rural differences are not surprising given the lower volume of patients appropriate for LTCH care in areas with lower population densities. Rural LTCHs may be less able to expand their referral area or the volume of patients who meet the criteria.

In terms of the U.S. Census divisions, the share of LTCH discharges meeting the criteria was lowest in the West South Central, New England, and Mountain regions. The contrast across regions widened from 2012 to 2017 when the Mountain and West South Central regions had

**TABLE
10-3**

Changes in the share of LTCH discharges that met the criteria varied by location, ownership, and facility size, 2012-2017

	Share of LTCH discharges	Share of discharges that met the criteria			Average annual percentage point change	
	2017	2012	2015	2017	2012-2015	2015-2017
Total	100%	53%	55%	64%	0.5	4.3
Location						
Large urban	53	56	58	64	0.5	3.3
Other urban	42	51	53	64	0.5	5.8
Rural	4	38	42	46	1.2	2.2
Ownership						
For profit	87	53	55	63	0.6	3.8
Nonprofit	12	55	56	70	0.6	6.6
Region						
New England	4	43	52	62	2.8	5.1
Middle Atlantic	7	60	65	76	1.7	5.6
South Atlantic	14	64	65	78	0.4	6.5
East North Central	13	61	63	75	0.5	6.1
East South Central	7	55	56	73	0.4	8.4
West North Central	5	57	58	78	0.5	9.9
West South Central	35	43	42	46	-0.3	1.7
Mountain	5	62	61	64	-0.4	1.7
Pacific	9	61	64	70	1.0	3.1
Facility size						
0 to 24 beds	3	46	48	61	0.9	6.5
25 to 124 beds	77	55	56	65	0.3	4.8
125+ beds	19	50	53	57	1.2	2.0

Note: LTCH (long-term care hospital). Components may not sum to 100 percent due to rounding. Government-owned LTCHs, representing about 1 percent of discharges, operate in a different financial context from other facilities, so their data are not presented separately here, although they are included in other groups (e.g., "Total"), as appropriate.

Source: MedPAC analysis of Medicare claims data.

lower than average annual increases in the share of LTCH discharges that met the criteria (1 percent average annual increase) compared with the national average (4 percent average annual increase). The number of LTCHs and LTCH beds in each region varied widely, both in aggregate and per capita (data not shown). This variation, in addition to differences in facility ownership and practice patterns across regions, could help explain some of the differences across regions of the country. In 2017, the share of LTCH discharges meeting the criteria equaled or exceeded 70 percent in two-thirds of the regions. However, the West

South Central region (Arkansas, Louisiana, Oklahoma, and Texas), representing over one-third of all LTCH discharges, had a significantly lower share of discharges meeting the criteria (46 percent) than the rest of the country. If this region were excluded from the analysis, the share of discharges meeting the criteria on average would increase to 73 percent.

Midsized LTCHs, those with 25 to 124 beds, had the highest share of Medicare discharges that met the criteria (Table 10-3), a pattern that some interviewees attributed

**TABLE
10-4****The aggregate LTCH Medicare margin for all cases fell to -2.2 percent in 2017**

Type of LTCH	Share of discharges	Medicare margin					
		2012	2013	2014	2015	2016	2017
All	100%	7.6%	6.8%	5.2%	4.7%	3.9%	-2.2%
Urban	96	7.7	6.9	5.2	4.7*	4.0	-1.9
Rural	4	3.4	6.0	5.1	3.5*	-0.2	-13.6
Nonprofit	12	-0.2	-1.1	-2.2	-5.9	-5.7	-13.0
For profit	87	9.3	8.6	7.0	6.5	5.5	-0.3

Note: LTCH (long-term care hospital). Government-owned facilities, representing about 1 percent of discharges, operate in a different financial context from other facilities, so their margins are not necessarily comparable. Their margins are not presented separately here, although they are included in the margins for other groups (e.g., "All"), where applicable.

*CMS adopted new core-based statistical area codes for LTCHs beginning fiscal year 2015; this change reclassified several facilities as urban that had previously been classified as rural, and therefore the margins across categories of urban and rural of facilities before 2015 should not be compared.

Source: MedPAC analysis of Medicare cost report data from CMS.

to these facilities being large enough for a broad range of referral sources but small enough to maintain a consistent occupancy rate, even with the implementation of the dual payment-rate structure. Notably, this analysis reflects only the partial implementation of the new rate structure. In 2017, the policy was phased in at 50 percent of the site-neutral payment rate and 50 percent of the LTCH PPS payment rate. Consistent with the goals of the dual payment-rate structure, the share of cases meeting the criteria across all categories of LTCHs has increased. We expect additional changes in LTCH use to occur as the policy becomes fully implemented.

LTCH financial performance under Medicare

From 2012 through 2015, LTCH cost per case rose by about 2 percent per year across all LTCHs and about 2 percent per year for the cohort of LTCHs that had a high share of Medicare cases meeting the criteria in 2017. However, starting in 2016, the trend in cost growth diverged. From 2015 to 2016, growth in cost per discharge was just 1.3 percent in aggregate, the slowest growth since 2011. In 2017, on average, LTCHs actually reduced costs per discharge by 1.1 percent. This reduction likely resulted from changes in LTCH cost structures, including reductions in length of stay for beneficiaries not meeting the criteria under the dual payment-rate structure.

Cost growth remained robust for LTCHs with a high share of Medicare cases meeting the criteria. For LTCHs

with more than 85 percent of Medicare cases meeting the criteria, cost per case increased from 2015 to 2016 by 5.4 percent and from 2016 to 2017 by 5.6 percent, reflecting a 10-year high across this cohort of LTCHs. These cost increases are expected because of the growth in case mix and patient acuity associated with cases that meet the criteria. For this group of LTCHs, the share of cases meeting the criteria between 2015 and 2017 grew by almost 30 percentage points in aggregate, from 65 percent of cases to nearly 95 percent of cases.

Aggregate LTCH Medicare margins decreased in 2017

LTCH margins peaked in 2012 at 7.6 percent. In 2013, 2014, and 2015, CMS began implementing a downward payment adjustment intended to bring LTCH payments more in line with what would have been spent under the previous payment method (as mandated by the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999), lowering the standard federal payment rate by about 3.75 percent in total. Because of these adjustments, the aggregate LTCH margin ultimately fell to 4.7 percent in 2015 (Table 10-4).

In 2016, as the phase-in of the dual payment-rate structure began, the aggregate LTCH margin fell to 3.9 percent, primarily because of lower Medicare payment for discharges not meeting the criteria (Table 10-4). Between 2015 and 2017, although there was a 9 percentage point

**TABLE
10-5****From 2016 to 2017, Medicare margins fell for LTCHs with more than 85 percent of cases meeting the criteria**

Type of LTCH	Share of discharges	Medicare margin					
		2012	2013	2014	2015	2016	2017
All	23%	10.5%	8.9%	6.5%	6.5%	6.2%	4.6%
Nonprofit	13	0.9	2.9	-1.8	-2.8	-2.8	-6.9
For profit	87	12.0	9.8	7.8	7.9	7.6	6.5

Note: LTCH (long-term care hospital). This analysis includes a cohort of LTCHs with more than 85 percent of Medicare cases meeting the criteria in 2017. "Cases meeting the criteria" refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 for the standard LTCH prospective payment system rate.

Source: MedPAC analysis of Medicare cost report data from CMS.

shift to cases that met the criteria (from 55 percent to 64 percent), LTCHs in aggregate received lower payments for 36 percent of cases (data not shown). Because the reduction in payments was greater than reductions in costs, the aggregate Medicare margin fell to -2.2 percent in 2017. Consistent with prior years, financial performance in 2017 varied across LTCHs. For-profit LTCHs (which accounted for more than three-quarters of all LTCHs and over 85 percent of LTCH discharges) had the highest aggregate Medicare margin at -0.3 percent (Table 10-4). The aggregate Medicare margin for nonprofit LTCHs (which accounted for less than 20 percent of all LTCHs and 12 percent of LTCH discharges) was -13.0 percent (Table 10-4).

Since 2015, the Commission has calculated a margin for Medicare cases meeting the criteria using claims data combined with cost-to-charge ratios for each LTCH, as opposed to aggregate cost report data (Medicare Payment Advisory Commission 2016b). Using this methodology, the Medicare margin for cases meeting the criteria declined between 2015 and 2016 from 6.8 percent to 6.3 percent; in 2017, the margin for cases meeting the criteria declined by another 0.5 percentage point to 5.8 percent (data not shown). Because cases that meet the criteria are generally more profitable under the dual payment-rate structure than those that do not, we expect stronger financial performance under Medicare for LTCHs that treat higher shares of these cases. Indeed, the cohort of LTCHs with more than 85 percent of Medicare cases meeting the criteria in 2017 has

historically had higher margins than LTCHs with a lower share of cases meeting the criteria, in part due to the high case mix and relatively high profitability on Medicare cases admitted. However, in 2017, the aggregate Medicare margin for LTCHs with more than 85 percent of Medicare cases meeting the criteria in 2017 was 4.6 percent, a 1.6 percentage point reduction from 2016 (Table 10-5). This reduced margin resulted from lower payment for cases that did not meet the criteria (representing up to 15 percent of cases at these facilities), combined with relatively high cost growth.

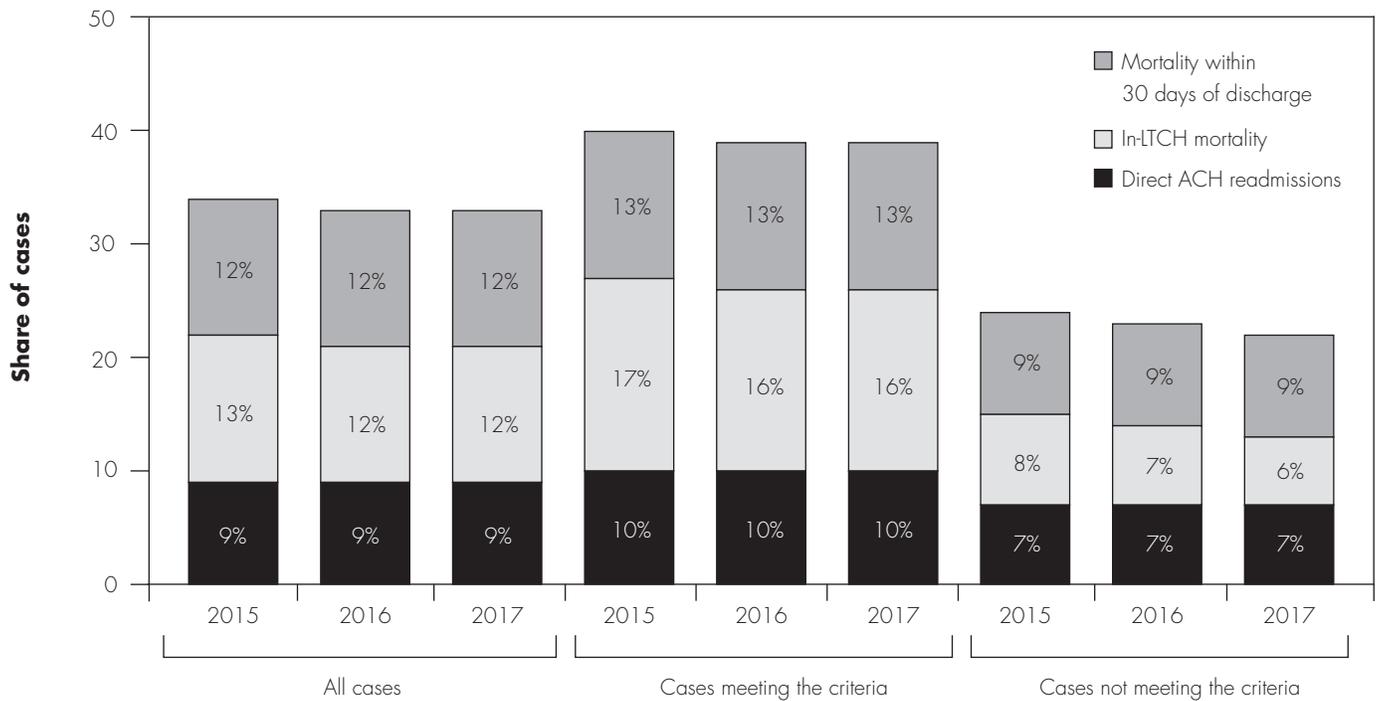
LTCH financial performance varied by ownership across LTCHs with a high share of cases meeting the criteria. From 2016 to 2017, cost per case increased four times more rapidly at nonprofit facilities with a high share of cases that met the criteria than at their for-profit counterparts (13 percent compared with 4 percent), resulting in a 4.1 percentage point decrease in the Medicare margin for nonprofit LTCHs (from -2.8 percent to -6.9 percent). Margins at for-profit LTCHs with a high share of Medicare cases meeting the criteria fell by 1.1 percentage points to 6.5 percent in 2017.¹⁶

Quality of care provided in LTCHs

The mandate requires the Commission to assess the effect that the dual payment-rate structure has had on quality of care in LTCHs. Overall, rates of unadjusted quality measures have remained stable since 2015. Because LTCHs were one of the last sectors to have a quality

FIGURE 10-5

Rates of unadjusted quality measures have remained stable since 2015



Note: LTCH (long-term care hospital), ACH (acute care hospital). “Cases meeting the criteria” refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to qualify for the standard LTCH prospective payment system rate. “Cases not meeting the criteria” refers to Medicare discharges that do not meet the criteria specified in the Pathway for SGR Reform Act of 2013. “Direct ACH readmissions” includes discharges from the LTCH directly to an ACH.

Source: MedPAC analysis of Medicare Provider Analysis and Review and enrollment data from CMS.

reporting program, the Commission historically has assessed aggregate quality of care trends by examining three claims-calculated measures: unadjusted in-facility mortality rates, mortality within 30 days postdischarge, and readmissions from LTCHs to ACHs. For this report, we used these measures for LTCH discharges that met the new criteria as well as for all discharges in aggregate.

CMS recently started publicly reporting some risk-adjusted quality measures for LTCHs. Although risk adjusted, these measures include all LTCH cases, regardless of whether they meet the criteria, and, where applicable, regardless of payer. Two years of data are now available for several of the outcome measures, including rates of pressure ulcers, catheter-associated urinary tract infections (CAUTIs), central line-associated bloodstream infections (CLABSIs), and 30-day unplanned readmissions.

Aggregate unadjusted quality measures

From 2012 through 2017, the Commission’s analysis of claims data found stable or improving rates of unadjusted hospital readmissions (discharges from the LTCH directly to an ACH) and unadjusted mortality rates. For calculating mortality rates, we considered deaths that occurred in the facility and 30 days postdischarge from the LTCH. These rates are not risk adjusted, meaning patient characteristics were not taken into account when calculating rates. Thus, these results should be interpreted with caution. Nonetheless, a trend analysis beginning in 2014 found consistency in the rates of unadjusted readmission and unadjusted mortality in LTCHs over time.

In aggregate, in 2017, 9 percent of LTCH discharges were readmitted to an ACH directly from the LTCH, 12 percent died in the LTCH, and another 12 percent died within 30

**TABLE
10-6****Trends in selected risk-adjusted quality measures from the CMS LTCH Quality Reporting Program have been mixed**

Measure	Fiscal year 2016	Fiscal year 2017
Pressure ulcer	1.8%	1.3%
30-day unplanned readmission*	24.6%	25.0%
Catheter-associated urinary tract infection (standardized infection ratio)	0.94	0.98
Central line-associated bloodstream infection (standardized infection ratio)	0.94	0.87

Note: LTCH (long-term care hospital). The standardized infection ratio is a measure of the share of actually observed cases with the infection compared with the expected number of cases after adjusting for certain risk factors. A ratio of 1.0 indicates the rate is equal to what was expected, below 1.0 indicates the rate is lower than expected, and above 1.0 indicates the rate is higher than expected.

*The 30-day unplanned readmission measure is based on data collected from claims data over a two-year period. The most recently published unique time periods include discharges occurring January 1, 2013, through December 31, 2014, and January 1, 2014, through December 31, 2015. These data do not reflect data from fiscal year 2016 or fiscal year 2017.

Source: CMS LTCH Compare website.

days of discharge from the LTCH (Figure 10-5). The rates have been relatively stable since 2015.

Not unexpectedly, given differences in patient severity, the unadjusted rates for the three quality measures varied depending on whether cases met the criteria, but the rates were also relatively stable over time. In 2017, for cases meeting the criteria, 10 percent were readmitted to the ACH directly from the LTCH, 16 percent died in the LTCH, and 13 percent died within 30 days of discharge from the LTCH. Thus, combined, almost 40 percent of LTCH patients meeting the criteria in 2017 were directly readmitted to an ACH or died in the LTCH or within 30 days of LTCH discharge.

By comparison, cases not meeting the criteria had lower rates of readmission and mortality. These rates were consistent from 2015 to 2017, but the share of cases where the patient died in the LTCH appeared to drop. Six percent of cases not meeting the criteria died during the LTCH stay in 2017, down from 8 percent in 2015. Since these measures are not adjusted for patient risk factors, this decrease could be attributable to improvements in quality, changes in case mix, or changes in admission patterns. We will monitor these cases as the dual payment-rate structure is fully phased in.

Adjusted measures for quality reporting

Medicare's LTCH Quality Reporting Program (QRP) for fiscal year 2019 includes 16 measures calculated from 3 sources. CMS currently reports some of these

measures on its LTCH Compare website, which is updated quarterly. The data elements needed to calculate the LTCH quality measures are collected from a patient assessment instrument called the Continuity Assessment Record and Evaluation Data Set, the Centers for Disease Control and Prevention's internet-based surveillance system (National Health Care Safety Network), and Medicare claims data. CMS has published two years of data for four outcome measures, including rates of pressure ulcers, CAUTIs, CLABSIs, and 30-day all-cause unplanned readmissions. For several measures, CMS compares each facility's risk-adjusted rate with the national rate.

We reviewed the risk-adjusted national rates of pressure ulcers, CAUTIs, CLABSIs, and 30-day unplanned readmissions across a two-year period. The rate of pressure ulcers reported by LTCHs in 2017 continued to be low at 1.3 percent (Table 10-6). The risk-adjusted 30-day unplanned readmission rate was about 25 percent and remained stable between fiscal years 2016 and 2017.¹⁷ CMS has replaced this measure with a potentially preventable 30-day postdischarge readmission measure; however, these data are not yet available. For fiscal year 2017, the standardized ratios of CAUTIs and CLABSIs were both lower than expected at 0.98 and 0.87, respectively (less than 1.0 using the share of actual cases observed with the infection compared with the expected number of cases). These ratio figures mean that the rate of CAUTIs was about 2 percent lower than expected, while the rate of CLABSIs was about 13 percent lower than expected after adjusting for certain risk factors. We

**TABLE
10-7****Medicare spending for PAC remained stable
but increased for hospice services since 2012**

	2012	2013	2014	2015	2016	2017
All PAC	\$58.4	\$58.9	\$59.3	\$60.5	\$59.8	\$59.6
SNF	28.2	28.7	29.1	29.7	29.1	28.8
HHA	18.2	18.1	18.0	18.4	18.3	18.4
IRF	6.7	6.9	7.2	7.4	7.7	7.9
LTCH	5.3	5.2	5.0	5.0	4.7	4.5
Hospice	15.1	15.1	15.1	15.9	16.8	17.9

Note: PAC (post-acute care), SNF (skilled nursing facility), HHA (home health agency), IRF (inpatient rehabilitation facility), LTCH (long-term care hospital). Data include spending for beneficiaries discharged from an acute care hospital to a post-acute care provider and beneficiaries directly admitted to a post-acute care provider from the community.

Source: MedPAC analysis of the denominator files and CMS Office of the Actuary.

urge caution in interpreting the precise ratios and changes since 2016, given that the changes in facilities' testing and reporting for such infections could have altered the rate without any meaningful change in the number of those infections. We will continue to monitor trends in the rates of these measures and newly adopted measures as they become available for analysis.

The rates for certain risk-adjusted quality measures varied by hospital characteristics. For example, using data collected during fiscal year 2017, we found that a larger share of for-profit facilities scored better than the national average on rates of CAUTIs and CLABSIs than did nonprofit LTCHs. However, data collected from 2014 through 2015 show a larger share of nonprofit LTCHs had better rates of unplanned readmissions than the national rate for for-profit LTCHs. We did not find this difference between nonprofit and for-profit facilities in the facility-adjusted rate of pressure ulcers or across any of the measures when we examined them by facility size.

Impacts of changes in payment policy on the use of other PAC and hospice services

The mandate requires the Commission to assess the effect that the dual payment-rate structure has had on the use of other PAC and hospice services. The dual payment-

rate structure provides a financial incentive for LTCHs to serve a larger share of beneficiaries who meet the criteria while reducing or eliminating admissions for beneficiaries who do not meet the criteria. This incentive may result in increased use of other PAC or hospice services in place of LTCH services. However, given the relatively low volume of ACH discharges to LTCHs, patterns of use for other PAC and hospice providers have remained stable since fiscal year 2016.

Medicare spending for PAC and hospice services

Medicare's Office of the Actuary estimates that, in 2017, Medicare spent almost \$60 billion on PAC services, including spending for beneficiaries admitted from the community (Table 10-7). Spending on SNF services (\$28.8 billion) and home health services (\$18.4 billion) accounted for 80 percent of total PAC spending in 2017. The remainder comprised spending on IRF and LTCH services, which totaled \$7.9 and \$4.5 billion, respectively. Meanwhile, Medicare spending for hospice care was \$17.9 billion in 2017. Since 2012, Medicare spending for PAC has remained relatively stable, rising just 2 percent between 2012 and 2017, while spending on hospice has increased rapidly, climbing 19 percent over the period.

Supply and use of PAC and hospice services since 2012

The supply of SNFs, HHAs, and IRFs has remained fairly stable since 2012 (Table 10-8). In 2017, consistent with

**TABLE
10-8**

Between 2012 and 2017, the number of PAC and hospice providers remained stable

	Number of providers			Share of ACH discharges using PAC services within seven days of discharge		
	2012	2016	2017	2012	2016	2017
All PAC	28,768	29,078	28,710	36%	38%	36%
SNF	15,139	15,263	15,277	51	50	52
HHA	12,026	12,204	11,844	36	37	35
IRF	1,166	1,188	1,178	9	9	10
LTCH	437	423	411	3	3	3
Hospice	3,720	4,382	4,488	3	4	4

Note: PAC (post-acute care), ACH (acute care hospital), SNF (skilled nursing facility), HHA (home health agency), IRF (inpatient rehabilitation facility), LTCH (long-term care hospital). The provider counts include all facilities or providers, including those not paid under the prospective payment system.

Source: MedPAC analysis of the Provider of Services file and CMS Office of the Actuary Medicare Trustees report.

2012, home health and skilled nursing facility providers accounted for about 95 percent of PAC providers (or about 27,000 providers). The overall share of ACH discharges bound for PAC has also remained stable since 2012. In 2017, about 36 percent of Medicare FFS beneficiaries used PAC services within seven days of their ACH discharge. Of these, 52 percent were discharged to SNFs, 35 percent to home health care, 10 percent to IRFs, and 3 percent to LTCHs.

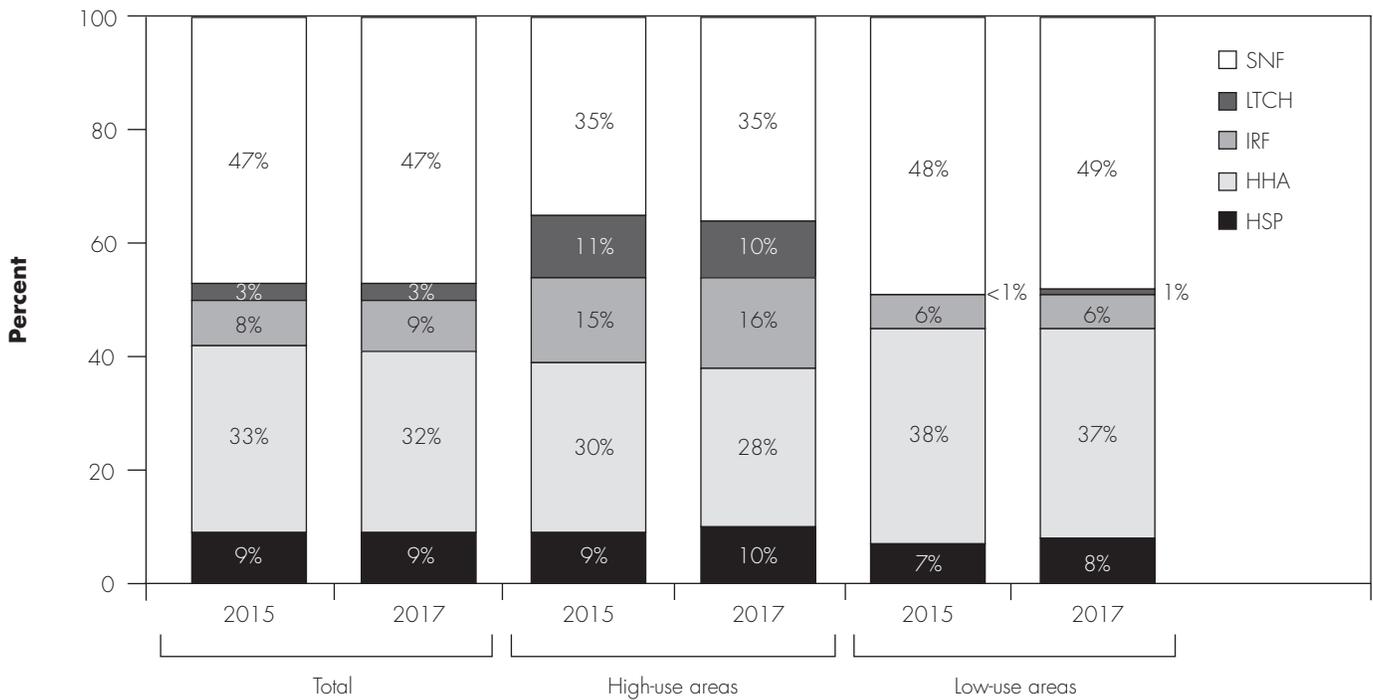
Between 2012 and 2017, the supply of hospice providers grew by 21 percent, from 3,720 to 4,488 providers.¹⁸ In 2017, 4 percent of all Medicare FFS beneficiaries used hospice services within seven days of their ACH discharge compared with about 3 percent in 2012.

In aggregate, PAC and hospice use vary by market characteristics, including areas with historically high and low LTCH use.¹⁹ In 2017, in areas of the country with high LTCH use, beneficiaries discharged from ACHs who were not discharged home were discharged to LTCHs, IRFs, and hospice more frequently than in areas with low LTCH use (Figure 10-6, p. 366). Since the implementation of the dual payment-rate structure in 2016, we would expect to see any changes in response to the policy between 2015 and 2017 (the most recent data). However, we observed minimal changes in the share of ACH discharges to PAC and hospice over this period. Instead, although largely

consistent over time, we observed discharge pattern differences between markets with high LTCH use and low LTCH use. In 2017, in areas with high LTCH use, the share of hospitalized beneficiaries—excluding those discharged to home—who were discharged to LTCHs was 10 percent and to SNFs, 35 percent. By contrast, in areas with low LTCH use, the share of hospitalized beneficiaries discharged to LTCHs was 1 percent and to SNFs, 49 percent, which suggests that LTCHs and SNFs could be substitutes for certain types of cases, depending on the market and the capabilities of the SNFs in the market. In 2017, 37 percent of ACH discharges receiving PAC in low-use areas were discharged with HHA services compared with 28 percent from high-use areas. ACH discharges in high-use areas who were not discharged home used hospice services somewhat more commonly than their counterparts in low-use areas (10 percent vs. 8 percent). However, underlying case mix and care delivery differences could exist across these areas, contributing to differences in the use of PAC and hospice. Indeed, 25 percent of ACH discharges from high-use areas had an ICU stay that exceeded three days and 6 percent exceeded eight days. In contrast, 19 percent of ACH discharges from low-use areas had an ICU stay that exceeded three days and 5 percent exceeded eight days (data not shown). For this reason, we also considered the ACH discharge destination by beneficiary characteristics, including length of time spent in an ICU and severity of illness.

FIGURE 10-6

ACH discharge patterns to PAC and hospice in areas with high and low use of LTCH remained stable from 2015 to 2017



Note: ACH (acute care hospital), PAC (post-acute care), LTCH (long-term care hospital), SNF (skilled nursing facility), IRF (inpatient rehabilitation facility), HHA (home health agency), HSP (hospice). "High-use areas" were identified as the top 20 areas of the country with the highest per beneficiary LTCH use in 2015. "Low-use areas" were identified as the 20 areas of the country with the lowest per beneficiary LTCH use in 2015, requiring a minimum threshold of 25 fee-for-service Medicare LTCH cases.

Source: MedPAC analysis of Medicare claims data.

Characteristics of PAC and hospice users

Beneficiaries who spend more time in an ICU are more likely to be discharged to PAC or hospice services than beneficiaries who spend few or no days in an ICU. The length of time that a beneficiary spends in an ICU is associated with case complexity; a long ICU stay may be an indicator of chronic critical illness (Gage et al. 2011). We found that, in 2017, 36 percent of beneficiaries with an ICU stay less than three days were discharged to PAC or hospice compared with 69 percent of beneficiaries with eight or more days in an ICU (data not shown).

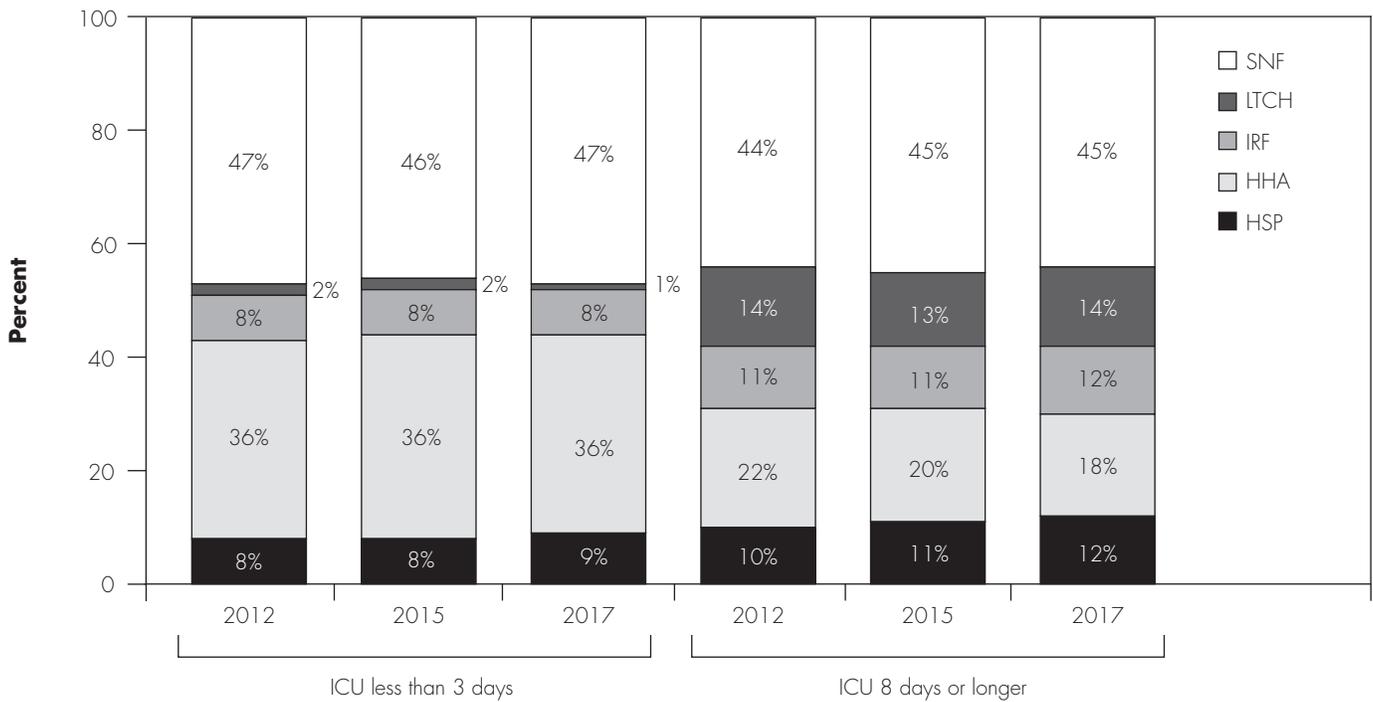
In aggregate, the mix of PAC and hospice use differed by the beneficiary's length of stay in an ICU (Figure 10-7). For example, in 2017, 36 percent of beneficiaries with ICU

stays of less than three days who received PAC or hospice services were discharged using home health. However, the share was 18 percent for beneficiaries with ICU stays of eight days or longer. The number of days a beneficiary spent in the referring hospital's ICU had an opposite correlation with LTCH use: 1 percent of beneficiaries with less than three ICU days were discharged to an LTCH compared with 14 percent of beneficiaries with eight or more ICU days. These patterns did not change meaningfully from 2012 through 2017.

We also considered changes in PAC and hospice use since 2012 by market area and by a beneficiary's length of stay in the ACH ICU. In general, we find small changes in the share of discharges to other PAC and hospice from 2012 through 2017. During that period, the largest change

FIGURE 10-7

Discharge to PAC and hospice care by ICU use remained stable from 2012 to 2017



Note: PAC (post-acute care), ICU (intensive care unit), SNF (skilled nursing facility), LTCH (long-term care hospital), IRF (inpatient rehabilitation facility), HHA (home health agency), HSP (hospice). "ICU less than 3 days" includes acute care hospital (ACH) stays with fewer than three ICU days, including no ICU use. "ICU 8 days or longer" includes ACH stays with eight days or more ICU days.

Source: MedPAC analysis of Medicare claims data.

in discharge patterns from ACHs occurred for LTCH use from 2015 to 2017: The share of beneficiaries with less than a three-day ICU stay in the ACH who were discharged to an LTCH declined by almost 10 percent annually across market areas with historically high and low LTCH use. However, the share of beneficiaries discharged to an LTCH rose to 13 percent for those who had had an ICU stay in an ACH lasting eight days or longer in markets with historically low LTCH use. Although this 13 percent increase is notable, it reflects just a 1 percentage point change, owing to the relatively low volume of discharges to LTCHs in low-use areas.²⁰ We did not find a corresponding increase in the use of LTCH for beneficiaries with long ICU stays in areas with historically high LTCH use.

PAC use and the mix of PAC settings also varied based on the beneficiary's ACH diagnosis. Among the 6 ACH

MS-DRGs with a share of LTCH discharges exceeding 10 percent, 4 included the use of mechanical ventilation for 96 or more hours. The combined six diagnosis groups constituted 1.5 percent of ACH live discharges but 29 percent of discharges to LTCHs in 2017. About 62 percent of discharges requiring a tracheostomy and more than 96 hours of ventilator support in an ACH (the average of MS-DRGs 004 and 003) were discharged to an LTCH, as were about 16 percent of beneficiaries, who were discharged to LTCHs with either septicemia or respiratory failure requiring mechanical ventilation for more than 96 hours in the preceding ACH stay (the average of MS-DRGs 870 and 207) (Table 10-9, p. 368).

Over the 2012 to 2017 period, the use of LTCHs remained fairly stable by ACH primary diagnosis. For example, the share of beneficiaries with principal ACH diagnoses of skin conditions or procedures, including wound and skin

**TABLE
10-9**

In 2017, the majority of ACH discharges requiring tracheostomy with mechanical ventilation support were discharged to an LTCH

ACH MS-DRG	Description	Live discharges	Postdischarge PAC and hospice use					
			LTCH	SNF	IRF	HHA	HSP	None
004	Tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth & neck without major OR procedure	12,076	65%	10%	2%	3%	3%	16%
003	ECMO or tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth and neck with major OR procedure	12,314	59	10	7	4	3	17
870	Septicemia or severe sepsis with MV 96+ hours	20,464	16	27	5	5	17	29
207	Respiratory system diagnosis with ventilator support 96+ hours	12,911	15	26	6	7	14	31
853	Infectious and parasitic diseases with OR procedure with MCC	67,886	10	31	6	12	6	35
463	Wound debridement and skin graft except hand, for musculo-connective tissue disorders with MCC	5,813	10	40	7	11	3	30
	All MS-DRGs	8,864,084	1	19	3	13	4	60

Note: ACH (acute care hospital), LTCH (long-term care hospital), MS-DRG (Medicare severity–diagnosis related group), PAC (post-acute care), SNF (skilled nursing facility), IRF (inpatient rehabilitation facility), HHA (home health agency), HSP (hospice), MV (mechanical ventilation), OR (operating room), ECMO (extracorporeal membrane oxygenation), MCC (major complication or comorbidity). “None” indicates that the beneficiary did not receive PAC or hospice services within seven days of discharge from the acute care hospital.

Source: MedPAC analysis of Medicare claims data.

debridement, who were discharged to an LTCH dropped slightly (Table 10-10). In contrast, the share of patients with certain ACH diagnoses or procedures increased annually by 1 percentage point from 2012 to 2015 and by 2 percentage points annually from 2015 to 2017, including those having a tracheostomy with 96 or more hours of mechanical ventilation support. However, because this trend is consistent before and after the implementation of the dual payment-rate policy, it is not clear that the changes in discharge pattern are in response to the policy. We found minimal changes across the PAC and hospice providers since 2012 (data not shown). We will continue to monitor changes in the share of ACH discharges to LTCHs by MS-DRG.

Discharge patterns varied substantially across high-use and low-use areas. In areas with high LTCH use, three-quarters of beneficiaries who had a tracheostomy with mechanical ventilator support of 96 or more hours in an ACH were

discharged to an LTCH, while 4 percent were discharged to a SNF (Table 10-11, p. 370). In contrast, in areas with low LTCH use, about one-quarter of beneficiaries with this diagnosis were discharged to an LTCH, while more than a third were discharged to a SNF. This finding may bolster other research identifying a decline in SNF use for certain beneficiaries when an LTCH opens in a market, suggesting some degree of substitution (Einav et al. 2018, Kahn et al. 2010, Koenig et al. 2013).

We find differences by ACH MS-DRGs over time across different types of market areas. From 2012 through 2015, for the six ACH MS-DRGs with a share of LTCH discharges exceeding 10 percent—with the exception of wound debridement (ACH MS-DRG 463)—the changes in the share of discharges to LTCHs and SNFs were generally less than 1 percentage point per year regardless of market type (Table 10-12, p. 371). However, from

**TABLE
10-10**

Since 2012, there has been little change in the share of ACH discharges to LTCH and SNF services by select MS-DRGs

ACH MS-DRG	Description	Average annual percentage point change			
		LTCH		SNF	
		2012-2015	2015-2017	2012-2015	2015-2017
004	Tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth & neck without major OR procedure	1	2	0	-1
003	ECMO or tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth and neck with major OR procedure	1	0	0	-1
870	Septicemia or severe sepsis with MV 96+ hours	0	1	0	0
207	Respiratory system diagnosis with ventilator support 96+ hours	0	1	0	0
463	Wound debridement and skin graft except hand, for musculo-connective tissue disorders with MCC	-1	-2	0	2
853	Infectious and parasitic diseases with OR procedure with MCC	0	-1	0	-1
570	Skin debridement with MCC	0	-1	0	1
	All ACH MS-DRGs	1	1	0	0

Note: ACH (acute care hospital), LTCH (long-term care hospital), SNF (skilled nursing facility), MS-DRG (Medicare severity-adjusted diagnosis related group), MV (mechanical ventilation), OR (operating room, ECMO (extracorporeal membrane oxygenation), MCC (major complication or comorbidity). Includes all live discharges.

Source: MedPAC analysis of Medicare claims data.

2015 to 2017, the discharge patterns for beneficiaries with certain diagnoses and procedures appeared to change. For example, from 2015 to 2017 in areas of high LTCH use, there was an increase in the share of beneficiaries who had a tracheostomy with mechanical ventilator support for 96 or more hours in an ACH and were discharged to an LTCH. Similarly, in areas of low LTCH use, use increased for beneficiaries who had a tracheostomy in the ACH (ACH MS-DRG 004) and were discharged to an LTCH, while the use of SNFs declined for these patients. From 2015 to 2017 in areas of high LTCH-use, there were decreases in the share of beneficiaries with skin procedures, including wound or skin debridement, in the ACH (ACH MS-DRGs 463 and 570) who were discharged to an LTCH. In areas with low LTCH use, however, there was no change in the share of beneficiaries discharged to LTCHs who had these skin procedures in the ACH. In the future, additional data might be helpful in

determining whether these changes reflect data anomalies or a shift in ACH discharge patterns.

Changes in the use of PAC and hospice services are difficult to detect even when isolating the analysis to particular MS-DRGs in certain areas with high and low use of LTCHs. We will continue to monitor changes in ACH discharge patterns as the dual payment-rate structure continues to be implemented.

Necessity of the 25 percent rule

The mandate requires the Commission to assess the need to apply the 25 percent rule that CMS eliminated in its fiscal year 2019 final rule. CMS established the 25 percent rule as a response to incentives inherent in Medicare’s IPPS and LTCH payment policies. Under the IPPS, fixed

**TABLE
10-11**

Large differences in PAC use by ACH MS-DRGs for beneficiaries from MedPAC areas with high and low use of LTCHs, 2017

ACH MS-DRG	Description	High-use areas		Low-use areas	
		LTCH	SNF	LTCH	SNF
004	Tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth & neck without major OR procedure	75%	4%	28%	39%
003	ECMO or tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth and neck with major OR procedure	69	4	24	35
870	Septicemia or severe sepsis with MV 96+ hours	30	19	3	36
207	Respiratory system diagnosis with ventilator support 96+ hours	31	18	5	35
570	Skin debridement with MCC	31	17	2	41
463	Wound debridement and skin graft except hand, for musculo-connective tissue disorders with MCC	28	24	2	47
853	Infectious and parasitic diseases with OR procedure with MCC	25	19	2	39

Note: PAC (post-acute care), ACH (acute care hospital), MS-DRG (Medicare-severity diagnosis related groups), LTCH (long-term care hospital), SNF (skilled nursing facility), MV (mechanical ventilation), OR (operating room), ECMO (extracorporeal membrane oxygenation), MCC (major complication or comorbidity). "High-use areas" were identified as the top 20 areas of the country with the highest per beneficiary LTCH use in 2015. "Low-use areas" were identified as the 20 areas of the country with the lowest per beneficiary LTCH use in 2015, requiring a minimum threshold of 25 fee-for-service Medicare LTCH cases.

Source: MedPAC analysis of Medicare claims data.

per case payments encourage ACHs to reduce their costs by shortening lengths of stay and shifting costly patients to LTCHs and other PAC providers. The incentive to reduce the length of stay in an ACH combined with the profit incentives inherent in the LTCH payment system together contributed to the strong growth in LTCH facilities and admissions after 2003.

Establishment and implementation of the 25 percent rule

In 2005, CMS established a policy that set a limit on the share of an LTCH's cases that could be admitted from a single ACH, the "25 percent rule." The 25 percent threshold policy was intended to help ensure that LTCHs did not function as units of ACHs and that decisions about admission, treatment, and discharge in both ACHs and LTCHs were made for clinical rather than financial reasons. The rule reduced payments for some LTCHs that exceeded the threshold, creating disincentives for LTCHs to admit a large share of their patients from a single ACH. After the threshold was reached, Medicare paid the LTCH

the lesser of the LTCH PPS rate or an amount equivalent to the applicable acute care hospital PPS rate.

The 25 percent rule was never fully applied. The Medicare, Medicaid, and SCHIP Extension Act of 2007—as amended by the Patient Protection and Affordable Care Act of 2010, the Health Care Education Reconciliation Act of 2010, and the Pathway for SGR Reform Act of 2013—substantially changed the implementation of the 25 percent rule. Together, these laws rolled back the phased-in implementation of the 25 percent rule for hospitals-within-hospitals and satellites to 50 percent until cost reporting periods beginning on or after October 1, 2016, and prevented application of the rule to freestanding LTCHs until cost reporting periods beginning on or after July 1, 2016. In addition, the Pathway for SGR Reform Act of 2013 also permanently exempted certain colocated LTCHs from the 25 percent rule. In its fiscal year 2017 final rule, CMS aligned the timing of the implementation of the 25 percent rule for freestanding, hospitals-within-hospitals, and satellite LTCHs. However, through the 21st

**TABLE
10-12**

Annual percentage point change in the share of ACH discharges subsequently admitted to a SNF or LTCH, by market type, 2012-2017

		Average annual percentage point change							
		Areas with high LTCH use				Areas with low LTCH use			
ACH MS-DRG	Description	LTCH		SNF		LTCH		SNF	
		2012-2015	2015-2017	2012-2015	2015-2017	2012-2015	2015-2017	2012-2015	2015-2017
004	Tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth & neck without major OR procedure	-1	2	0	0	1	3	0	-3
003	ECMO or tracheostomy with MV support 96+ hours or primary diagnosis except face, mouth and neck with major OR procedure	-1	1	0	0	1	0	-1	-1
870	Septicemia or severe sepsis with MV 96+ hours	-1	-1	1	1	0	1	0	0
207	Respiratory system diagnosis with ventilator support 96+ hours	-1	2	0	1	0	1	0	0
570	Skin debridement with MCC	-1	-1	-1	3	0	0	-1	2
463	Wound debridement and skin graft except hand, for musculo-connective tissue disorders with MCC	-3	-2	1	2	0	0	0	2
853	Infectious and parasitic diseases with OR procedure with MCC	-1	-2	0	1	0	0	0	-1

Note: ACH (acute-care hospital), SNF (skilled nursing facility), LTCH (long-term care hospital), MS-DRG (Medicare severity–diagnosis related group), MV (mechanical ventilation), OR (operating room), ECMO (extracorporeal membrane oxygenation), MCC (major complication or comorbidity). High LTCH use areas were identified as the top 20 areas of the country with the highest per beneficiary LTCH use in 2015. Low LTCH use areas were identified as the 20 areas of the country with the lowest per beneficiary LTCH use in 2015, requiring a minimum threshold of 25 fee-for-service Medicare LTCH cases. Includes all live discharges.

Source: MedPAC analysis of Medicare claims data.

Century Cures Act, the Congress delayed implementation of the 25 percent threshold policy until fiscal year 2018. CMS further delayed implementation until fiscal year 2019 in its 2018 final rule and subsequently eliminated the rule altogether in fiscal year 2019.

The Commission has provided comments to CMS and the Congress in response to the 25 percent rule since 2004 (Medicare Payment Advisory Commission 2011, Medicare Payment Advisory Commission 2004a). Before

the implementation of the dual payment-rate policy, the Commission viewed the 25 percent policy as a blunt but necessary instrument to help ensure that LTCHs did not function as units of ACHs (Medicare Payment Advisory Commission 2014). Further, the Commission recognized that the 25 percent threshold policy also did little to promote optimal care for beneficiaries. Under the rule, an LTCH’s decision to admit a patient might be based not only on the patient’s clinical condition but also on how close the facility is to exceeding its threshold.

The 25 percent rule and the dual payment-rate structure

Even under the LTCH dual-payment structure, ACHs continue to have an incentive to unbundle care (reduce their costs by shortening lengths of stay and shifting costly patients to LTCHs (and other PAC providers)). For this reason, in the context of the March 2014 recommendation to the Congress, the Commission asked that CMS continue to apply the 25 percent rule (Medicare Payment Advisory Commission 2014). In 2018, the Commission requested that the Secretary refrain from permanently eliminating this policy until the Commission examined the continued need for the 25 percent threshold policy under the dual payment-rate structure (Medicare Payment Advisory Commission 2018a).

Our analysis of data through 2017 suggests that, since 2016, the trends in LTCH use have begun to shift toward cases meeting the criteria. LTCHs that have closed after the implementation of the dual payment-rate policy admitted a lower share of patients meeting the criteria compared with LTCHs that remained open. Combined, these trends indicate a general shift away from lower severity cases and an underlying change in admission patterns in LTCHs, reducing the necessity for the 25 percent rule. The Commission expects additional changes in ACH referrals to LTCHs as the dual payment-rate structure is fully phased in, further reducing the need for the 25 percent rule. However, given the responsiveness of the LTCH industry to payment policy changes, the Commission will monitor changes in referral patterns to LTCHs, including understanding variation in ICU use across ACHs. The Secretary and the Congress could contemplate several policies to further reduce the likelihood of overusing LTCHs, including increasing the ICU requirement to more closely align with the Commission's March 2014 recommendation to the Congress and increasing the share of cases meeting the criteria necessary for the facility to receive the standard LTCH PPS rate.

Conclusion

The Pathway for SGR Reform Act of 2013 mandated that the Commission explore the effect of the LTCH dual payment-rate structure on LTCHs and their quality of care and on the use of other PAC and hospice services. In response to the mandate, the Commission's analysis

generally found reductions in LTCH use, especially for cases not meeting the criteria; however, the impact of this policy across other settings was difficult to ascertain given the short period that the policy has been in effect (at a 50 percent phase-in) and the low volume of LTCH cases generally.

The Commission found reductions in LTCH spending, in the volume of beneficiary use of LTCHs, and in the number of LTCH facilities from 2015 through 2017. Even with overall reductions in volume, the Commission found that the share of LTCH cases meeting the criteria increased since the implementation of the dual payment-rate structure, while fewer beneficiaries not meeting the criteria were being admitted to LTCHs. Through our interviews, we found that LTCHs are increasingly focused on a more acute and medically complex population, as intended by the new dual payment-rate structure. Although nearly 50 LTCHs have closed since fiscal year 2016, most of these closures occurred in markets with competition from other LTCHs. Our analysis found that the facilities that closed had lower occupancy, a lower share of beneficiaries who met the criteria, lower payments per case, and higher costs per case than facilities that remained open. Because the payment rate for cases not meeting the criteria is substantially lower than that for beneficiaries who meet the criteria, an LTCH's financial stability under Medicare relies, in part, on the share of its cases meeting the criteria. LTCHs with more than 85 percent of their Medicare population meeting the criteria continued to have positive financial performance under Medicare in 2017.

The LTCH Quality Reporting Program is relatively new, with few risk-adjusted measures currently appropriate for longitudinal comparisons. However, our examination of unadjusted measures, even after focusing on cases that met the criteria, did not find evidence that the quality of care provided in LTCHs has been negatively affected by the dual payment-rate structure.

Given the relatively small number of LTCH referrals, it remains challenging to identify meaningful changes in discharge patterns of PAC and hospice in response to the implementation of the dual payment-rate structure. We did, however, observe some small differences in certain MS-DRGs, including those involving wound care and, in some markets, tracheostomy.

Although the Commission was asked to opine on the necessity of continuing to apply the 25 percent rule, this policy was eliminated in fiscal year 2019 and no longer applies to the LTCH PPS. However, before the

implementation of the dual payment-rate policy, the Commission viewed the 25 percent policy as a blunt but necessary instrument to help ensure that LTCHs did not function as units of ACHs, but also recognized that the 25 percent rule did little to promote optimal care for beneficiaries. Even under a dual-payment structure, incentives remain for ACHs to unbundle care that is paid for under the IPPS. However, substantial changes in referral patterns that have occurred and closures of LTCHs with lower shares of cases meeting the criteria indicate strong behavioral shifts even with a partial policy phase-in. Because we expect continued changes in admission patterns as the policy becomes fully phased in, the dual payment-rate structure may obviate the need for the 25 percent rule.

The Commission reiterates two concerns regarding the dual payment-rate structure specified in the Pathway for SGR Reform Act of 2013. First, the Commission's March 2014 recommendation to the Congress included an eight-day ICU stay threshold requirement for payment under the standard LTCH payment rate. Because the current policy continues to pay the higher LTCH standard payment rate for cases with three or more ICU days, the Commission remains concerned that cases otherwise cared for in lower cost settings are being discharged to the higher cost LTCH. Second, for purposes of payment equity across provider types, the defined level of payment should equalize

payment across provider types; instead, because the defined payment level for site-neutral cases is the lesser of an IPPS-comparable rate or 100 percent of the cost of the case, LTCHs may receive a lower payment than what would have been received for a similar IPPS discharge (Medicare Payment Advisory Commission 2015).

In sum, the Commission observed changes in the LTCH setting consistent with the policy objectives of the dual payment-rate structure that was implemented for cost reporting periods beginning on or after October 1, 2015. Given the decades of concern regarding increases in LTCH use and the relatively high cost of LTCH services without a clear benefit for some cases, the trends in the LTCH sector align with the Commission's recommended patient-specific criteria for LTCHs. Changes in the trends of LTCH use and spending after implementation of the policy were expected, and the Commission expects to see further continuation of these trends as the dual payment-rate structure becomes fully implemented (in 2020). Given the current partial policy phase-in and elimination of the 25 percent rule, the Commission will continue to monitor changes in use and trends across PAC and hospice, facility closures, and quality. The Commission also continues to pursue a unified PAC PPS, which could eliminate the need for the dual payment-rate structure for LTCHs in the future. ■

Endnotes

- 1 The Medicare, Medicaid, and SCHIP Extension Act of 2007 also requires LTCHs to have a patient review process that screens patients to ensure the appropriateness of admission and continued stay, physician on-site availability on a daily basis, and interdisciplinary treatment teams of health care professionals. The Pathway for SGR Reform Act of 2013 specifies that, beginning in fiscal year 2020, LTCHs will also be required to maintain a certain share of beneficiaries who qualify to receive the standard LTCH payment rate.
- 2 We based our analysis of the top 6 referring ACH MS–DRGs on a threshold of more than 500 discharges to LTCHs in 2017. Using a threshold of 100 discharges to LTCHs would include 3 additional ACH MS–DRGs: MS–DRG 573, skin graft for skin ulcer or cellulitis with major complication or comorbidity (MCC) (19 percent of cases discharged to LTCHs); MS–DRG 11, tracheostomy for face, mouth, and neck diagnosis or laryngectomy with MCC (12 percent); and MS–DRG 570, skin debridement with MCC (10 percent).
- 3 We define MedPAC areas as metropolitan statistical areas within a state or rest-of-state nonmetropolitan areas, depending on where beneficiaries reside (Medicare Payment Advisory Commission 2017b).
- 4 More information on the PPS for LTCHs is available at http://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_18_ltch_final_v2_sec.pdf?sfvrsn=0.
- 5 As a reference point, in 1993, Medicare spending on LTCHs was \$398 million, but grew more than fourfold to \$2.2 billion in 2002 (Medicare Payment Advisory Commission 2007).
- 6 RTI, under contract to CMS, reported a similar finding (Gage et al. 2007). RTI reviewed LTCH Medicare costs and payments for the two years before and two years after implementation of the LTCH PPS. Immediately after the PPS was implemented, LTCH margins were found to be much higher than margins in the 2001 to 2002 period under the prior payment system. RTI attributed higher overall LTCH margins to the fact that the initial base LTCH PPS rate was set substantially too high.
- 7 LTCHs' (and other providers') Medicare margins under TEFRA were generally zero or negative. The TEFRA margins are consistent with the payment system since providers were paid the cost of services.
- 8 For additional information, refer to the Commission's March 2018 report to the Congress (Medicare Payment Advisory Commission 2018d).
- 9 An HWH is an LTCH that occupies space in a building also used by another hospital or on the campus of another hospital. HWHs have their own provider numbers and operate independently from their host hospitals. A satellite is an HWH that operates under the same Medicare number as another LTCH at a separate location.
- 10 Exceptions to the moratorium that MMSEA and subsequent legislation allowed were for (1) LTCHs that began their qualifying period (demonstrating an average Medicare length of stay greater than 25 days) on or before December 29, 2007; (2) entities that had a binding or written agreement with an unrelated party for the construction, renovation, lease, or demolition of an LTCH, with at least 10 percent of the estimated cost of the project already expended on or before December 29, 2007; (3) entities that had obtained a state certificate of need on or before December 29, 2007; (4) existing LTCHs that had obtained a certificate of need for an increase in beds issued on or after April 1, 2005, and before December 29, 2007; and (5) LTCHs that were located in a state with only one other LTCH and that sought to increase beds after the closure or decrease in the number of beds of the state's other LTCH.
- 11 The Pathway for SGR Reform Act of 2013, as amended by the Protecting Access to Medicare Act of 2014, allowed exceptions to the moratorium for (1) LTCHs that began their qualifying period (demonstrating an average Medicare length of stay greater than 25 days) on or before April 1, 2014; (2) entities that had a binding or written agreement with an unrelated party for the construction, renovation, lease, or demolition of an LTCH, with at least 10 percent of the estimated cost of the project already expended on or before April 1, 2014; and (3) entities that had obtained a state certificate of need on or before April 1, 2014.
- 12 Beginning in fiscal year 2020, CMS will implement a revised SNF PPS that redistributes payments from cases that receive a high level of rehabilitation therapy to cases with higher levels of medical complexity. The redistribution of SNF payments will also include payment increases for cases with the highest nontherapy ancillary costs and comorbidities and for cases where the beneficiary has a tracheostomy that requires ventilator or respirator support. Because of these changes in payment, in the years after the implementation of the revised SNF PPS, we expect an increasing willingness for SNFs to provide care to more medically complex patients, including those patients who are considered the most chronically critically ill.

- 13 In 2016, the net payment update resulted from a 2.4 percent market basket increase reduced by a 0.5 percentage point adjustment for productivity and an additional 0.2 percentage point reduction mandated by statute.
- 14 The LTCH closure analysis for this report included data from the December 2018 update to the Provider of Services file. This number differs from our payment adequacy analysis because the data reflect changes that occurred during fiscal year 2018 and part of fiscal year 2019.
- 15 Regions presented are census divisions as defined by the United States Census Bureau. For more information, see https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.
- 16 Only one rural facility had more than 85 percent of its Medicare cases meeting the criteria in 2017; therefore, we did not consider a breakdown of margins by urban versus rural location to be meaningful.
- 17 This rate of about 25 percent is higher than the Commission's unadjusted measure of direct LTCH to ACH readmissions for a combination of reasons. First, the Commission's measure includes only direct LTCH to ACH admissions and does not include a 30-day window. Second, the CMS measure requires a one-day period after LTCH discharge before ACH admission to be counted for the measure, eliminating any direct LTCH to ACH admissions.
- 18 For additional detail, refer to the June 2018 data book, Chart 8-1 (Medicare Payment Advisory Commission 2018b).
- 19 These areas are identified as the 20 areas with the highest and lowest per beneficiary LTCH use in 2015. Low-use areas require a minimum threshold of 25 FFS Medicare LTCH cases to be included in the analysis.
- 20 In areas with historically low LTCH use, the volume of discharges increased from 1,170 in 2015 to 1,450 in 2017.

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CHAPTER

11

**Options for slowing the growth
of Medicare fee-for-service
spending for emergency
department services**

R E C O M M E N D A T I O N

- 11** The Secretary should develop and implement a set of national guidelines for coding hospital emergency department visits under the outpatient prospective payment system by 2022.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

Options for slowing the growth of Medicare fee-for-service spending for emergency department services

Chapter summary

Medicare fee-for-service (FFS) beneficiaries' use of hospital emergency departments (EDs) has increased in recent years, in both volume of services per beneficiary and overall program and beneficiary spending. We explore the frequency with which EDs are used for low-acuity care relative to lower cost urgent care centers (UCCs)—health care organizations that are not EDs but provide care primarily on a walk-in basis beyond normal business hours and offer basic medical care and imaging services. In addition, we assess changes in the share of ED visits that are coded at high-acuity levels and the extent to which these changes may be the result of changes in provider coding practices. These analyses suggest opportunities for policymakers to slow the growth of Medicare ED-related FFS spending.

It may be appropriate for some nonurgent ED care to be treated in UCCs

Although UCCs account for a small share of Medicare physician service use, beneficiaries' use of UCCs has grown rapidly. UCCs accounted for 1 percent of all evaluation and management (E&M) claims in 2017, and just 7 percent of Medicare Part B FFS beneficiaries (2 million beneficiaries) used a UCC. However, from 2013 to 2017, the number of UCC claims per beneficiary increased 73 percent, significantly faster than other settings that provide low-acuity ambulatory care.

In this chapter

- Introduction
- Nonurgent care in EDs and UCCs
- Coding of ED visits has shifted to higher paying levels
- Conclusion

Medicare beneficiaries have rapidly increased their use of UCCs, but hospital EDs remain a common setting for nonurgent care, which we define as care related to any physician claim on which the principal diagnosis code includes one of seven conditions: bronchitis, urinary tract infection, upper respiratory infection, sprain, contusion, back pain, or arthritis. When a hospital ED treats a nonurgent condition, the Medicare program and beneficiaries spend between 3 and 20 times more per episode than when a UCC treats the same condition (depending on the type of UCC).

In 2017, 1.5 million Medicare physician fee schedule claims were for beneficiaries receiving nonurgent care at hospital EDs, representing 7 percent of all hospital ED E&M claims. The beneficiaries associated with these claims were more complex, on average, than beneficiaries receiving nonurgent care in UCCs. However, a subset of these beneficiaries using the ED appears to share the characteristics of relatively low-complexity beneficiaries receiving nonurgent care in UCCs. We estimate that about one-third of ED claims involving nonurgent care (or 2 percent of Medicare physician ED claims) could be appropriately treated in a UCC or other lower cost, non-ED setting.

Shifting a subset of claims for nonurgent care from EDs to UCCs would result in significant program and beneficiary savings, but doing so would require addressing beneficiary decision-making and the availability of care in non-ED settings. To address this issue in FFS Medicare, policymakers could consider policies implemented by commercial insurers or Medicaid programs. To encourage the migration of these cases from the ED to a non-ED setting, the program or accountable care associations could take the following approaches:

- Initiate a patient education campaign to improve beneficiaries' understanding of appropriate ED use, which could include developing educational materials and a website.
- Expand quality measurement of avoidable ED use across the Medicare FFS and Medicare Advantage programs, especially to provider types where nonurgent care is common.
- Encourage hospital EDs to improve care coordination with primary care physicians.

Improving the accuracy of Medicare payments for ED services

Under the hospital outpatient prospective payment system (OPPS), hospitals code each ED visit into one of five levels of intensity, with Level 1 as the least resource intensive with the lowest payment rate and Level 5 as the most resource intensive

with the highest payment rate. In 2005, ED visits across these five levels reflected an approximately normal distribution, with Level 3 as the most frequently coded level and Levels 1 and 5 as the least frequently coded. However, in recent years, coding of ED visits has steadily shifted to higher levels. In 2017, Level 4 was the most frequently coded level and Level 5 was the second most frequently coded. In 2017, hospitals coded 66 percent of ED visits as Level 4 or Level 5, up from 37 percent in 2005. Reportedly, coding of ED visits has shifted from lower levels to higher levels for patients covered by private insurance as well.

If the change in coding was due to ED patients having medical conditions that required more hospital resources for treatment or to ED patients receiving more resource-intensive care that produced better outcomes, then the change in coding and associated higher Medicare payments were warranted. Conversely, if the change in coding was due to hospitals providing more resource-intensive care that had little or no effect on patient outcomes or to upcoding with no corresponding change in beneficiary need or services provided, then the coding changes were not appropriate and associated higher Medicare payments were not justified.

We reviewed the literature and analyzed data to explain hospitals' coding of ED visits at higher levels. In the literature, some researchers argue that the coding of ED visits to higher levels reflects ED patients being older and sicker. Other researchers argue that the age and health of ED patients have not materially changed; rather, hospitals are taking advantage of weaknesses in the coding system to enhance revenue.

Our data analysis found that hospitals are providing more intensive care to ED patients. However, the conditions treated in EDs and the reasons that patients had given for seeking care in EDs were largely unchanged over time, which undercuts the argument that patient complexity has increased.

This lack of change in the conditions treated in EDs raises concerns about the appropriateness of the growth in service intensity. Some stakeholders have argued that the change in ED coding is due to the increased presence of UCCs, which pulls lower acuity patients away from EDs, resulting in an increased level of acuity among remaining ED patients. If UCCs pulled lower acuity patients from EDs, geographic areas where UCC use is high should also have high rates of ED patients coded at the highest level (Level 5). However, among geographic areas, we found almost no correlation (either positive or negative) between the rate of UCC use and rate of coding ED visits at Level 5.

The high concentration of ED visits coded as Level 5 suggests hospitals are potentially coding patients in response to payment incentives and Medicare is paying more than necessary for many patients who present in the ED setting.

Medicare could change the system of ED codes to improve its payment accuracy. Medicare could begin by developing a system of ED codes that are based on national coding guidelines and that reflect the resources hospitals use to treat ED patients. The Current Procedural Terminology (CPT) codes that hospitals use to code ED visits reflect the work and resources of physicians, not hospitals. CMS has responded to this lack of CPT codes for hospitals by directing hospitals to develop their own internal guidelines for coding ED visits.

In the early years of the OPSS, CMS emphasized the importance of developing national guidelines for hospitals so that coding would reflect hospital resource use. CMS spent several years working with hospitals and organizations such as the American Hospital Association, the American Health Information Management Association, and the American College of Emergency Physicians. Despite its effort to develop national guidelines, CMS was not able to implement them and ended this effort in 2008.

To improve the accuracy of Medicare payments for ED visits, the Commission recommends that the Secretary create and implement national coding guidelines. If done properly, the benefits of effective national coding guidelines for ED visits include the following:

- Payments for ED visits would accurately reflect the resources hospitals use when providing care in the ED setting.
- Hospitals would have a clear set of rules for coding ED visits.
- CMS would have a firm foundation for assessing and auditing the coding behavior of hospitals. ■

Introduction

Medicare fee-for-service (FFS) beneficiaries use many emergency department (ED) services. The number of visits to EDs has grown relative to the number of visits to physician offices in recent years. In 2017, 30 percent of Medicare Part B FFS beneficiaries (more than 10 million beneficiaries) were treated in hospital EDs without being admitted as inpatients. From 2011 to 2017, Medicare outpatient ED visits per Part B FFS beneficiary increased 14 percent, while the number of visits to physician offices increased just 4 percent. This discrepancy in growth between the ED setting (where average patient acuity is relatively high) and the physician office setting (where average patient acuity is relatively low) suggests that Medicare beneficiaries are changing where they receive care. This trend is not unique to Medicare; a recent study found similar trends for services covered by Medicaid and commercial insurance (Chou et al. 2019).

Several studies also suggest that the use of urgent care centers (UCCs)—health care organizations that are not EDs but provide care primarily on a walk-in basis beyond normal business hours and offer basic medical care and imaging services—and other non-ED settings have increased in recent years and that the provision of relatively low-acuity care across these settings overlaps (Ashwood et al. 2016, Baker and Baker 1994, Mehrotra et al. 2009, Mehrotra et al. 2008, Pitts et al. 2010, Thygeson et al. 2008, Weinick 2009, Weinick et al. 2010). Three studies effectively identify the growing role of UCCs—and the declining use of EDs—in treating low-acuity cases, or nonurgent care.¹ A 2018 study concluded that, from 2008 to 2015, commercially insured patients increased their use of UCCs for nonurgent care by 119 percent, while use of hospital EDs for these services declined 36 percent (Poon et al. 2018). In addition, the authors found that the commercial patients using UCCs for nonurgent care had lower risk scores and had higher incomes than patients with similar conditions who were treated in hospital EDs. A 2016 study of Medicare claims data concluded that in markets where the rate of UCC use for nonurgent care increased, the use of hospital EDs for nonurgent care decreased (Corwin et al. 2016). These two studies suggest UCCs are an alternative to hospital EDs. A third study estimated that between 13 percent and 27 percent of cases across all payers treated at hospital EDs nationally could be appropriately treated at UCCs or other non-ED providers, potentially saving \$4 billion annually (Weinick et al. 2010).

**TABLE
11-1**

Growth in Medicare spending on ED visits, 2011–2017

Year	Program spending (in billions)
2011	\$2.3
2012	2.4
2013	2.5
2014	3.3
2015	3.8
2016	4.0
2017	4.1

Note: ED (emergency department). Hospital outpatient ED spending data include beneficiary cost sharing and packaged ancillary services but not physician fee-schedule spending or spending for separately paid outpatient drugs and imaging services.

Source: MedPAC analysis of Standard Analytic Files, 2011–2017.

While the use of UCCs for nonurgent care appears to be increasing, hospitals and health systems retain a financial incentive to devote their limited capital to building higher cost EDs rather than UCCs because Medicare payment rates for ED services are higher. Moreover, a discrepancy between rates of growth in Medicare spending for ED services and the number of ED services furnished raises additional concerns that may implicate ED claim coding practices. From 2011 to 2017, Medicare program spending on ED visits under the hospital outpatient prospective payment system (OPPS) increased from \$2.3 billion to \$4.1 billion, a 74 percent increase per Medicare Part B FFS beneficiary (Table 11-1).² Over the same period, 2011 to 2017, the number of ED services per Part B FFS beneficiary increased 14 percent. Similar trends have been observed with commercially insured patients (Health Care Cost Institute 2018).³

Several factors contributed to the growth in Medicare spending on ED visits, including updates to the OPPS payment rates, an increased number of ED visits, a shift of ancillary items that were previously paid separately when provided during an ED visit but are now packaged into the payment rates of ED visits (which increases the ED payment rates), and ED visits coded to higher levels. We estimate that 20 percent to 25 percent of the growth was due to ED visits being coded to higher levels.

Medicare payment for ED services

Roughly 4,500 hospitals provide ED services. These EDs are open 24 hours per day and 7 days per week (24/7), and most EDs are on the campus of their parent hospital. About 400 EDs that bill Medicare are located apart from the hospital campus.⁴ These off-campus EDs are typically open 24/7, though some are open less. Whether on campus or off campus, hospital-affiliated EDs are required to comply with the Emergency Medical Treatment and Labor Act of 1986 (EMTALA), which requires facilities to stabilize patients in need of emergency medical care.⁵ For more details on EDs, please see our June 2018 report (Medicare Payment Advisory Commission 2018).

An encounter at a hospital ED by a Medicare beneficiary who is not admitted for subsequent inpatient care generates two separate claims: a physician claim and a hospital outpatient claim.⁶ Medicare pays for physician claims for ED encounters through Medicare's physician fee schedule (PFS) and for hospital claims for ED encounters through the OPSS. About 10 percent of the ED visits that do not lead to an inpatient stay become part of an observation stay, and the remaining 90 percent are paid as ED visits.

Both the PFS and OPSS use a five-tiered scale to pay for ED visits. Under the PFS, physicians code each ED visit into one of five Current Procedural Terminology (CPT) codes (99281, 99282, 99283, 99284, and 99285). Under the OPSS, the hospitals use the same five ED CPT code levels, and these codes translate into five distinct ambulatory payment classification (APC) groups for payment purposes.⁷ However, the five ED CPT codes describe and represent services provided by physicians, not the services provided by hospital staff and the resources expended by hospitals. The five CPT codes for ED visits have been unchanged since CMS launched the OPSS in August 2000. Factors that make up the guidelines for the five codes include patient history, complexity of the examination, level of medical decision-making, and level of urgency faced by the physician. Under both the PFS and OPSS, beneficiaries are responsible for cost sharing equal to 20 percent of the allowed charges for the services they receive.

Because the ED CPT codes describe and represent the work and effort of physicians, not the hospital staff, CMS has directed hospitals to develop their own internal hospital-specific guidelines for the five codes. Therefore, there are no national guidelines for hospitals to refer to

when coding ED visits. We do not know much about the coding guidelines hospitals use, but the definitions are likely to vary. The lack of national guidelines for hospitals makes identifying differences in hospital resource use problematic and makes auditing hospital coding more difficult.

Medicare payment for UCC services

UCCs are an increasingly common source of ambulatory medical care because of their ability to deliver care outside of an ED without scheduled appointments. About 8,100 UCCs were operational in 2018, up 33 percent from 2013, and these facilities provide 150 million visits annually (Urgent Care Association of America 2018). (See the text box, pp. 388–389, for more information on the UCC industry.)

Medicare regulates UCCs by designating them as equivalent to physician offices. An encounter by a Medicare beneficiary at a UCC triggers one of two payment scenarios, depending on the facility's hospital affiliation:

- If an encounter is at an independent UCC (not affiliated with a hospital), it generates only a PFS claim. The UCC receives the same higher nonfacility-based PFS payment rate as physician offices and retail clinics. UCCs use 1 of 10 evaluation and management (E&M) codes to characterize each visit and bill separately for ancillary services. These facilities cannot bill Medicare for one of the five ED CPT codes.
- If the encounter is at a UCC that is a provider-based department of a hospital, it generates both a PFS claim and an OPSS claim. The PFS claim for the clinician services includes 1 of the 10 E&M codes and is paid using the facility-based PFS payment rates, which are lower than the nonfacility rates. Under the PFS, some ancillary services are also separately paid. The OPSS claim for the facility services uses a single code for a hospital outpatient clinic visit.

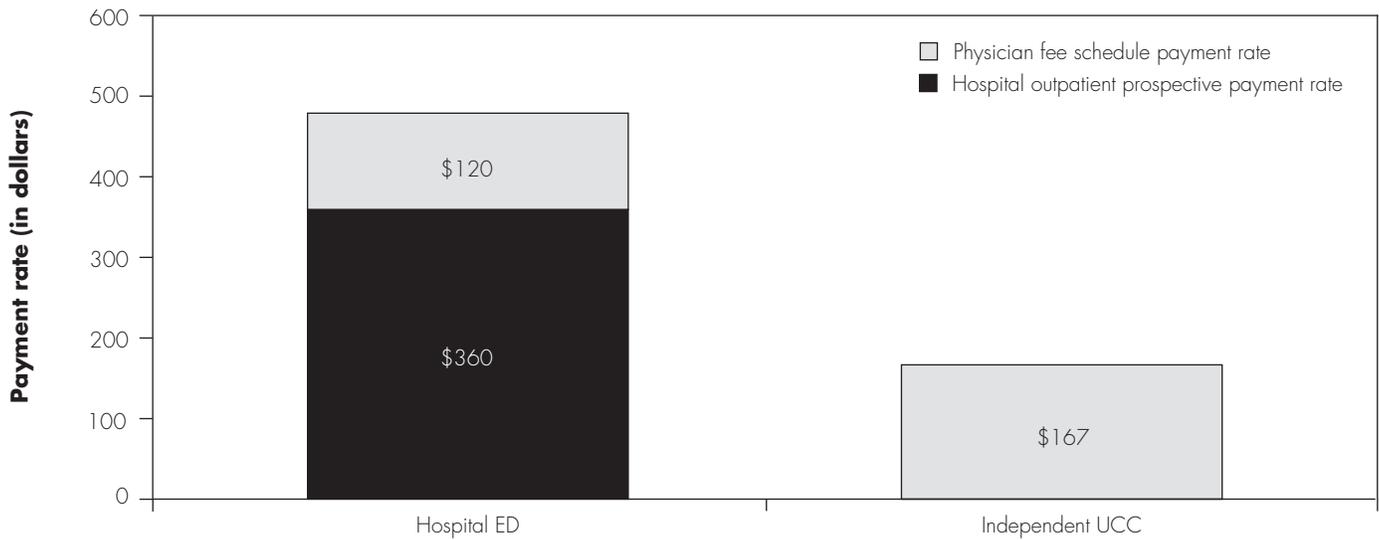
Beneficiaries served at either independent UCCs or provider-based UCCs are responsible for 20 percent cost sharing.

Comparison of Medicare payment rates at hospital EDs and UCCs

Medicare payment rates are generally higher for comparable patients when they are treated in a hospital ED, relative to a UCC. Under a hypothetical example of

**FIGURE
11-1**

Medicare payment rates are higher for comparable patients when they are treated in a hospital ED, relative to a UCC



Note: ED (emergency department), UCC (urgent care center). ED rates reflect an outpatient prospective payment system Level 4 ED visit and a physician fee schedule (PFS) Level 4 ED visit receiving the facility-based rate. UCC rates reflect a PFS Level 4 facility-based evaluation and management visit for new patients.

Source: MedPAC analysis of Medicare 2019 hospital outpatient prospective payment system payment rates and physician fee schedule payment rates.

the most common ED level—a Level 4 ED visit—the 2019 Medicare payment rate for a hospital ED open 24/7 is \$480, combining the PFS payment of \$120 and the OPSS payment of \$360 (not including other ancillary services) (Figure 11-1). By contrast, if the same patient were treated in an independent UCC, the UCC would receive a nonfacility-based PFS payment of \$167. Because beneficiaries in all of these settings are responsible for 20 percent cost sharing, their liability differs greatly depending on where the service is provided.

- How does spending for nonurgent care differ between hospital EDs and UCCs?
- To what extent could beneficiaries treated for nonurgent care in EDs be effectively treated at UCCs?
- How might the provision of nonurgent care in hospital EDs be addressed?
- How does the quality of care provided at UCCs compare with care at EDs?

Nonurgent care in EDs and UCCs

In this section, we discuss several questions about nonurgent care provided at hospital EDs:

- To what extent could care provided in EDs be shifted to UCCs?
- Where do Medicare beneficiaries commonly receive nonurgent care?

Use of UCCs increasing, overlaps with hospital EDs

UCCs accounted for a small share of Medicare physician service use in 2017, but their use grew rapidly from 2013 to 2017. In 2017, UCCs treated 2.1 million Medicare beneficiaries, resulting in 3.2 million PFS E&M claims, which represent 7 percent of Medicare Part B FFS beneficiaries and 1 percent of all PFS E&M claims.⁸ From 2013 to 2017, the volume of E&M claims per beneficiary at UCCs increased 73.3 percent, faster than any other

Urgent care centers

Services and patient mix

Urgent care centers (UCCs) appear to fill a gap between physicians' offices and hospital emergency departments (EDs), offering patients greater convenience. Relative to physician offices, UCCs offer extended hours, unscheduled appointments, more diagnostic testing options, and a broader array of procedures. Relative to hospital EDs, UCCs offer shorter wait times and more locations (Weinick et al. 2010).

UCCs provide relatively low-complexity care, imaging, and laboratory services. For example, a 2010 study estimated that 65 percent of UCC cases were attributed to three conditions: upper respiratory infections (33 percent), musculoskeletal conditions (22 percent), and dermatological conditions (10 percent) (Weinick et al. 2010). In addition, 42 percent of prescriptions written at UCCs were for antibiotics and 14 percent were for pain medications. Durable medical equipment is one of the top services offered by UCCs (Urgent Care Association of America 2018, Weinick et al. 2010). UCCs typically house an X-ray machine, rather than ultrasound or MRI machines, and commonly conduct basic laboratory testing such as urinalysis and throat cultures.

UCCs tend to serve a high share of commercially insured patients. In 2016, 67 percent of patient visits were paid by commercial insurers, 12 percent were self-pay patients, 9 percent were Medicare beneficiaries, 8 percent were Medicaid beneficiaries, and 4 percent were paid for by other payers (Urgent Care Association of America 2018). Part of the skew in payer mix may be due to the suburban location of the majority of UCCs. In 2018, 87 percent of UCCs were located in suburban areas, 8 percent were in urban areas, and 6 percent were in rural areas (Urgent Care Association of America 2018). Additionally, communities with UCCs generally have a higher average income than communities without UCCs (Yee et al. 2013).

Staffing

UCC staffing models vary, but most have at least one physician, medical assistant, radiologic technician, and receptionist. Some UCCs choose to employ nurse practitioners (NPs) and physician assistants (PAs) rather than physicians to reduce staffing costs (Urgent Care Association of America 2018). Medicare claims data confirm this reliance on NPs and PAs. In 2017, 42 percent of UCC claims were billed by an NP or

(continued next page)

provider types offering similar services (Table 11-2, p. 390). Over the same period, the volume of all E&M claims per beneficiary at physician offices declined by 3.3 percent and increased at EDs by 2.6 percent. UCCs treat a wide range of conditions; the majority of these are generally regarded as relatively low-acuity conditions. In 2017, across all Medicare cases, the five most common conditions of beneficiaries treated at UCCs were upper respiratory infection, bronchitis, cough, urinary tract infection, and sinus infection. These five conditions accounted for nearly 30 percent of E&M claims at UCCs.

Several conditions treated at UCCs overlap with hospital EDs. In 2017, 8 of the 20 most common conditions treated at UCCs were also among the 20 most common

conditions treated at hospital EDs: urinary tract infections, cough, hypertension, back pain, pneumonia, dizziness, chest pain, and shortness of breath. Compared with EDs, UCCs tend to serve a larger share of beneficiaries who are established patients (as opposed to new patients), and the most common procedures provided at UCCs suggest a less complicated overall mix of beneficiaries. In 2017, 67 percent of beneficiaries treated at UCCs were billed as established patients, compared with 1 percent at EDs.^{9,10} In addition, the most common procedure codes found on UCC claims were lower complexity procedures such as X-rays, urinalyses, and flu tests, as opposed to higher complexity procedures common to hospital EDs, such as MRI scans, computed tomography (CT) scans, wound repairs, and intubations.

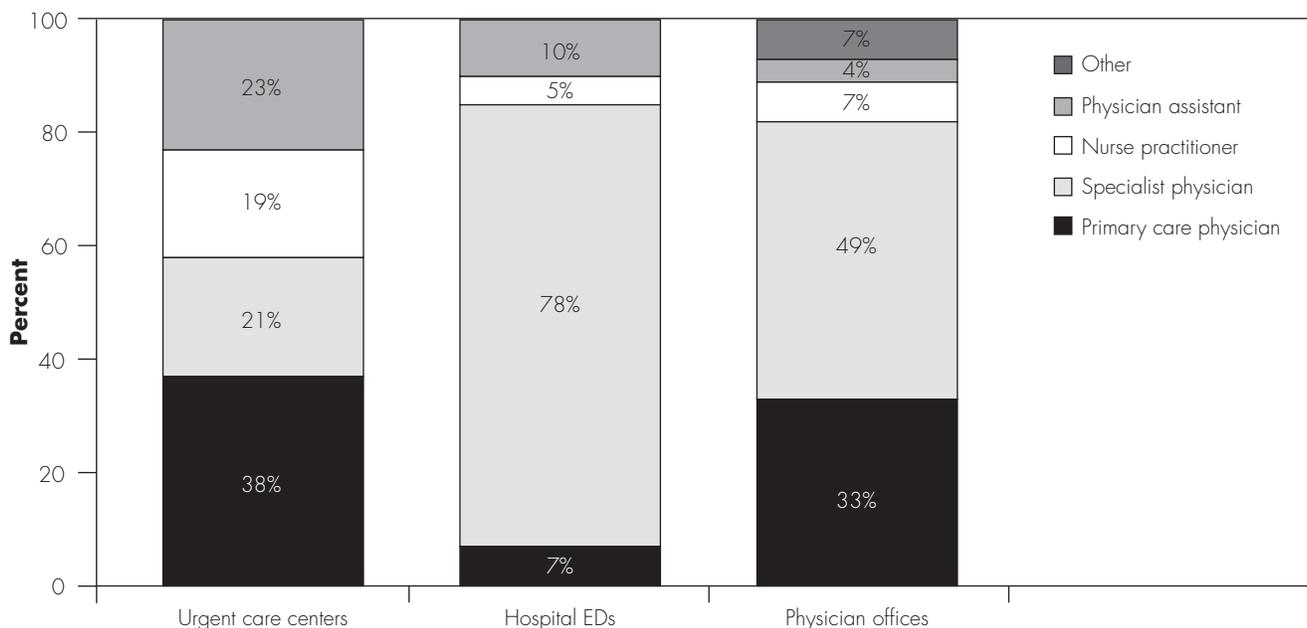
Urgent care centers (cont.)

a PA (Figure 11-2). By contrast, NPs and PAs billed 15 percent and 11 percent of claims at EDs and physician offices, respectively.¹¹ At UCCs, physicians

billed the remaining 59 percent of claims, and these physicians were more likely primary care than specialists such as emergency care physicians.^{12,13} ■

FIGURE 11-2

Share of clinicians billing Medicare, by place of service, 2017



Note: ED (emergency department). The percentages in the column for urgent care centers do not sum to 100 because of rounding. The share of claims billed by nurse practitioners (NPs) and physician assistants (PAs) at urgent care centers and physician offices may be slightly higher if it were possible to identify claims where NPs and PAs billed under a physician identification number. "Other" includes a wide range of provider types including chiropractor, podiatrist, and occupational therapist.

Source: MedPAC analysis of Medicare carrier claims, 2017.

Nonurgent care provided in various settings, increasing at UCCs

To compare services provided to Medicare beneficiaries at UCCs, EDs, and other non-ED settings, we limited examined cases to those that were likely to occur across these settings. We refer to these cases as nonurgent care. Our definition of nonurgent care is drawn from a 2016 study published in the *American Journal of Medicine*,

which defines Medicare claims as nonurgent if the principal diagnosis on the claim includes an International Classification of Diseases, Ninth Revision (ICD-9), code associated with one of seven conditions: urinary tract infections, upper respiratory infections, bronchitis, contusions, sprains, back pain, and arthritis (Corwin et al. 2016).¹⁴ Of the various definitions of nonurgent care, we chose the Corwin method: Because the seven conditions cited in the 2016 study are also among the most commonly

TABLE 11-2

Number of PFS claims for E&M services grew faster in UCCs than in other ambulatory care settings, 2013-2017

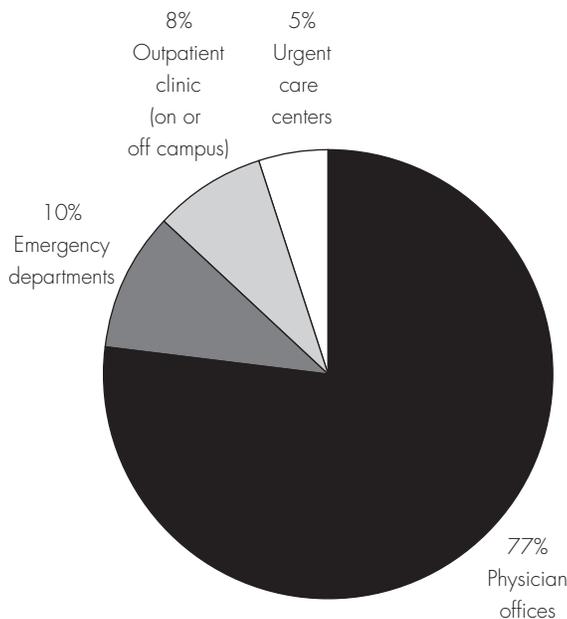
Place of service	Number of Medicare PFS E&M claims per 1,000 Part B FFS beneficiaries		Percent change in Medicare PFS E&M claims per 1,000 Part B FFS beneficiaries
	2013	2017	2013-2017
All	8,101	8,101	0.0%
Physician offices	6,704	6,486	-3.3
Hospital EDs	616	631	2.6
Outpatient clinics	638	1,086	70.2
Urgent care centers	55	95	73.3

Note: PFS (physician fee schedule), E&M (evaluation and management), UCC (urgent care center), FFS (fee-for-service), ED (emergency department). Outpatient clinics include both on- and off-campus hospital outpatient clinics.

Source: MedPAC analysis of Medicare carrier claims, 2013 and 2017.

FIGURE 11-3

Share of Medicare claims for nonurgent care by place of service, 2017



Note: We define claims involving nonurgent care as those with a principal diagnosis of one of seven conditions: urinary tract infections, upper respiratory infections, bronchitis, contusions, sprains, back pain, and arthritis. In 2017, other providers furnished some nonurgent care. Retail clinics accounted for 13,000 claims involving nonurgent care. Other types of independent, state, or federal clinics and federally qualified health centers collectively accounted for approximately 12,000 claims involving nonurgent care.

Source: MedPAC analysis of Medicare carrier claims, 2017.

recorded on UCCs' Medicare claims, this method was built around Medicare claims, and it identifies a conservative number of claims relative to other methods.¹⁵

Nonurgent care provided in various settings

In 2017, Medicare paid 14.9 million PFS claims for nonurgent care (6 percent of PFS E&M claims). These claims were associated with 8.1 million beneficiaries (24 percent of Part B FFS beneficiaries). In 2017, physician offices accounted for 77 percent of claims for nonurgent care (11.4 million claims) (Figure 11-3). EDs accounted for 10 percent of these claims (1.5 million claims), outpatient clinics accounted for 8 percent (1.1 million claims), and UCCs accounted for 5 percent (794,000 claims).¹⁶

Use of UCCs for nonurgent care increased

Medicare beneficiaries' use of UCCs for nonurgent care has increased and may be migrating from other settings. Across all provider types, from 2013 to 2017, the number of PFS claims for nonurgent care per Part B FFS beneficiary increased 23 percent (Table 11-3). Over this period, the most rapid growth was at UCCs, where the number of claims for nonurgent care per beneficiary increased 72 percent. By contrast, at physician offices and EDs, the number of claims for nonurgent care increased 19 percent and 9 percent, respectively. From 2016 to 2017, the volume of claims for nonurgent care at UCCs increased 13 percent compared with no volume change at hospital EDs and a decline of 6 percent at physician offices.

**TABLE
11-3**

Number of PFS claims for nonurgent care grew faster in UCCs than in other ambulatory care settings, 2013–2017

Place of service	Number of Medicare PFS claims for nonurgent care per 1,000 Part B FFS beneficiaries			Percent change in Medicare PFS claims for nonurgent care per 1,000 Part B FFS beneficiaries	
	2013	2016	2017	2013–2017	2016–2017
All	361	463	443	23%	–4%
Physician offices	285	362	341	19	–6
Hospital EDs	41	45	45	9	0
Outpatient clinics	20	34	33	60	–3
Urgent care centers	14	21	24	72	13

Note: PFS (physician fee schedule), UCC (urgent care center), FFS (fee-for-service), ED (emergency department). We defined claims involving nonurgent care as those with a principal diagnosis of one of seven conditions: urinary tract infections, upper respiratory infections, bronchitis, contusions, sprains, back pain, and arthritis. Outpatient clinics include both on and off-campus hospital outpatient clinics.

Source: MedPAC analysis of Medicare carrier claims, 2013–2017.

Some degree of the growth at each place of service was likely due to demand induced by the opening of new facilities rather than by substitution across settings. Some researchers have pointed to the greater convenience of UCCs as a possible source of induced demand for nonurgent care (Poon et al. 2018). Several studies document the increased use of non-ED settings, such as UCCs and retail clinics, for nonurgent care in recent years and suggest induced demand and site of service substitution may be occurring (Ashwood et al. 2016, Chou et al. 2019, Poon et al. 2018). For example, one of these studies found that among 20 million privately insured patients, overall per patient visits for nonurgent care increased from 2008 to 2015, as these visits declined at EDs (36 percent decrease) and increased at non-ED settings such as UCCs (119 percent increase) (Poon et al. 2018).

Use of UCCs for nonurgent care varies by metropolitan area

The volume of ED and UCC claims for nonurgent care varies significantly across metropolitan statistical areas (MSAs). To assess the geographic variation in the use of UCCs by Medicare beneficiaries, we examined the 50 largest MSAs by population. Among these 50 MSAs, in 2017, UCCs consistently accounted for a relatively small share of nonurgent care visits. However, the use of UCCs ranged from 2 claims per 100 beneficiaries in the

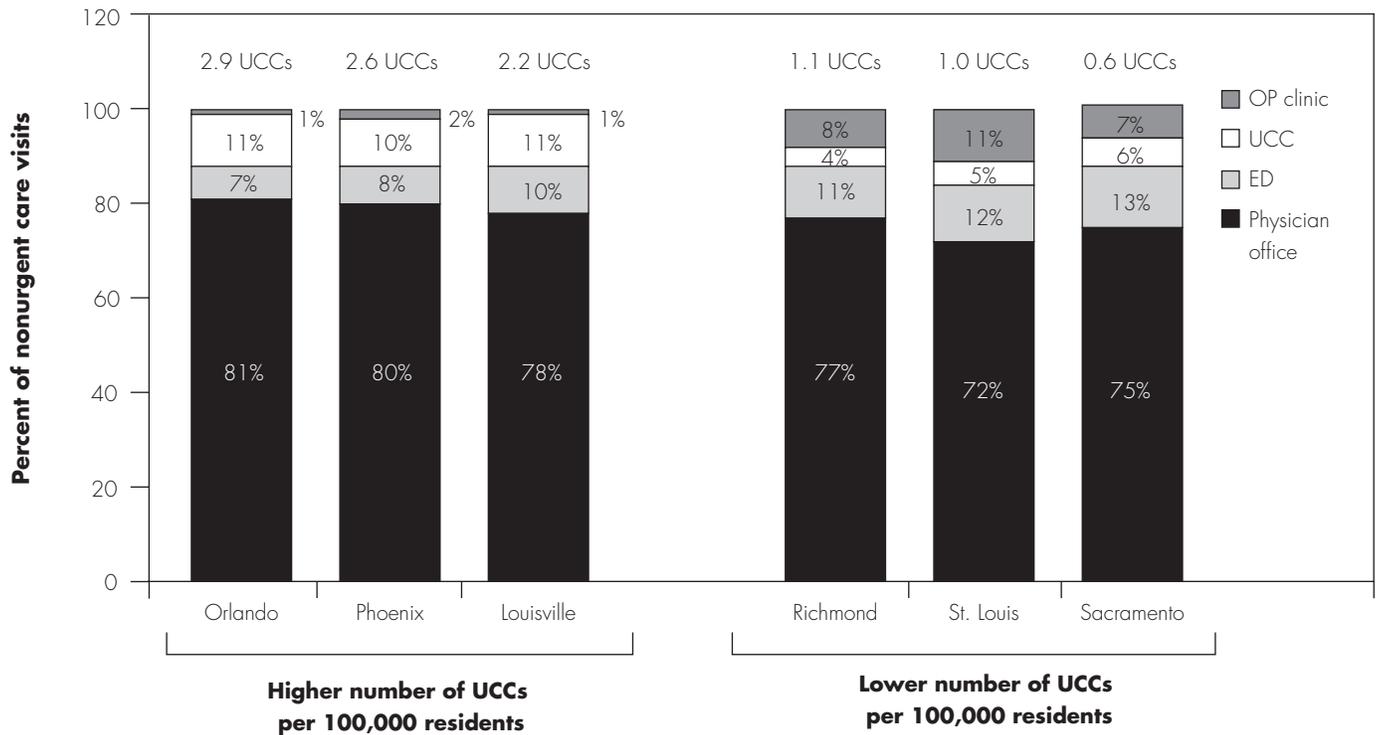
Virginia Beach/Norfolk, VA, MSA to 25 claims per 100 beneficiaries in the Orlando, FL, MSA.

Market-level variation also exists with regard to the share of claims for nonurgent care treated at UCCs, with UCC use positively correlated with the market penetration of UCCs in some MSAs. In a few MSAs with a comparatively high penetration of UCCs (the number of UCCs per resident), UCCs accounted for a relatively large share of nonurgent care visits, and EDs accounted for a relatively small share.¹⁷ For example, the Orlando, FL, MSA had a high concentration of UCCs (2.9 UCCs per 100,000 residents), and 11 percent of visits for nonurgent care occurred at UCCs and 7 percent occurred at EDs (Figure 11-4, p. 392). The opposite was true for several MSAs with relatively low penetration of UCCs. For example, the St. Louis, MO, MSA had a low concentration of UCCs (1.0 UCC per 100,000 residents), and 5 percent of visits for nonurgent care occurred at UCCs and 12 percent occurred at EDs. However, these trends are not consistent across all MSAs with high and low concentrations of UCCs, due in part to market-level variation in the presence of other ambulatory care providers such as outpatient clinics and possibly in part to the relative size of UCCs.

The impact of UCC volume growth on ED volume is inconsistent across individual MSAs. Across all 50 MSAs, we found only a weak correlation between the change

FIGURE 11-4

Rate of UCC use is correlated with UCC penetration in a market, 2017



Note: UCC (urgent care center), OP (outpatient), ED (emergency department). The percentages in the column for Sacramento do not sum to 100 because of rounding.

Source: MedPAC analysis of Medicare carrier file claims, 2017.

in the number of claims per beneficiary for nonurgent care at UCCs and the change in claims for nonurgent care at EDs. From 2013 to 2017, among the 10 MSAs, in aggregate, with the highest growth rates in UCC claims for nonurgent care, the volume of ED claims for nonurgent care increased rather than declined. Individually, only 2 of these 10 MSAs experienced a decline in volume of ED claims for nonurgent care. For example, in the Hartford, CT, MSA and Birmingham, AL, MSA, the number of claims for nonurgent care at UCCs increased by 1 claim per 100 beneficiaries, while the number of claims for nonurgent care at EDs declined by approximately 0.5 claims per 100 beneficiaries. Even in the MSA with the highest concentration of UCCs per resident—Milwaukee, WI—the number of claims for nonurgent care at UCCs increased just 0.5 claims per 100 beneficiaries, while the number of claims for nonurgent care at EDs declined

by 0.8 claims per 100 beneficiaries. In Milwaukee, the number of claims for nonurgent care at outpatient clinics also increased while claims for nonurgent care at physician offices decreased. The change in nonurgent care in these settings suggests that both UCC and outpatient clinic visits are substituting for ED and physician office visits. Therefore, while UCCs may be in part substituting for ED visits in some MSAs, the extent of the substitution by UCCs or other non-ED provider settings is unclear.

ED spending is higher and beneficiaries are more complex; some ED visits may be appropriate for UCCs

Spending for nonurgent care

Medicare program spending per encounter for nonurgent care varies significantly by place of service. In 2017,

**TABLE
11-4**

Medicare spending per encounter for nonurgent care was much lower in UCCs than in hospital EDs, 2017

Place of service	Share of claims	Average spending per encounter involving nonurgent care (including PFS, OPPS, and beneficiary cost sharing)	Average beneficiary cost sharing
UCC (hospital affiliated)	100%	\$739	\$148
UCC (independent)	100	110	22
Hospital EDs			
All visits	100	3,859	772
Coded as ED Level 5	23	5,896	1,179
Coded as ED Level 4	38	4,783	957
Coded as ED Level 3	33	2,232	446
Coded as ED Level 2	5	1,151	230
Coded as ED Level 1	1	897	179
Coded as ED Levels 1, 2, or 3	39	2,067	413

Note: UCC (urgent care center), ED (emergency department), PFS (physician fee schedule), OPPS (outpatient prospective payment system). We defined claims involving nonurgent care as those with a principal diagnosis of one of seven conditions: urinary tract infections, upper respiratory infections, bronchitis, contusions, sprains, back pain, and arthritis.

Source: MedPAC analysis of Medicare carrier claims and hospital outpatient claims, 2017.

the average per encounter spending for beneficiaries receiving nonurgent care at hospital-affiliated UCCs—which bill under both the PFS and OPPS—was \$739 (Table 11-4). Per encounter spending includes physician services, services covered under the OPPS (inclusive of packaged ancillaries and separately paid items such as drugs and imaging), and beneficiary cost sharing for both physician and outpatient claims. In contrast, average per encounter spending for nonurgent care at independent UCCs—which bill under only the PFS—was \$110.¹⁸

By contrast, the average per encounter spending ranged from \$897 for Level 1 ED visits to \$5,896 for Level 5 ED visits (Table 11-4). The average per episode spending of ED claims with the three lowest ED codes (Levels 1, 2, and 3) combined was \$2,067, three times higher than for beneficiaries receiving nonurgent care at hospital-affiliated UCCs and 20 times higher than at independent UCCs. Importantly, differences in beneficiary cost sharing by place of service are proportional to per encounter spending estimates.

Beneficiaries receiving nonurgent care at EDs are more complex

Claims for beneficiaries receiving nonurgent care at hospital EDs in 2017 represented 7.1 percent of hospital

ED E&M claims—1,512,123 claims (Table 11-5, p. 394). However, only a subset of these ED claims may have been appropriate for UCCs. On average, the beneficiaries receiving nonurgent care at EDs had a risk score of 1.61, compared with 0.97 for beneficiaries receiving nonurgent care at UCCs (Table 11-5).¹⁹ On average, beneficiaries receiving nonurgent care at EDs had 3.1 chronic conditions, compared with 2.0 for beneficiaries receiving nonurgent care at UCCs.

In addition, compared with beneficiaries receiving nonurgent care at UCCs, a smaller share served at EDs were ages 65 to 74 and a larger share were in minority groups. These findings are consistent with a prior Commission analysis concluding that on-campus EDs tend to serve higher complexity cases than both stand-alone EDs and UCCs (Medicare Payment Advisory Commission 2018). In addition, across the eight MSAs we analyzed with both high and low concentrations of UCCs, beneficiaries receiving nonurgent care at EDs on average had higher risk scores and more chronic conditions than beneficiaries receiving nonurgent care at UCCs. In all of these MSAs, minority groups were also more likely to receive nonurgent care at EDs than UCCs.

**TABLE
11-5**

Beneficiaries receiving nonurgent care in EDs were more complex than beneficiaries receiving nonurgent care in UCCs, 2017

	Hospital ED	Urgent care center
Number of physician E&M claims involving nonurgent care	1,512,123	793,898
Number of unique beneficiaries	1,224,124	650,597
Acuity		
Average patient risk score (overall average = 1.0)	1.61	0.97
Average number of chronic conditions per beneficiary	3.1	2.0
Share of claims with no chronic conditions	30%	38%
Share of claims with 5 or more chronic conditions	32%	15%
Demographics		
Share ages 0 to 64 years	27%	16%
Share ages 65 to 74 years	34%	55%
Share ages 75 or more years	40%	29%
Race		
Share White	79%	89%
Share African American	14%	5%
Share other minority	7%	5%

Note: ED (emergency department), UCC (urgent care center), E&M (evaluation and management). We defined claims involving nonurgent care as those with a principal diagnosis of one of seven conditions: urinary tract infections, upper respiratory infections, bronchitis, contusions, sprains, back pain, and arthritis. The percentages under the “demographics” and “race” categories do not always sum to 100 because of rounding.

Source: MedPAC analysis of Medicare carrier claims, CMS beneficiary denominator file, and Medicare risk score file, 2017.

Across the seven nonurgent conditions, the complexity of beneficiaries receiving nonurgent care at EDs in 2017 was consistently higher than for beneficiaries receiving nonurgent care in UCCs (Table 11-6). On a national level, the average beneficiary risk score for each of the seven conditions for beneficiaries receiving nonurgent care at EDs ranged from 1.32 to 1.83, compared with a range of 0.92 to 1.17 for beneficiaries receiving nonurgent care at UCCs. Also, the average number of chronic conditions for beneficiaries receiving nonurgent care at EDs ranged from 2.6 to 3.5, compared with a range of 1.9 to 2.5 for beneficiaries receiving nonurgent care at UCCs.

A subset of ED claims for nonurgent care may be appropriate for UCCs

Despite the higher average complexity of beneficiaries receiving nonurgent care at EDs relative to UCCs, a subset of these ED visits could be appropriately treated in UCCs.

We estimate that about 500,000 claims for beneficiaries receiving nonurgent care in EDs in 2017 could have been appropriately treated in UCCs. These half million claims share the characteristics of UCC claims for nonurgent care. Specifically, we attributed these ED claims to beneficiaries with a risk score less than or equal to 0.97 (the average risk score for nonurgent care claims at UCCs) and two or fewer chronic conditions (the average number of chronic conditions for nonurgent claims at UCCs). About two-thirds of these claims were for bronchitis or urinary tract infections (UTIs), and a disproportionate share were for upper respiratory infections (URIs). Therefore, patients presenting at the ED for nonurgent care related to bronchitis, URIs, and UTIs may be among the best candidates for treatment at UCCs.

While researchers have estimated that 13 percent to 27 percent of hospital ED cases across all payers nationally could be appropriately treated at UCCs, our research

**TABLE
11-6**

Across the seven nonurgent conditions, the complexity of beneficiaries receiving nonurgent care at EDs in 2017 was consistently higher than that of beneficiaries receiving nonurgent care in UCCs

	Hospital EDs		Urgent care centers	
	Average patient risk score	Average number of chronic conditions per beneficiary	Average patient risk score	Average number of chronic conditions per beneficiary
All claims involving nonurgent care at hospital EDs	1.61	3.1	0.97	2.0
Bronchitis	1.83	3.5	1.15	2.4
Urinary tract infections	1.68	3.3	1.02	2.2
Upper respiratory infection	1.32	2.6	0.92	1.9
Contusions	1.55	3.2	1.17	2.5
Arthritis	1.51	3.0	1.10	2.4
Back pain	1.32	2.7	0.98	2.0
Sprains	1.34	2.8	1.05	2.1

Note: ED (emergency department), UCC (urgent care center). We defined claims involving nonurgent care as those with a principal diagnosis of one of seven conditions: urinary tract infections, upper respiratory infections, bronchitis, contusions, sprains, back pain, and arthritis.

Source: MedPAC analysis of Medicare carrier file claims, CMS beneficiary denominator file, and Medicare risk score file for 2017.

suggests that, for Medicare cases, that percentage would be smaller (Weinick et al. 2010). We estimate that between 2 percent (cases for beneficiaries receiving nonurgent care at EDs that have low relative complexity) and 7 percent (all cases for beneficiaries receiving nonurgent care at EDs) of Medicare hospital ED E&M cases could be appropriately treated in UCCs or other non-ED settings. If this migration of visits were to occur, we estimate the Medicare program and beneficiaries could save between \$400 million and \$2 billion annually. The lower end estimate assumes only the 200,000 ED claims for nonurgent care that fall in the three lowest ED levels migrate to UCCs. The higher end estimate assumes all 500,000 ED claims for nonurgent care migrate to UCCs.

Quality of care at UCCs

Currently, there is no Medicare quality reporting or payment program specific to UCCs. Consequently, information about the quality of care is limited. Physicians practicing at UCCs can participate in the Quality Payment Program for clinicians established by the Medicare Access and CHIP Reauthorization Act of 2015, but little is known about how the quality of care at UCCs differs

from quality in other settings. The limited research that does exist concerning UCC quality is focused on antibiotic prescribing patterns. Some evidence suggests UCCs may overprescribe antibiotics. In 2014, 46 percent of visits for antibiotic-inappropriate respiratory diagnoses treated at UCCs resulted in an antibiotic prescription, compared with 25 percent at EDs and 17 percent at physician offices (Palms et al. 2018). Another study found that antibiotics were administered at 42 percent of all UCC visits (Weinick et al. 2010). However, a third study found similar rates of antibiotic prescribing at retail clinics, physician offices, and urgent care clinics (Mehrotra et al. 2009). The mixed results highlight the need to further evaluate UCC quality.

Our own assessment of UCC quality suggests that, on average, beneficiaries served in UCCs do not disproportionately use subsequent ED services. In 2017, 3 percent of beneficiaries receiving nonurgent care at UCCs had an ED claim in the seven days after their UCC visit. By contrast, 10 percent of beneficiaries receiving nonurgent care at EDs had an ED claim within the seven days after their initial ED visit. In addition, 2 percent of beneficiaries receiving nonurgent care at physician offices

had an ED claim within the seven days after their initial office visit. Consistent with our expectations, differences in the rate of subsequent ED visits between UCCs and EDs are likely linked to the differences in patient complexity noted earlier.

In addition, a few commercial insurers have begun to require UCCs to earn accreditation with one of three entities. The insurers require accreditation to ensure that UCCs are providing their members with care meeting their standards. Neither Medicare nor any state Medicaid programs currently require that UCCs be accredited as a condition of participation.

Policies addressing nonurgent care at hospital EDs

Providing nonurgent care in EDs usually results in higher program spending and beneficiary cost sharing relative to providing the same care in UCCs or other non-ED settings. A subset of the nonurgent care provided in EDs could be appropriately treated in lower cost settings. Therefore, shifting a subset of these claims from EDs to UCCs or other non-ED settings would likely result in significant program and beneficiary savings.

Despite the potential for reduced spending, encouraging the migration of nonurgent care visits from EDs to lower cost settings is complicated because it may involve changing beneficiary decision-making and ensuring that alternative care settings are available. Beneficiaries requiring immediate medical care face the difficult question of which setting is most appropriate. Research suggests patients of all income levels, with all types of insurance, and with a usual source of primary care struggle with the question of which setting will best serve their nonurgent care needs (New England Healthcare Institute 2010). In addition, some assert that the recent increased ED use may be due to a lack of access to primary care (Agency for Healthcare Research and Quality 2017, Mehrotra 2013, Premier 2019, Wesson et al. 2018). Commercial insurers, the Medicaid program, and other stakeholders have made efforts to reduce the use of EDs for nonurgent care in recent years by focusing on issues of patient choice of setting and access to alternative non-ED settings.

Commercial insurers

Commercial insurers have implemented an array of policies encouraging patients to avoid the ED when seeking nonurgent care. Some insurers have taken a more aggressive approach, pushing back on hospitals and

beneficiaries, using audits or claim denials. For example, in 2017, Anthem began retrospectively auditing ED claims in Georgia, Kentucky, and Missouri to identify visits the company believes had occurred in an inappropriate setting (Livingston 2018). In 2018, UnitedHealth began auditing hospital ED claims when the company believed hospitals had coded at too high a complexity level.²⁰ As a part of this approach, UnitedHealth adjusts claims to lower ED complexity levels or denies claims. Commercial insurers who chose retrospective audit policies have received criticism in the media, with some contending the policies cause financial hardship for patients (Chou and Schuur 2018, Kliff 2018).

Other insurers have implemented education-based policies aimed at assisting patients and providers with identifying the appropriate setting for nonurgent care. Many insurers have developed websites describing circumstances in which EDs or UCCs are more appropriate (Aetna 2018, BlueCross BlueShield 2018, Cigna 2018). Many insurers also offer their members nurse telephone call-in lines or nurse help lines that are open 24 hours per day and assist patients with finding the appropriate care setting. Some insurers offer the same help-line services but do so through a website-based online messaging application. In general, nurse help lines (telephone and online applications) have become common in the commercial insurance industry, at VA medical centers, and among large health systems. For example, the Mayo Clinic Health System and Novant Health offer nurse help lines to their surrounding communities.²¹ Nurse help lines are also common in the Medicare Advantage (MA) program. In 2015, approximately 80 percent of MA beneficiaries had access to a nurse help line as a supplemental benefit. Although nurse help lines appear common in the commercial and MA environment, Medicare FFS beneficiaries do not have access to a nurse help line through the Medicare program.

Most major Medicaid and managed care organizations require nurse help lines, also known as telephone triage, of their providers (Schmitt and Hertz 2014). The limited research on their effectiveness points to their ability to reduce ED utilization and save money on health care costs (Barber et al. 2000, O'Connell et al. 2001). Several states utilize these help lines for their Medicaid and uninsured populations, and these publicly funded call centers have become increasingly popular over time (Schmitt and Hertz 2014).

At least one insurer uses quality metrics to assess its members' ED use by measuring the number of visits per month each member has to an ED if the member is not subsequently admitted to the hospital as an inpatient (CareOregon 2019). This Oregon-based insurer uses these data to educate members about non-ED alternatives, improve care coordination with primary care physicians, and assess the adequacy of non-ED care options in the service area.

State Medicaid programs

State Medicaid programs have also implemented a variety of approaches to address the use of EDs for nonurgent care. Similar to commercial insurers, some states have taken an aggressive approach. In 2018, Kentucky implemented a policy to penalize Medicaid beneficiaries between \$20 and \$75 per visit if the state deems an ED visit to be unnecessary (Gillespie 2018). In 2011, Washington State attempted to implement a policy to deny payment for unnecessary ED visits, but ultimately compromised with the hospital industry and physician groups to implement an education-based policy in which they collectively wrote a set of best practices and distributed them to patients and providers (Kellerman and Weinick 2012). This policy resulted in an initial 23 percent reduction in ED visits by frequent ED users (Uscher-Pines 2013).

CMS provides states with general guidance related to reducing the use of EDs for nonurgent care under their Medicaid programs and permits states to use cost sharing to alter patient decisions about site of service (Centers for Medicare & Medicaid Services 2014). In a 2014 informational bulletin, CMS's Center for Medicaid and CHIP Services (CMCS) identified three key strategies Medicaid programs can use to reduce these visits. CMCS recommended (1) broadening access to primary care services, such as through medical or health homes or through alternative primary care sites; (2) focusing on "super utilizers" of ED services by developing on-site non-ED clinics or community-based interventions; and (3) targeting the needs of people with behavioral health needs through case management programs and medical homes for those with substance abuse problems.

In addition, states are permitted to impose cost sharing on Medicaid beneficiaries for nonemergent services provided in an ED, but not for other ED visits. For Medicaid beneficiaries with a family income at or below 150 percent of the federal poverty level (FPL), states may impose up

to \$8 in cost sharing for these nonemergent services. For Medicaid beneficiaries with a family income above 150 percent of FPL, states can impose cost sharing for these nonemergent visits as long as it does not exceed 5 percent of the family's income.²² As of January 2018, 12 state Medicaid programs impose cost sharing on Medicaid adults with a family income at or below 150 percent of FPL for nonemergent visits to an ED (Kaiser Family Foundation 2019).

Policy ideas from other entities

Beyond the commercial insurance industry and the Medicaid environment, other stakeholders have proposed policies that contemplate reducing ED visits for nonurgent care. These policies aim to improve primary care access and care coordination, expand physician quality measurement to include measures of avoidable ED visits, optimize beneficiary cost-sharing policies, and establish more effective clinical evaluation criteria for EDs (Davies et al. 2017, Lee et al. 2013, New England Healthcare Institute 2010). A recent white paper by hospital cooperative Premier suggests that the use of EDs for nonurgent care could be reduced if hospitals implemented care management programs for patients with chronic conditions, such as behavioral health conditions (Premier 2019). Others have suggested that simply turning patients away from EDs with denial-based policies is not effectively resolving the problem of improving outcomes and enhancing value (Uscher-Pines 2013).

CMS has made recent efforts to accelerate the interoperability of electronic health records (EHRs) with the goal of improving care coordination across payers and providers (Keith 2019). It has arguably improved communication between hospital EDs and primary care physicians and could reduce the use of EDs for nonurgent care. In 2019, CMS proposed to accelerate the interoperability of EHRs by requiring payers to make patient health information available electronically through a standardized open application programming interface; requiring hospitals to send electronic notifications to the patient's other providers when the patient is admitted, discharged, or transferred; and publicly disclosing when providers inappropriately restrict the flow of information to other health care providers and payers (Centers for Medicare & Medicaid Services 2019).

Strategies to address nonurgent care at EDs

The Commission has suggested that policymakers consider the options discussed in this chapter as possible strategies

for reducing FFS beneficiaries' use of EDs for nonurgent care. Some of the policies identified in this chapter have come with potential unintended consequences. The denial of ED claims, cost-sharing increases, or payment penalties may deter appropriate ED use, which in turn could worsen patient outcomes and result in higher long-term spending. To address concerns about Medicare spending for ED visits for nonurgent care, policymakers could consider a few other strategies implemented or suggested by commercial insurers, Medicaid programs, and other sources. The Medicare program or accountable care organizations (ACOs) that serve FFS beneficiaries could consider the following strategies:

- Implement a patient education campaign, which could improve beneficiaries' understanding of appropriate ED use, the benefits of having a regular primary care physician, and the cost-sharing benefits of the various non-ED settings. The program or ACOs could develop a website and distribute educational materials that identify the types of conditions and symptoms appropriate for the ED setting. These materials should encourage beneficiaries to seek care through a primary care physician's office or another non-ED setting, such as UCCs, that offers extended hours on nights or weekends when physician offices are typically unavailable.
- Assess primary care access using quality measurement tools. The program or ACOs could use Medicare physician claims data to measure avoidable ED use. This measurement tool could identify gaps in FFS beneficiaries' primary care access in individual markets or hospital service areas. Policymakers could then develop policies to fill these gaps and reduce the use of EDs for nonurgent care.
- Improve care coordination between hospital EDs and non-ED settings. The Medicare program—except, most likely ACOs—could accelerate requirements for hospitals and other providers to maintain interoperable EHRs and to share patient data on a real-time basis. For example, in an environment where patient data are openly shared across providers, an FFS beneficiary's ED visit for nonurgent care may trigger communication between the hospital ED and the beneficiary's primary care physician, which may prevent any subsequent use of EDs for nonurgent care.

In addition, the Commission also suggests that the Medicare program encourage ACOs to implement 24-hour

nurse help lines (telephone and/or online application) to assist FFS beneficiaries with their decision about which care setting is appropriate for their care needs. ACOs may be better suited than the larger Medicare program to initiate nurse help lines because ACOs have a direct incentive to reduce beneficiary spending.

Coding of ED visits has shifted to higher paying levels

In 2017, Medicare FFS beneficiaries had 14.7 million ED visits that did not lead to an inpatient stay. About 1.4 million of these ED visits were part of an observation stay; the rest were simply ED visits. In 2017, combined program spending and beneficiary cost sharing for ED visits was \$4.1 billion. In addition, program spending and beneficiary cost sharing was \$3.1 billion for observation stays, which almost always include an ED visit.

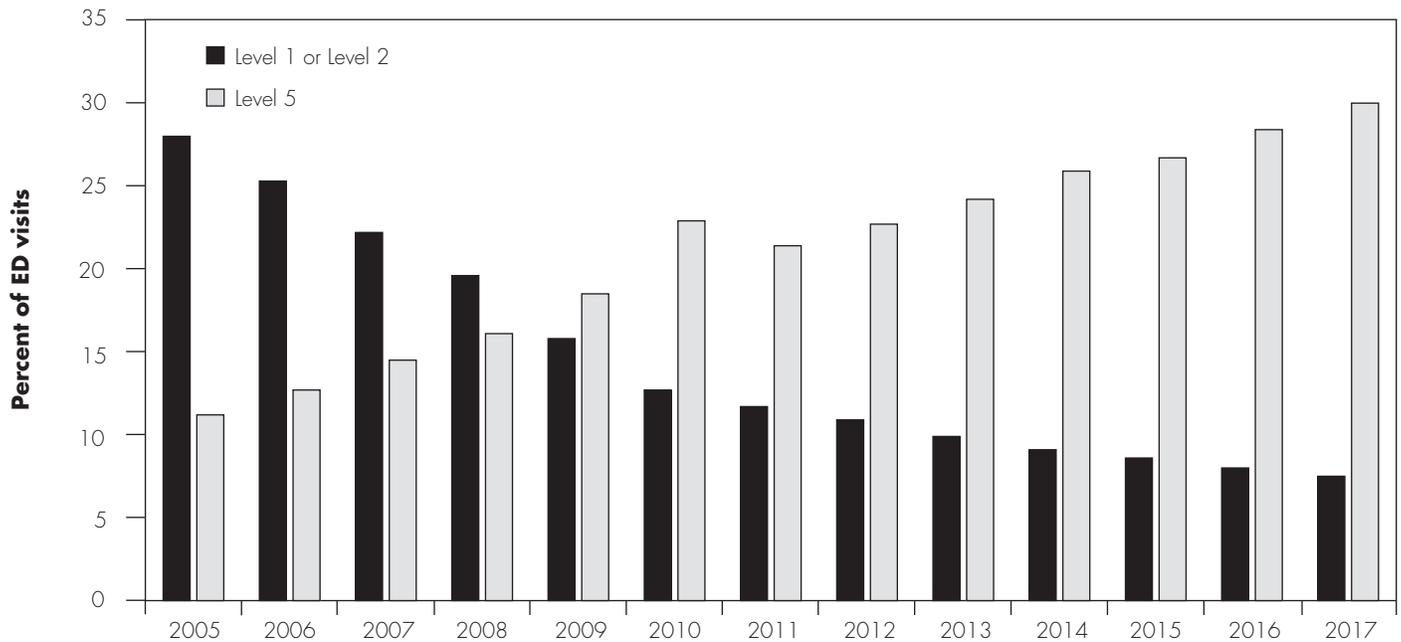
When a patient is treated in a hospital ED and the ED visit does not result in an inpatient stay, the hospital codes the visit on a claim into one of five Current Procedural Terminology (CPT) code levels (Level 1 through Level 5). The five levels are intended to distinguish ED visits on the basis of the resources hospitals use to treat patients. The more resources a hospital uses, the higher the level that hospitals can record on a claim. Under the OPPI, payments increase with the level of the ED visit, with Level 1 visits having the lowest payment rate (\$70 in 2019) and Level 5 visits having the highest payment rate (\$525 in 2019).

However, because the CPT codes for ED visits reflect the services and activity of the physicians who treat the ED patients, not hospital resources used to furnish care, these codes are not useful for guiding hospitals on how to code ED visits. In response, CMS has directed hospitals to develop their own internal guidelines for coding ED visits, but CMS expected that hospitals' internal guidelines would comport with 11 principles (Centers for Medicare & Medicaid Services 2007).

Under their own guidelines for coding ED visits, hospitals' coding of these visits has steadily shifted from the lower levels to the higher levels. From 2005 to 2017, the share of ED visits coded as Level 1 or Level 2 decreased from 28.0 percent to 7.5 percent, and the share coded as Level 5 increased from 11.2 percent to 30.0 percent (Figure 11-5).²³

**FIGURE
11-5**

Share of emergency department visits coded at high levels increased, at low levels decreased, 2005–2017



Note: ED (emergency department).

Source: MedPAC analysis of 2005–2017 cost statistics files for the outpatient prospective payment system from CMS.

It is important to know the factors underlying the change in coding of ED visits. If the change in coding was due to ED patients having medical conditions that required more hospital resources for treatment or due to ED patients receiving more resource-intensive care that produced better outcomes, then the change in coding and the associated higher Medicare payments are warranted. Conversely, if the change in coding was due to hospitals providing more resource-intensive care that had little or no effect on patient outcomes or reflects upcoding with no corresponding change in beneficiary need or services provided, then the coding change and associated higher Medicare payments are inappropriate.

The high concentration of ED visits coded at Level 5 suggests that Medicare payments for ED visits do not accurately reflect the costs hospitals incur in furnishing ED care. If increased coding to Level 5 has occurred because hospitals changed their coding behavior without

a commensurate change in either the medical conditions of its ED patients or the treatment of those patients, then Medicare is paying more than necessary to adequately reimburse hospitals for these visits.

Patient characteristics do not explain hospitals coding ED visits to higher levels

We reviewed the literature and performed our own data analysis to identify why the coding of ED visits shifted to higher levels. Two papers were especially informative. Both papers investigated whether the change in ED coding reflected sicker ED patients and/or the provision of more intensive care that results in better outcomes. Neither paper identified a definitive reason for the change in coding (Burke et al. 2018, Eaton 2012).

In our data analysis, we used data from Medicare claims for the hospital outpatient sector that included an ED visit and data from the National Hospital Ambulatory Medical

Care Survey (NHAMCS), a nationally representative sample that includes information from hospitals about their ED visits. Our results show that the conditions treated in EDs changed very little over time.

Strong disagreements in the literature over the reasons for the change in ED coding

The Center for Public Integrity investigated the change in coding of ED visits, including interviews with experts and stakeholders such as hospital representatives and individuals who perform coding for hospitals. A paper from this investigation revealed strong disagreements over whether the change in coding reflects hospitals treating sicker patients or advances in treatments that produce better outcomes (Eaton 2012). Hospitals defended their coding practices, reporting that the increase in higher level ED codes occurred because their patients were older and sicker and because advances in medical care allowed hospitals to treat patients in EDs without later admitting them for an inpatient stay. Other interviewees disagreed with the hospitals' reports. They argued that the severity and complexity of ED patients were largely unchanged over time. They assert that hospitals were simply coding patients to increasingly higher levels over time as a way to enhance revenue.

Several sources indicated that rules and guidelines for coding ED visits provide substantial leeway for hospitals to make changes to their coding practices, and hospitals have taken advantage of that leeway. Moreover, allowing hospitals to use their own guidelines makes it more difficult for CMS to monitor and audit hospital coding of ED visits because there is not a consistent benchmark. These sources cited two factors that facilitated the change in ED coding:

- greater use of EHRs and other electronic systems, which helps hospitals more completely record the medical interventions provided during an ED visit and can prompt providers to use interventions they may have overlooked; and
- the absence of national coding guidelines for ED visits for all hospitals, as CMS has directed hospitals throughout the existence of the OPSS to create their own internal coding guidelines.

Although the paper from the Center for Public Integrity was a useful investigation of the change in ED coding, it largely presented arguments without empirical analysis. An analysis that used Medicare claims data to assess the

changes in the coding of ED visits was also inconclusive. This data-based analysis provided support for both sides of the argument over whether the change in coding for ED visits was appropriate (Burke et al. 2018). In support of the argument that ED coding had shifted to higher levels because patients were sicker or that hospitals provided more intensive care, this study found an increase in the number of services provided per ED visit, with the largest increase among the patients who had ED visits coded as Level 5. In addition, the rate at which ED patients were later admitted for inpatient stays decreased over time, which suggests that the increased use of services may have had some benefit to patient outcomes.

However, another part of this analysis supports the argument that hospitals changed their coding practices in response to payment system incentives. Burke and colleagues used statistical techniques to predict the number of Level 5 ED visits in a base year (2006) if the patient characteristics and other factors from a later year (2012) had occurred in the base year. The authors found that not all of the increased coding of Level 5 ED visits could be explained by their model, which could indicate some upcoding by the hospitals.

Data from claims and a sample of ED visits do not provide a clear explanation for the change in ED coding

Our analysis of Medicare beneficiaries' ED visits also provides support for both sides of the argument over hospitals' coding behavior. The analyses we performed included:

- Whether the principal diagnoses recorded on claims and the reasons that ED patients gave for going to an ED changed over time. A change in the conditions treated could explain the change in ED coding.
- Whether ED coding changed only for some medical conditions or whether there was a shift of coding to higher levels for most conditions. Some conditions treated in EDs are low acuity and require only basic treatments. If coding for these conditions has shifted to higher levels, it is questionable whether the shift could be explained by more intensive treatment or higher severity patients. Therefore, a shift in coding to higher levels for most or all conditions could indicate upcoding has occurred.
- Whether the change in coding was similar across geographic areas or whether some areas had much

larger coding changes than others. If the shift in ED coding occurred because patients are generally sicker or because treatment is more intensive, we expect a general shift in coding to higher levels across most or all geographic areas.

- Whether care provided to ED patients was more resource intensive, and, if so, what services were more frequently used by hospitals.
- Whether there was a relationship between the extent to which Medicare beneficiaries received care in UCCs and the rate at which hospitals code ED visits at high levels. Some have argued that UCCs have drawn lower acuity patients away from EDs, resulting in the remaining ED patients being sicker, on average, than previously (Eaton 2012). If this assertion is true, there should be a positive correlation between beneficiaries' use of UCCs in a geographic area and the rate at which hospitals in that geographic area code ED visits at high levels.

Principal diagnoses and patients' reasons for going to EDs changed little over time We examined whether the conditions treated in EDs changed from 2011 to 2017, a period during which the share of ED visits coded as Level 5 increased from 21.4 percent to 30.0 percent. Each claim for an ED visit has a principal diagnosis code that identifies the condition, diagnosis, or problem that is chiefly responsible for the services provided. A change over time in the principal diagnoses for ED patients could result in hospitals treating conditions that require more intensive care.

We identified the 210 most frequently recorded principal diagnosis codes in 2011. These codes were the principal diagnoses on 75 percent of the ED visits in 2011. We limited our analysis to these 210 diagnosis codes to ensure that each code had enough observations to produce reliable statistics. We found that these 210 diagnosis codes continued to be the principal diagnoses on about 75 percent of the claims for ED visits each year through 2017, which indicates little change in the conditions treated in EDs over the 2011 through 2017 period.

For each of the 210 diagnosis codes, we also determined the share of ED visits that had the diagnosis code as the principal diagnosis for both 2011 and 2017. Among these diagnosis codes, we found a strong correlation between the shares for the diagnoses in 2011 and the shares in 2017 (a correlation coefficient of 0.95). For example, the

most frequent principal diagnosis code in both 2011 and 2017 was unspecified chest pain (diagnosis code 78650); it was the principal diagnosis on 2.9 percent of all ED visits in 2011 and 3.0 percent in 2017. Most of the 210 principal diagnosis codes had similar shares of total ED visits in both 2011 and 2017, which indicates that the mix of conditions treated in EDs was very similar in 2011 and 2017.

In a final analysis of the principal diagnosis codes, we further sorted the claims by ED visit level. For example, unspecified chest pain was the primary diagnosis for 380,260 ED visits in 2011. Among these visits, 0.9 percent were Level 1; 1.4 percent were Level 2; 9.8 percent were Level 3; 31.5 percent were Level 4; and 56.6 percent were Level 5 (Table 11-7, p. 402). We sorted the 2017 ED visits into the same diagnosis code and ED visit categories. For each principal diagnosis code, we compared how the share of ED visits in each level changed from 2011 to 2017. We found that from 2011 to 2017, the share of patients who were coded at Level 5 ED visits increased in all 210 principal diagnosis codes we evaluated. The share of ED visits coded at Level 5 increased even for minor conditions. For ED visits that had the principal diagnosis of epistaxis (nosebleed), the share coded as Level 5 was 4.1 percent in 2011 and steadily increased to 5.7 percent in 2017. Table 11-7 provides an illustration of this analysis, using the results for the diagnosis code for unspecified chest pain as an example.

Finally, we evaluated the reasons and complaints that patients provided for visiting an ED. Using NHAMCS data from 2011 and 2016, we found that patients' reasons for visiting (RFVs) did not change much. Of the 10 most frequent reasons for visiting an ED in 2011, 9 were still among the top 10 reasons in 2016. Also, we found that 66 RFVs constituted 75 percent of claims in 2011. These same RFVs constituted 74 percent of all ED visits in 2016.

Hospitals increased number of services provided per ED visit We evaluated whether hospitals increased the intensity of care provided during ED visits by estimating the change in the number of services provided during ED visits and analyzing the change in the types of services hospitals provided during ED visits. We estimated the change in hospitals' use of screening services and procedures. The screening services include laboratory tests (primarily blood tests and urinalysis) and imaging services (primarily X-rays and CT scans). The procedures are typically simple to administer, such as administration of

**TABLE
11-7**

Among ED visits for unspecified chest pain, the share coded as Level 5 increased, 2011–2017

Number of claims and share of all claims coded at each level

	2011		2017	
	Number of claims	Share of claims	Number of claims	Share of claims
Level 1	3,300	0.9%	2,326	0.5%
Level 2	5,140	1.4	2,664	0.6
Level 3	37,160	9.8	28,230	6.5
Level 4	119,620	31.5	105,303	24.3
Level 5	215,040	56.6	295,077	68.1
Total	388,260	100.0	433,600	100.0

Note: ED (emergency department). This table is based on ED claims that have unspecified chest pain (diagnosis code 78650) as the principal diagnosis. The “share of claims” for 2011 does not sum to 100 percent because of rounding.

Source: MedPAC analysis of Standard Analytic Files, 2011–2017.

intravenous fluids and nebulizer treatments. We used data from the 2011 and 2016 versions of the NHAMCS.

The median number of screening services provided during ED visits increased by 52 percent from 2.0 in 2011 to 3.1 in 2016. The number of lab tests changed by a trivial amount, but some tests that were often done in 2011, such as measurement of electrolytes or blood glucose, were usually part of more comprehensive tests in 2016, such as complete metabolic panels. Use of two screening tests—electrocardiograms (EKGs) and CT scans—increased. The number of EKGs per 100 ED visits increased from 29 in 2011 to 34 in 2016, and the number of CT scans per 100 ED visits increased from 20 in 2011 to 25 in 2016. Finally, the number of procedures provided during ED visits was largely unchanged from 2011 to 2016, but the use of some procedures (nebulizer treatments) increased while the use of other procedures (bladder catheterization) decreased.

We used claims data to do a more in-depth analysis of the EKGs and CT scans that hospitals administered during ED visits. We identified 20 of the most frequent principal diagnoses listed on ED claims in 2011, then evaluated the rate at which hospitals administered EKGs and CT scans during ED visits from 2011 and 2017 that had one of these 20 principal diagnoses. Most of the results from

this analysis were as expected. In both 2011 and 2017, hospitals often provided EKGs during ED visits with a principal diagnosis of unspecified chest pain, and often provided CT scans of the head during ED visits with a principal diagnosis of unspecified head injury. Other results seemed surprising: The use of EKGs was about 18 per 100 ED visits that had unspecified constipation as the principal diagnosis, and use of CT scans of the head was 14 per 100 ED visits that had urinary tract infection (UTI) as the principal diagnosis. While this utilization may seem counterintuitive, certain protocols may lead clinicians to use CT scans in conjunction with these diagnoses. For example, a fragile elderly patient who shows up in an ED with altered mental status might receive a CT scan of the head to rule out acute conditions like stroke. This patient may subsequently be diagnosed with UTI, which can be associated with dehydration and altered mental status, but is a diagnosis of exclusion, after neurological injury has been ruled out.

While hospitals in our study frequently administered EKGs for unspecified chest pain, the rate at which hospitals used EKGs for this diagnosis did not increase much from 2011 to 2017, 2.6 percent. Use of CT scans of the head for unspecified head injury also had fairly slow growth, 4.9 percent. In contrast, rapid growth in use of

EKGs and CTs of the head occurred for ED visits where UTIs were the principal diagnosis. Use of EKGs during ED visits that had UTI as the principal diagnosis increased 20 percent from about 29 per 100 ED visits in 2011 to about 35 per 100 ED visits in 2017. Use of CT scans of the head increased 33 percent from about 11 per 100 ED visits to about 14 per 100 ED visits. It is interesting that the number of EKGs per 100 ED visits increased by a larger amount for ED visits that had UTI as the principal diagnosis (6 per 100 visits) than for ED visits that had unspecified chest pain as the principal diagnosis (about 3 per 100 visits).

In summary, our results indicate that hospitals provided more intensive care during the average ED visit in 2017 when compared with ED visits from 2011. In particular, use of CT scans—an advanced imaging service—increased by about 25 percent, and use of EKGs increased by about 19 percent.²⁴

An important issue is that increased use of services during an ED visit should not automatically result in coding of ED visits to higher levels. When a hospital provides a service during an ED visit, the hospital should consider whether the service is a packaged item or a separately payable item under the OPSS. If the service is a packaged item, its cost is packaged into the payment rate for the ED visit, and it should be included in the hospital's determination of how to code the ED visit. Conversely, if the service is a separately paid item, the service has its own payment rate and is paid separately from the ED visit. From 2001 through 2008, CMS made an effort to develop national guidelines for ED visits. During that effort, CMS initially said that separately payable items should not be considered when a hospital determines how to code an ED visit. CMS indicated that including separately payable items in the guidelines for coding ED visits would result in double payments for hospital resources. CMS later revised its stance on this issue, saying that some separately payable items may not result in double payment for some components of those items. In particular, if all separately payable items are removed from consideration of how to code an ED visit, it may be difficult for the remaining packaged items to capture the acuity level of the patient.

This distinction between packaged and separately paid items is important when assessing the change in coding of ED visits. Two of the screening services that are frequently provided during ED visits, EKGs and CT scans, have different payment status under the OPSS when provided

during an ED visit. Most EKGs are packaged, and most CT scans are paid separately. Consequently, the increased use of EKGs could help explain some of the shift in coding ED visits to higher levels, but the increased use of CT scans should have a smaller effect than that increased use suggests.

There were large geographic differences in the coding of ED visits and little correlation between coding of ED visits and use of UCCs

We assessed the extent of geographic differences in the coding of ED visits. Two results from that analysis stand out.

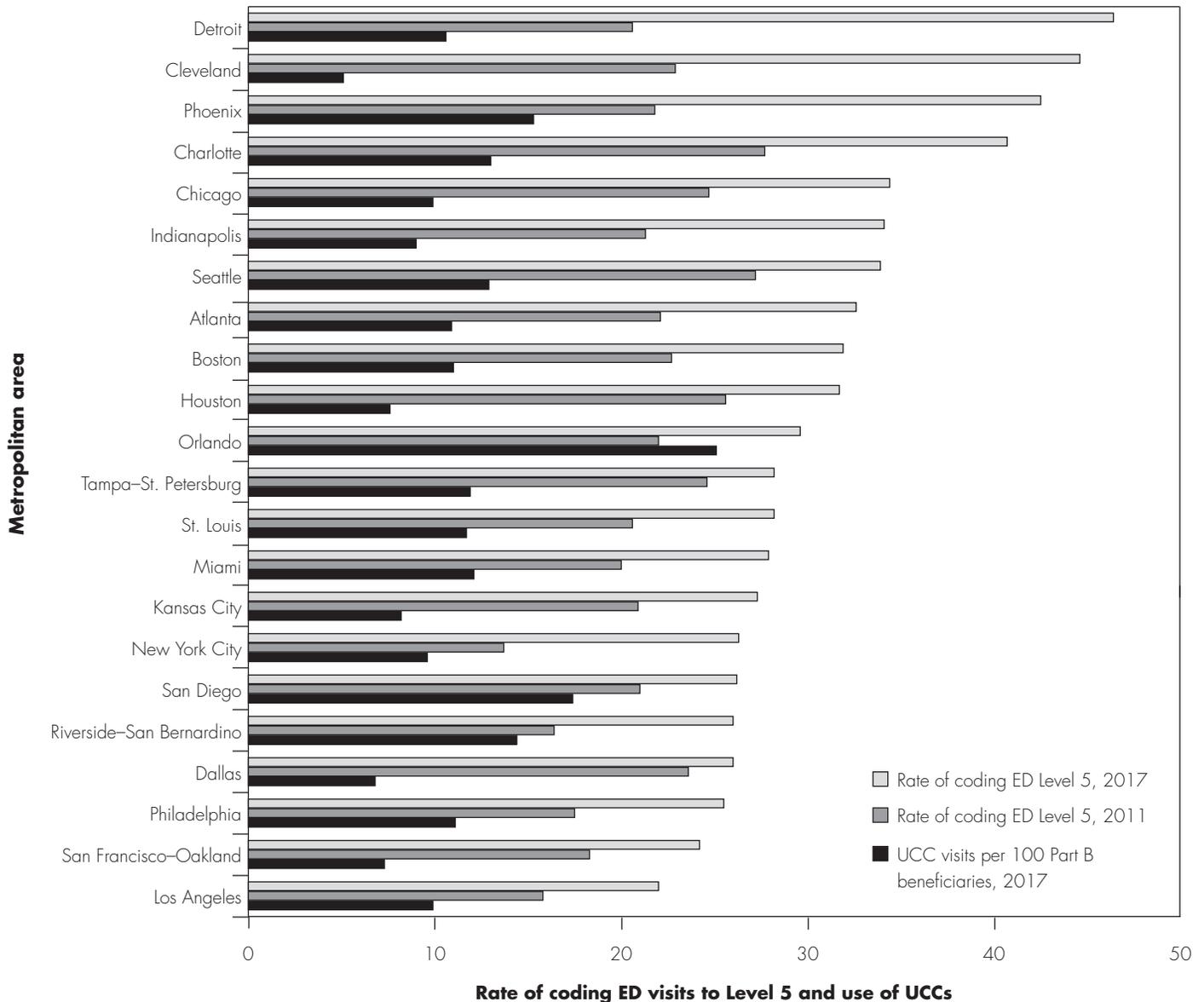
- There was substantial geographic variation in the rate of coding Level 5 ED visits.
- There was almost no correlation across geographic areas between the extent to which beneficiaries used UCCs and the coding of ED visits.

Substantial geographic variation in the coding of ED visits We collected counties into metropolitan areas, micropolitan areas, and “rest-of-state” areas, which are the counties in each state that are not in either metropolitan areas or micropolitan areas. This process resulted in 974 geographic units.²⁵ We determined the rate at which hospitals coded ED visits at each of the five levels for each geographic unit.

We found wide differences among the geographic units in how hospitals coded ED visits. Figure 11-6 (p. 404), which shows the results for the metropolitan areas that had the 20 largest populations of Part B FFS beneficiaries in 2017, illustrates the geographic variation in the coding of Level 5 ED visits. The bars that show the 2017 rate of coding ED visits to Level 5 (the lightest color bars) illustrate wide differences among the metropolitan areas: In Detroit, hospitals coded 46.4 percent of ED visits as Level 5, while hospitals in Los Angeles coded only 22.0 percent. Large differences were not unique to the largest metropolitan areas. Among the 974 geographic areas in our analysis, the rate at which hospitals coded ED visits at Level 5 ranged from 23.1 percent at the 25th percentile to 35.4 percent at the 75th percentile (data not shown). Figure 11-6 also shows wide differences in the extent to which coding of Level 5 ED visits changed over time. From 2011 to 2017, the rate of coding to Level 5 had a relatively small change of 2.4 percentage points in Dallas and a much larger change of 25.7 percentage points in Detroit.

FIGURE 11-6

Rate of coding ED visits at Level 5 varied widely among geographic areas; little correlation between use of UCCs and coding ED visits, 2017



Note: ED (emergency department), UCC (urgent care center).

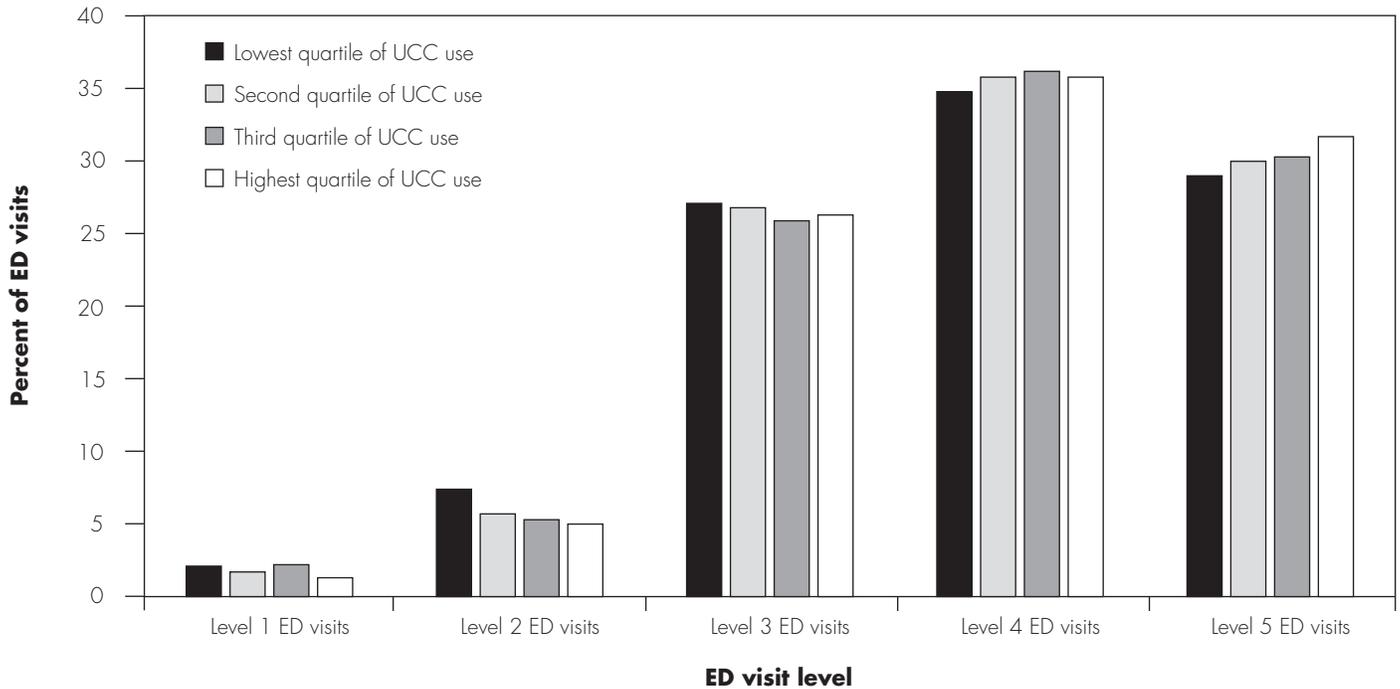
Source: MedPAC analysis of Standard Analytic Files, 2011 and 2017, and Medicare denominator files, 2011 and 2017.

Large geographic differences raise the question: If the change in coding of ED visits is due to sicker patients or more intensive care, why is the effect so much stronger in some areas than in others? For example, why do hospitals code ED visits to Level 5 at a rate of 46 percent in Detroit, but hospitals in Los Angeles code Level 5 at a rate of 22 percent? Also, why did some areas have much larger changes in coding than other areas?

Almost no correlation between use of urgent care centers and coding of ED visits We also examined the extent to which beneficiaries' use of UCCs correlates with hospitals' coding of ED visits at high levels. We determined the number of UCC visits per Part B FFS beneficiary for each geographic area and found almost no correlation between the extent to which beneficiaries

**FIGURE
11-7**

Increased use of UCCs slightly increased coding of ED visits at high levels in 48 metropolitan areas, 2017



Note: UCC (urgent care center), ED (emergency department). This figure reflects the coding of ED visits and use of UCCs among 48 metropolitan areas.

Source: MedPAC analysis of Standard Analytic Files and Medicare denominator files, 2017.

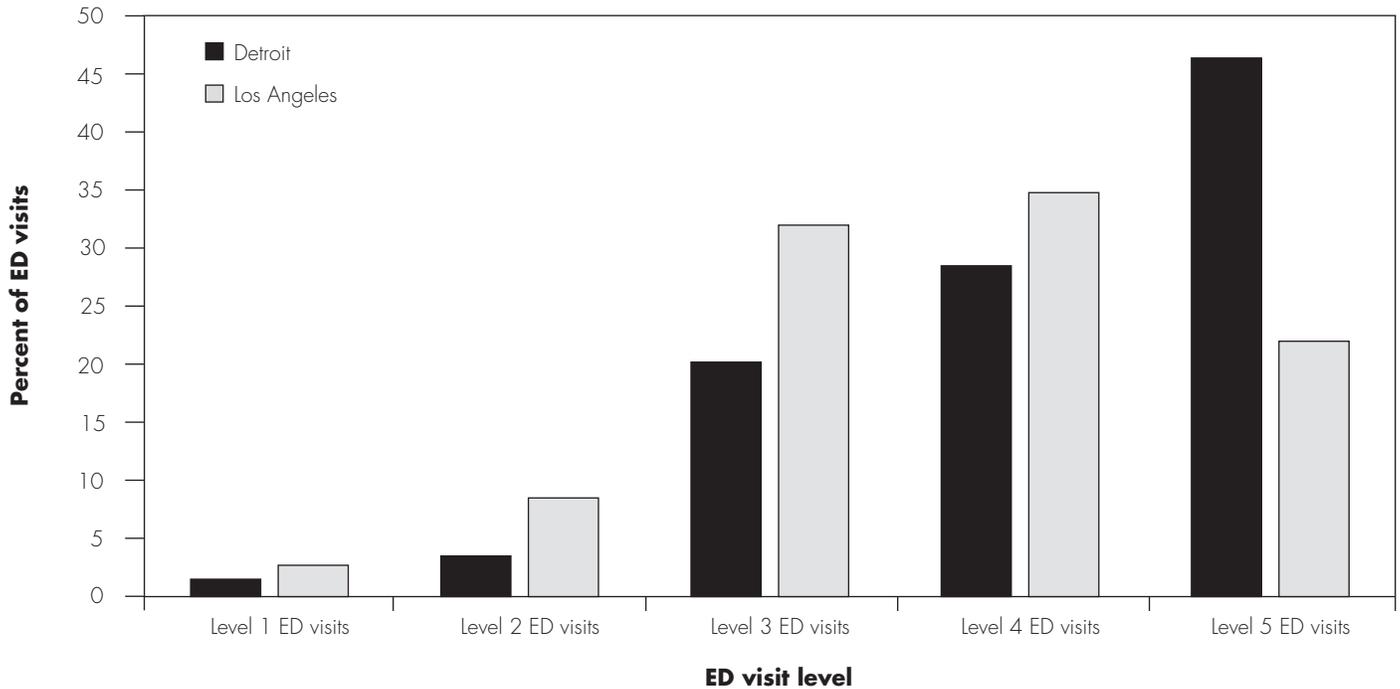
received care in UCCs and the rate at which hospitals coded ED visits at Level 5 or the rate at which hospitals coded at Level 1 or Level 2.²⁶ The 20 metropolitan areas listed in Figure 11-6 reflect this lack of correlation between coding of ED visits and use of UCCs. Detroit and Los Angeles have similar use of UCCs among Part B beneficiaries, but the rate at which hospitals code ED visits at Level 5 is much higher in Detroit than in Los Angeles.

We also evaluated how the use of UCCs affects the distribution of the coding of ED visits across the five levels. We identified the 50 largest metropolitan areas in the United States, then excluded Baltimore and Washington, DC, because the use of the all-payer system in Maryland appears to substantially affect coding of ED visits.²⁷ For the remaining 48 metropolitan areas, we determined how frequently hospitals coded ED visits in each of the five levels and the number of UCC visits per FFS beneficiary. We sorted the metropolitan areas by

number of UCC visits per FFS beneficiary and collected the metropolitan areas into quartiles. For each quartile, we determined the share of ED visits coded into each level. Results from this analysis suggest that increased use of UCCs could slightly increase the average acuity of patients seeking ED care, but the effect is not strong enough to explain the change in coding of ED visits (Figure 11-7). In 2017, the share of ED patients coded at Level 5 was 29.0 percent in the quartile with the lowest UCC use and 31.7 percent in the quartile with the highest UCC use, even though the rate of UCC use was nearly 3 times higher in the highest use quartile (17.4 visits per 100 beneficiaries) compared with the lowest use quartile (5.9 per 100 beneficiaries). Much larger differences were seen between metropolitan areas that have similar use of UCCs. Both Detroit and Los Angeles had about 10 UCC visits per 100 beneficiaries, but the coding of ED visits was very different between these two areas (Figure 11-8, p. 406).

**FIGURE
11-8**

Despite similar use of UCCs, Detroit and Los Angeles had very different coding of ED visits, 2017



Note: UCC (urgent care center), ED (emergency department).

Source: MedPAC analysis of Standard Analytic Files and Medicare denominator files, 2017.

It may be beneficial to address coding change

The literature we discussed and our data analyses do not provide a clear reason or reasons for the change in coding of ED visits. Nevertheless, it would be beneficial to address the current ED coding system to improve the accuracy of Medicare’s payments for ED visits.

A manifestation of paying inaccurately for ED visits is the fact that the distribution of how frequently hospitals code ED visits across the five levels shifted from approximating a normal distribution in 2005 (Figure 11-9) to being heavily weighted to the higher levels in 2017 (Figure 11-10, p. 408).

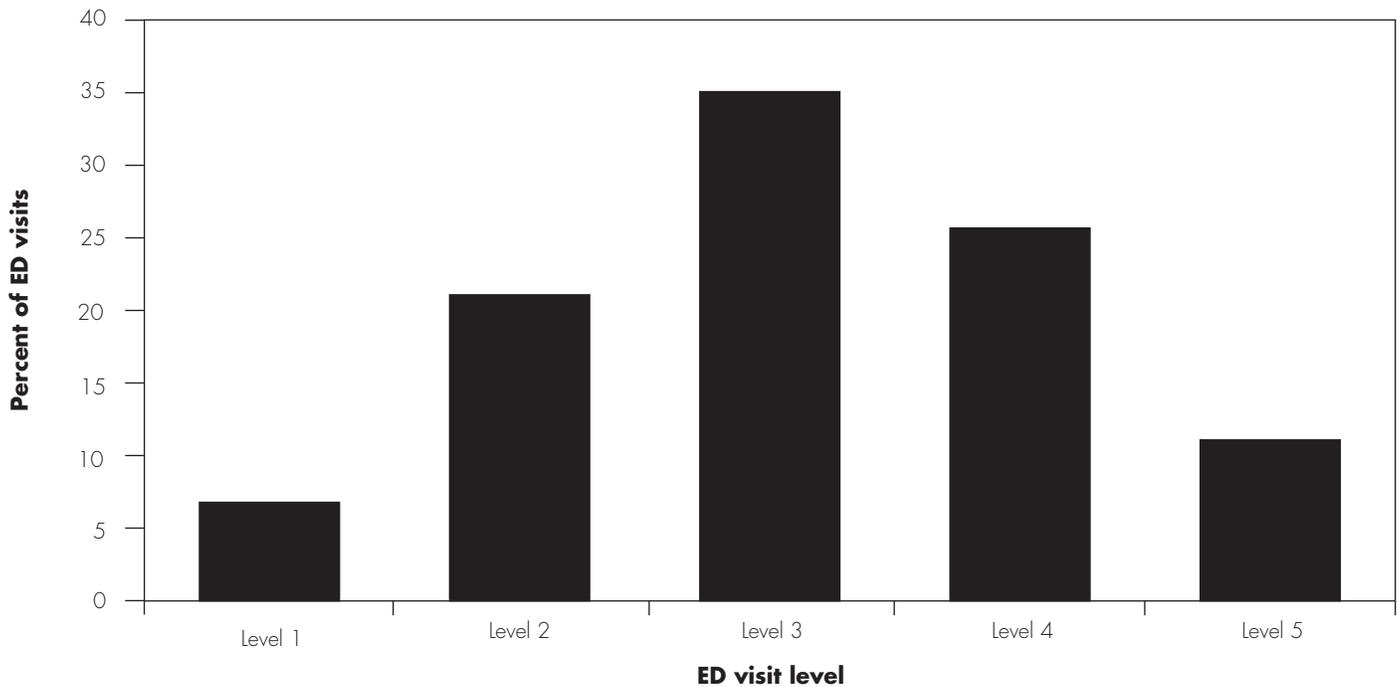
Under an approximately normal distribution, which occurred in 2005, Level 3 is the most frequent ED visit and Levels 1 and 5 are the least frequent. An approximately normal distribution suggests that the coding

system is structured such that hospitals are able to code ED patients to levels that accurately reflect the resources needed to treat those patients. The distribution for 2017 is far from normal.

When discussing the coding behavior of hospitals from 2002 through 2006, CMS stated that the distribution across the five levels appeared normal and relatively stable over time, which indicated that hospitals were billing the full range of visit codes in an appropriate manner, a reassuring finding. CMS noted that it would not expect individual hospitals to have a normal distribution across visit levels, but would expect a normal distribution across all hospitals (Centers for Medicare & Medicaid Services 2008). The importance to CMS of an approximately normal distribution for ED codes was reflected in concerns that CMS had about coding guidelines developed by the American Hospital Association (AHA) and the American Health Information Management Association (AHIMA).

**FIGURE
11-9**

Distribution of ED visit codes approximated a normal curve in 2005



Note: ED (emergency department).

Source: MedPAC analysis of 2005 cost statistics file for the outpatient prospective payment system from CMS.

CMS feared that the AHA/AHIMA guidelines would result in a redistribution of ED visits to higher levels.

As we have stated, CMS has directed hospitals to use their own internal guidelines for coding ED visits since CMS launched the OPSS in August 2000. In the early years of the OPSS, CMS recognized the potential problems with relying on hospital-level guidelines and tried for several years to develop a system of national coding guidelines for ED visits that would apply to hospitals, citing difficulties in creating clinic codes that apply to all hospitals and specialty clinics.

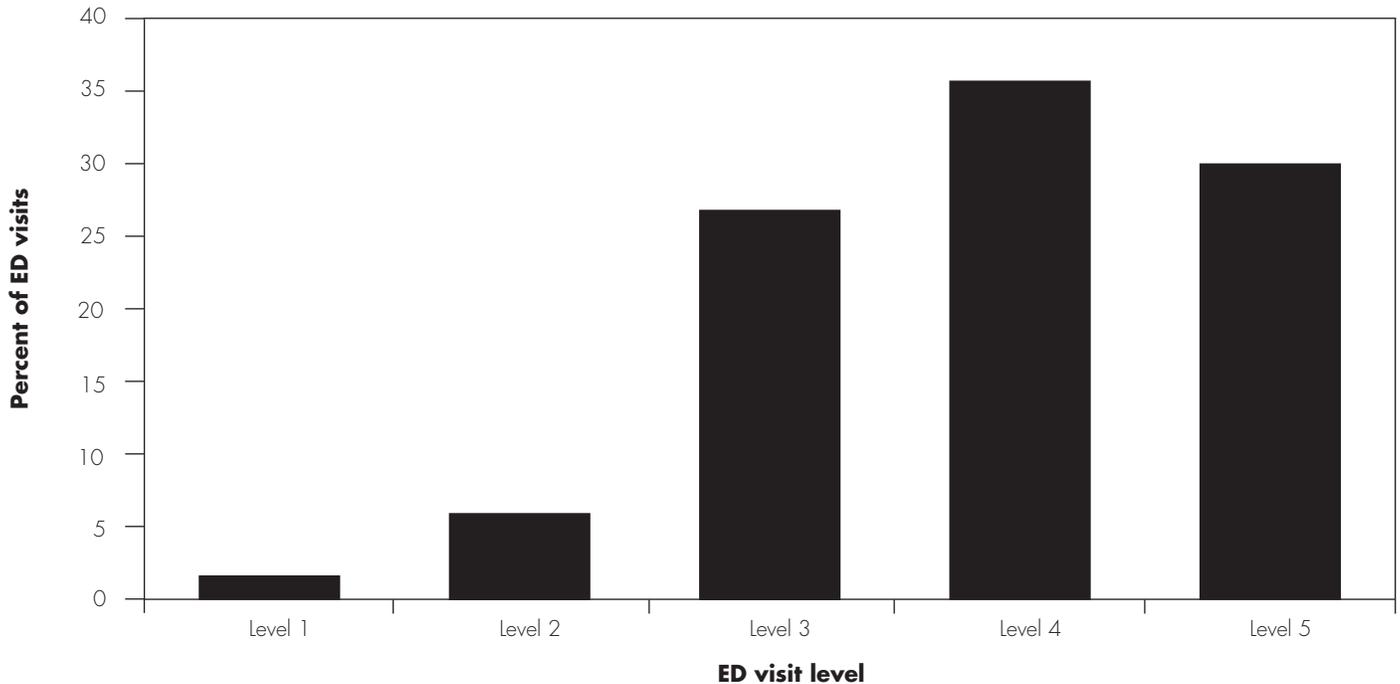
Considerable effort was made by multiple parties (including CMS) to create national guidelines for ED visits. The American College of Emergency Physicians (ACEP) created a set of national guidelines, and AHA and AHIMA worked together to create another set of national guidelines (see text box, p. 409).

In January 2002, the expert panel that advises CMS on OPSS issues recommended that CMS adopt the ACEP guidelines. CMS decided not to follow that recommendation. In the 2007 OPSS final rule, CMS indicated that the AHA/AHIMA guidelines were the most appropriate and well-developed guidelines (Centers for Medicare & Medicaid Services 2006). However, CMS identified several areas where the AHA/AHIMA guidelines needed to be refined, such as the appropriate number of levels and distinguishing Type A and Type B ED visits. In the 2008 OPSS proposed rule, CMS invited public comment on whether there was still a need for national guidelines (Centers for Medicare & Medicaid Services 2007).

Although CMS had stated that its goal was to create national guidelines, CMS also said that “this complex undertaking for these important and common hospital services was proving more challenging than we initially thought as we received new and expanded information

**FIGURE
11-10**

Distribution of ED visit codes was very different from a normal curve in 2017



Note: ED (emergency department).

Source: MedPAC analysis of 2017 cost statistics file for the outpatient prospective payment system from CMS.

from the public on current hospital reporting practices that led to appropriate payment for the hospital resources associated with clinic and emergency department visits” (Centers for Medicare & Medicaid Services 2007). CMS received a number of comments on national guidelines, including:

- A majority of commenters requested that CMS continue to work on national guidelines to ensure consistent reporting of hospital visits.
- Some commenters requested that the guidelines be implemented as soon as possible, including one commenter who believed it was absolutely necessary to create national guidelines as CMS moved toward greater packaging (of ancillary items).
- Other commenters stated it was unnecessary to implement national guidelines because CMS had

created principles for internal guidelines that were appropriate, reasonable, and sufficient.

Despite this effort, CMS was not able to develop national guidelines. CMS mentioned that, after testing models and receiving some negative feedback, it was difficult to find national coding guidelines that satisfied all hospitals. However, based on statements in regulations, the largest obstacle to creating national guidelines was not difficulties related to ED visits but to clinic visits. CMS was trying to establish national guidelines for ED visits and clinic visits at the same time. Even though ED visits and clinic visits have always had separate CPT codes and very different payment rates, CMS appeared to consider the creation of national coding guidelines for ED visits and clinic visits as a single project. When CMS ended its effort to create national guidelines, the most specific comment that CMS provided was: “Based on public comments, as well as our own knowledge of how clinics operate, it seemed unlikely

Models for guidelines for coding emergency department visits

From 2000 through 2007, CMS made an effort to create national coding guidelines for emergency department (ED) visits. Even though CMS was not able to successfully develop national coding guidelines, two sets of national guidelines were developed by different entities. The American College of Emergency Physicians (ACEP) developed one set of guidelines, and the American Hospital Association (AHA) and the American Health Information Management Association (AHIMA) combined to develop the other set of guidelines.

The national guidelines developed by ACEP have five levels. Each level reflects a different level of hospital resources used to provide patient care. The more resources a hospital uses, the higher the level.

The five levels in the ACEP guidelines are distinguished by the medical interventions provided by the nursing and ancillary staff of the hospital. The interventions that apply to the first level are basic items such as an initial assessment, dressing changes, and suture removal. The interventions that apply to each successive level include all of the interventions that apply to the previous level plus interventions more complex than those from the previous level. The

method for assigning the level of an ED visit under the ACEP guidelines is simple: The intervention that falls into the highest level determines the level of the visit. That means one intervention determines the level of the visit, the one that is in the highest level (American College of Emergency Physicians 2011).

The AHA/AHIMA model is a hybrid. The primary mechanism for assigning levels for ED visits is the interventions provided by hospital staff, but the level also depends on staff time and the complexity of the patient. Similar to the ACEP model, much of what drives the level of an ED visit is the most complex intervention, but an ED visit can be moved one level higher if hospital staff provide three or more of some interventions during a visit. Another difference between the ACEP model and the AHA/AHIMA model is that the ACEP model has five levels while the AHA/AHIMA model has three levels. AHA and AHIMA decided on three levels because under a five-level system, the same interventions could be reasonably classified into more than one level. AHA/AHIMA argued that a five-level system produced a lack of consistency in determining the correct level (American Health Information Management Association 2003). ■

that one set of straightforward national guidelines could apply to the reporting of visits in all hospitals and specialty clinics” (Centers for Medicare & Medicaid Services 2007).

Under the system where hospitals use their own internal guidelines, hospitals have steadily shifted the coding of ED visits from lower paying levels to higher paying levels. The use of hospital-level coding guidelines makes it difficult for CMS to assess and audit hospitals’ coding practices. Also, the coding practices that have resulted under these circumstances show that problems can occur, which can result in payments for ED visits that do not accurately reflect the cost of care. To improve the accuracy of Medicare payments for ED visits and to regain a distribution of coding frequency that is approximately

normal, CMS should renew its effort to develop and implement national coding guidelines for ED visits.

RECOMMENDATION 11

The Secretary should develop and implement a set of national guidelines for coding hospital emergency department visits under the outpatient prospective payment system by 2022.

RATIONALE 11

The benefits of effective national coding guidelines for ED visits include:

- Payments for ED visits would accurately reflect the resources hospitals incur when providing care in the ED setting.

- Hospitals would have a clear set of rules for coding ED visits.
- CMS would have a firm foundation for assessing and auditing the coding behavior of hospitals.

The best approach is a set of codes based on national guidelines that reflect different levels of hospital resources needed to treat patients and that facilitate monitoring and auditing to offset incentives for upcoding. A set of CPT codes that has multiple levels and is based on national guidelines would allow payments for ED visits to more accurately reflect the cost of each visit level. However, incentives to upcode are likely to be present in any set of ED codes that has multiple levels, and it will be essential for CMS to minimize these incentives in implementing a set of CPT codes with national guidelines.²⁸

CMS had previously identified four potential models for coding ED visits (Centers for Medicare & Medicaid Services 2006). CMS discussed how well each of these models could prevent upcoding. The four models that CMS considered included:

- The number or type of staff interventions. The level of an ED visit would be based on the number and/or type of interventions performed by nursing or ancillary staff.
- The amount of staff time spent with an ED patient.
- A point system where points are assigned to each staff intervention based on the time, intensity, and type of staff required for the intervention.
- Patient complexity based on diagnosis codes, complexity of medical decision-making, or the presenting complaint or medical problem.

CMS said that upcoding is always a concern when coding is based on multiple levels, but the agency believed that a point system was the least susceptible to upcoding. However, CMS also said that a point system could add burden to hospitals because it could require additional documentation (Centers for Medicare & Medicaid Services 2006).

Moving from hospital-specific internal guidelines to national guidelines would be a substantial change for hospitals. In the previous attempt to implement national guidelines, CMS did significant testing of the models it considered. As it did with the previous attempt, CMS

should thoroughly test the national guidelines before implementation, such as using empirical data to determine that the guidelines produce an appropriate distribution across the levels defined by the guidelines.

IMPLICATIONS 11

Spending

- Under current law, use of national coding guidelines would be budget neutral. Any change in spending on ED visits would trigger an offsetting change in the payment rates for all services covered under the OPSS.

Beneficiaries and providers

- We do not anticipate that this recommendation will diminish beneficiaries' access to ED services. For providers, this recommendation would improve the equity of Medicare payments by ensuring that all hospitals are using the same guidelines to code ED visits.

Conclusion

Medicare FFS beneficiaries' use of hospital EDs has increased in recent years, which has increased overall program and beneficiary spending. Policymakers may be able to slow the growth of Medicare ED spending by reducing beneficiaries' use of EDs for nonurgent care. While the use of lower cost UCCs by beneficiaries has also grown in recent years, we estimate that between 2 percent and 7 percent of Medicare ED visits could be appropriately treated in a UCC. To encourage the migration of nonurgent care to UCCs or other non-ED settings, policymakers might consider implementing policies such as educating patients and providers about choosing the appropriate care setting for their condition, measuring preventable ED visits, and encouraging EDs to better coordinate care with primary care physicians.

Policymakers may also be able to slow spending related to ED coding practices. Since CMS implemented the OPSS in August 2000, the agency has not established national guidelines for coding ED visits. Hospitals largely have been left to establish their own guidelines. Under these guidelines, hospitals have steadily shifted the coding of ED visits from lower paying levels to higher paying levels. The use of hospital-level coding guidelines makes it difficult for CMS to assess and audit hospitals' coding

practices. Also, the coding practices that have resulted under these circumstances show that problems can occur, which can result in payments for ED visits that do not accurately reflect the cost of care.

To improve the accuracy of ED payments, the Commission recommends that the Secretary implement national coding guidelines. National guidelines have been developed by ACEP and by AHA and AHIMA in a joint effort. CMS could use either or both of these models as a starting point. ■

Endnotes

- 1 We and others use the term *nonurgent care* to refer to cases that do not require immediate treatment in a hospital ED. Therefore, the term is not meant to suggest that these cases are not appropriate for UCCs or other non-ED settings.
- 2 Hospital outpatient ED spending data include beneficiary cost sharing and packaged ancillary services but not physician fee schedule spending or spending for separately paid outpatient drugs and imaging services.
- 3 In 2018, the Health Care Cost Institute reported that nationally, from 2009 to 2016, hospital ED spending for commercially insured patients increased 99 percent per capita and no change occurred in ED volume per capita.
- 4 In 2017, 377 facilities were off-campus EDs, located in 35 states and affiliated with more than 300 individual hospitals. An additional 200 stand-alone EDs were not affiliated with a hospital and were not permitted to bill Medicare.
- 5 In 1986, the Congress enacted EMTALA to ensure public access to emergency services regardless of ability to pay. Section 1867 of the Social Security Act imposes specific obligations on Medicare-participating hospitals that offer emergency services to provide a medical screening examination when a request is made for examination or treatment for an emergency medical condition (EMC), including active labor, regardless of an individual's ability to pay. Hospitals are then required to provide stabilizing treatment for patients with EMCs. If a hospital is unable to stabilize a patient within its capability or if the patient requests, an appropriate transfer should be implemented.
- 6 Hospitals' ED claims that result in a hospital admission are bundled into a Medicare severity–diagnosis related group and paid through the inpatient prospective payment system. ED visits at critical access hospitals (CAHs) are paid under the CAH cost-based payment system. About 10 percent of ED visits that do not lead to an inpatient stay become part of an observation stay.
- 7 In addition to the five ED CPT codes (99281 through 99285), which receive Type A ED payment rates, the OPSS (but not the PFS) uses five additional ED codes (G0380 through G0384) for ED facilities open less than 24/7, which receive Type B ED payment rates. The relative weights placed on Type A payment rates are based on the geometric mean cost of services in Type A EDs relative to the average cost of a clinic visit. The relative weights placed on Type B payment rates are based on the geometric mean cost of services in Type B EDs. In 2018, Type B rates were on average about 30 percent lower than Type A rates because Type B facilities do not incur the cost of maintaining standby ED staff 24 hours per day. The volume of claims paid under Type B rates is low, accounting for about 1 percent of all Medicare ED claims in 2016.
- 8 Throughout this analysis, we define the term *PFS E&M claims* to include claims containing any of the 10 PFS CPT codes for standard office visits for new or established patients and the 5 CPT codes that were in place from 2013 to 2017 for ED services. Only hospital EDs use the 5 CPT ED codes, but nearly any place of service—including hospital EDs—can use the 10 PFS CPT codes for standard office visits.
- 9 Established patients are perceived to be less complex than new patients because the clinician typically does not need to gather as much medical history from an established patient at the time of the visit.
- 10 In 2017, 90 percent of beneficiaries at physician offices were billed as established patients.
- 11 The practice of “incident to” billing affects the estimates of NPs and PAs practicing in physician offices and UCCs. Therefore, it is likely that the share of claims billed by NPs and PAs at UCCs and physician offices represented in Figure 11-2 (p. 389) would be slightly higher if we could identify claims where NPs and PAs billed under a physician identification number.
- 12 Of the 85 percent of E&M visits at hospital EDs that were billed for by physicians, the majority were for specialists. Among the 82 percent of E&M visits at physician offices that were billed for by physicians, a little more than half were specialists.
- 13 Primary physicians, specialists, nurse practitioners, and physician assistants all had similar coding behavior in UCCs across the five CPT code levels.
- 14 To apply the method to 2017 claims files, we cross-walked the ICD–9 codes identified by the authors to the corresponding ICD–10 (International Classification of Diseases, Tenth Revision) codes.
- 15 Researchers at New York University (NYU) developed a method for categorizing ED claims into one of nine categories of emergency and nonemergency claims—referred to as the NYU algorithm. Using the NYU algorithm, we estimated that there were 3.1 million nonemergency claims from hospital EDs in 2017, or 14.6 percent of hospital ED E&M cases. From 2013 to 2017, the number of nonemergent claims was largely unchanged. The NYU algorithm is a widely used and

- tested method of categorizing ED claims that uses the ICD–9 and ICD–10 codes present on Medicare claims to identify the probability that individual claims will fall into one of NYU’s nine categories reflecting the extent to which individual cases were emergency: ED care needed—not preventable; ED care needed—preventable; emergent—primary care treatable; nonemergency; alcohol; drug; injury; psychiatric; unclassified (Ballard et al. 2010, Gandhi and Sabik 2014, Jones et al. 2013). Based on these probabilities, we estimated the proportion of claims in each of the nine categories.
- 16 Other providers also furnished nonurgent care, but each accounted for less than 1 percent of claims. Retail clinics accounted for 13,000 claims involving nonurgent care. Other types of independent, state, or federal clinics and Federally Qualified Health Centers collectively accounted for approximately 12,000 claims involving nonurgent care.
 - 17 To identify the concentration of UCCs by MSAs, we obtained the number of UCCs by MSA from the Urgent Care Association of America and identified the top 50 MSAs by resident population. All 50 MSAs have more than 1 million residents. We express the concentration of UCCs in terms of UCCs per 100,000 residents. Our three “high-concentration MSAs” were among the highest of the 50 MSAs in terms of UCCs per 100,000 residents, but not the highest. The three “low-concentration MSAs” were among the lowest of the 50 MSAs in terms of UCCs per 100,000 residents, but not the lowest. We also chose these six MSAs based on their collective geographic distribution.
 - 18 In 2017, we estimate that approximately 93 percent of UCC claims involving nonurgent care were served in independent UCCs, and 7 percent were served in UCCs affiliated with a hospital. Also, the average spending per encounter in hospital-affiliated UCCs will likely decrease slightly in 2019 because CMS implemented a policy that decreases the payment rate for clinic visits provided in off-campus provider-based departments of hospitals.
 - 19 Beneficiary risk scores reflect the CMS hierarchical condition category (CMS–HCC) model. Implemented in 2004, CMS uses these risk scores to adjust capitated payments to Medicare Advantage health care plans. CMS–HCC risk scores are based on the conditions diagnosed for the beneficiary in the prior year.
 - 20 UnitedHealth exempts cases from the policy if the case results in a hospital admission, if it is a critical care patient, if the patient dies in the ED, or if the patient is a child under the age of two.
 - 21 The Mayo Clinic Health System in Minnesota, Arizona, and Florida offers a nurse help line to patients, which is described on their website at <https://mayoclinichealthsystem.org/>
 - nurse-line. Novant Health in Virginia, North Carolina, and South Carolina offers a nurse help line to patients, which is described on their website at <https://www.novanthealth.org/home/services/emergency/novant-health-care-line.aspx>.
 - 22 Title 42 of the Code of Federal Regulations (Section 447.54) defines the Medicaid cost-sharing rules related to nonemergent care provided at hospitals. In addition, Section 447.56 also states that “Before providing nonemergency services and imposing cost sharing for such services, hospitals must: a) Inform the individual of the amount of his or her cost sharing obligation for non-emergency services provided in the emergency department, b) Provide the individual with the name and location of an available and accessible alternative nonemergency provider, c) Determine that the alternative provider can provide services to the individual in a timely manner with the imposition of a lesser cost sharing amount or no cost sharing if the individual is otherwise exempt from cost sharing, d) and provide a referral to coordinate scheduling for treatment by the alternative provider.”
 - 23 Physicians also code ED visits into one of five levels, and their coding has also shifted to higher levels, but not to the same extent as hospitals. For physicians, the share of ED visits coded as Level 5 increased from 49.3 percent in 2011 to 55.5 percent in 2017.
 - 24 In our analysis of claims data, we also found that the number of drug administrations per ED visit increased from 2011 to 2017. In addition, in our analysis of NHAMCS data, we found that from 2011 to 2016 the rate at which ED patients saw an attending physician decreased and the rate at which they saw nurse practitioners and physician assistants increased.
 - 25 We excluded geographic areas that include counties located in Maryland. Coding of ED visits by these hospitals was very different from the coding of other hospitals, likely because of rules from the all-payer rate-setting system used by Maryland. The geographic areas excluded from our analysis were the Baltimore metropolitan area, the rest-of-state area of Maryland, and the Washington, DC, metropolitan area.
 - 26 In 2017, the correlation coefficient between the rate at which beneficiaries used UCCs and the rate at which hospitals coded ED visits at Level 5 was –0.01, and the correlation coefficient between the rate at which beneficiaries used UCCs and the rate at which hospitals coded ED visits at either Level 1 or Level 2 was 0.05.
 - 27 The remaining 48 metropolitan areas had about 43 percent of all ED visits and 43 percent of all FFS Part B beneficiaries.
 - 28 Obviously, upcoding would not be an issue if CMS implemented a single CPT code for all ED visits. CMS previously proposed a single code that would have been

implemented in 2014 (Centers for Medicare & Medicaid Services 2013). In a comment letter, the Commission strongly opposed a single CPT code. The leading reason was that hospitals would either benefit or be disadvantaged based on

the health of their ED patients (Medicare Payment Advisory Commission 2013). Based on stakeholder input, CMS chose not to implement this policy.

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CHAPTER

12

**Promoting integration
in dual-eligible
special needs plans**

Promoting integration in dual-eligible special needs plans

Chapter summary

Individuals who qualify for both Medicare and Medicaid, known as dual-eligible beneficiaries or “dual eligibles,” can receive care that is fragmented or poorly coordinated because of the challenges in dealing with two distinct and complex programs. Many observers have argued that the development of managed care plans that provide both Medicare and Medicaid services would improve quality and reduce spending for this population because integrated plans would have stronger incentives to coordinate care than either program does when acting on its own. These plans would provide all Medicare and Medicaid services and would feature extensive care coordination, a uniform provider network, and a single set of member materials. Integrated plans have shown some ability to reduce enrollees’ use of inpatient and nursing home care, and CMS is testing the use of integrated plans on a broader scale through its financial alignment demonstration.

Given the importance of integrating Medicare and Medicaid benefits for the dual-eligible population, the Commission began an examination of integrated plans in its June 2018 report, reviewing the demonstration’s progress and noting that Medicare has several types of integrated plans. This chapter continues our analysis by examining the integrated plan type with the largest enrollment, the Medicare Advantage (MA) dual-eligible special needs plan (D–SNP). This year, D–SNPs are available in 42 states and the District of

In this chapter

- Introduction
- Background on dual eligibles
- Background on integrated plans and D–SNPs
- D–SNPs offer extra benefits different from those offered by traditional MA plans
- Comparing the D–SNP and Medicaid managed care markets
- The growing use of “look-alike” plans to circumvent D–SNP requirements
- Policy options to promote greater integration in D–SNPs
- Conclusion

Columbia and have 2.2 million enrollees, which accounts for between 15 percent and 20 percent of the dual-eligible population. This popularity is partly due to the extra benefits that D–SNPs provide using MA rebates. These benefits typically differ from those offered by traditional MA plans, with D–SNPs spending a much larger share of their rebates on supplemental benefits such as dental, hearing, and vision services. However, the level of integration between D–SNPs and Medicaid is generally low, and only about 18 percent of D–SNP enrollees are in plans with a significant degree of integration.

The low level of integration between D–SNPs and state Medicaid programs has three underlying causes:

- First, 27 percent of D–SNP enrollees are “partial-benefit” dual eligibles who have Medicaid coverage that is limited to payment of the Part B premium and, in some cases, Medicare cost sharing. D–SNPs provide little obvious benefit in these situations in terms of integrating Medicare and Medicaid coverage, and quality data for partial-benefit dual eligibles suggest that D–SNPs perform about the same as traditional MA plans. However, some partial-benefit dual eligibles may nonetheless benefit from enrolling because of the extra benefits that these plans provide using MA rebates.
- Second, 41 percent of D–SNP enrollees qualify for full Medicaid benefits but are enrolled in plans that do not have capitated Medicaid contracts for delivery of long-term services and supports (LTSS), such as nursing home care and community-based care. The delivery of these services is a key ingredient for integrated plans because LTSS accounts for about 80 percent of Medicaid spending on dual eligibles. However, a growing number of states can make capitated payments for these services because they have developed managed LTSS (MLTSS) programs. The plans in these programs typically provide primary care, acute care, and at least some behavioral health services in addition to LTSS, and thus provide an opportunity to develop integrated plans that serve a wide range of dual eligibles, including those who do not use LTSS.
- Third, 14 percent of enrollees qualify for full Medicaid benefits and are in D–SNPs that have a companion MLTSS plan run by the same parent company, but they are not enrolled in that MLTSS plan. Some enrollees may not be required to enroll in an MLTSS plan, but for those who are, these cases of misaligned enrollment are unlikely to lead to any meaningful integration given the inherent challenges of coordinating the efforts of two separate managed care companies.

Our analysis suggests that several policy changes could improve the level of Medicare–Medicaid integration in D–SNPs. Plan sponsors could be prohibited

from enrolling partial-benefit dual eligibles in D–SNPs or be required to establish separate D–SNPs for partial-benefit and full-benefit dual eligibles. Both options would make it easier to pursue greater levels of integration for dual eligibles who qualify for full Medicaid benefits (the group most likely to benefit from integrated plans), but the second option would enable partial-benefit dual eligibles to enroll in plans with the distinctive package of extra benefits that D–SNPs typically offer.

The other barriers to greater integration could be addressed by using a practice known as aligned enrollment, which would limit enrollment in D–SNPs to beneficiaries enrolled in a comprehensive Medicaid managed care plan offered by the same parent company. Under this approach, plan sponsors could not offer a D–SNP unless they had a companion Medicaid plan, and beneficiaries would not be able to enroll in D–SNPs and Medicaid plans from separate companies. These changes would ensure that D–SNP enrollees receive their Medicare and Medicaid benefits from the same parent company and would set the stage for greater integration in other important areas, such as the development of a single care coordination process and a unified process for handling grievances and appeals.

These policy changes would likely reduce overall enrollment in D–SNPs initially, but the number of beneficiaries enrolled in more highly integrated plans would increase. Since states vary greatly in their use of Medicaid managed care, policymakers could consider applying these changes only in states that have MLTSS programs.

Finally, some plan sponsors might try to circumvent these requirements by developing “look-alike” plans, which are traditional MA plans targeted at dual eligibles. Since look-alike plans operate as traditional MA plans instead of D–SNPs, they do not have to meet the additional requirements that apply to D–SNPs, such as having a Medicaid contract. The use of these plans has been growing; they are now available in 35 states and have about 220,000 enrollees. CMS may need new authority to prevent sponsors from using look-alike plans to undermine efforts to develop more highly integrated D–SNPs. ■

Introduction

Individuals who qualify for both Medicare and Medicaid, known as dual-eligible beneficiaries or “dual eligibles,” may receive care that is fragmented or poorly coordinated because of the challenges of navigating two distinct and complex programs. Many observers argue that managed care plans that provide both Medicare and Medicaid services would improve quality and reduce spending for this population because integrated plans would have stronger incentives to coordinate care than either program does when acting on its own. These plans would provide all Medicare and Medicaid services and would feature extensive care coordination, a uniform provider network, and a single set of member materials. However, these plans have been difficult to develop, and only 8 percent of dual eligibles who receive full Medicaid benefits are enrolled in plans with a high degree of Medicare–Medicaid integration.¹

The first integrated plans for dual eligibles were developed in the 1990s and 2000s in Massachusetts, Minnesota, and Wisconsin. Researchers found that these plans had some ability to reduce enrollees’ use of hospital services and redirect use of long-term services and supports (LTSS) from nursing home care to community-based care (JEN Associates 2015, Kane and Homyak 2004). The most positive findings come from a 2016 study of the Minnesota program, which is known as Minnesota Senior Health Options (MSHO) and serves beneficiaries who are 65 and older. The study compared MSHO enrollees with other dual eligibles in Minnesota who were mostly enrolled in a combination of fee-for-service (FFS) Medicare and Medicaid managed care. The study found that MSHO enrollees were 48 percent less likely to have an inpatient stay, 6 percent less likely to have an outpatient emergency room visit, 2.7 times more likely to have a visit with a primary care physician, and no more likely to have a visit with a specialist. As for LTSS use, MSHO enrollees were 13 percent more likely to receive home- and community-based services and no more likely to have a nursing home admission. The authors concluded that the integrated MSHO program was associated with desirable patterns of service use and “may have merit for other states” (Anderson et al. 2016).

In 2013, the Commission examined the performance of Medicare Advantage (MA) dual-eligible special needs plans, or D–SNPs. We found that these plans generally had average to below-average performance on quality

measures compared with other types of special needs plans and traditional MA plans that are open to all enrollees, but some D–SNPs that were highly integrated with Medicaid performed well. The Commission recommended that D–SNPs be required to “assume clinical and financial responsibility for Medicare and Medicaid benefits” to encourage greater integration (Medicare Payment Advisory Commission 2013).

Given the potential benefits of integrated plans, the Commission began an examination of Medicare’s managed care plans for dual eligibles in its June 2018 report to the Congress. We reviewed the progress of the financial alignment demonstration, where CMS and 10 states have been testing whether highly integrated plans known as Medicare–Medicaid Plans (MMPs) can improve quality and lower costs. While there were limited data available on the demonstration’s effects on areas such as quality, service use, and cost, the information that was available was generally positive. Enrollment in the demonstration plans was stable, quality of care appeared to be improving, payment rates appeared adequate, plans had grown more confident about their ability to manage service use, and stakeholders remained supportive of the demonstration. We reported that Medicare has four types of integrated plans serving dual eligibles, and we described how these plans differed in key areas, such as their level of integration with Medicaid. Some states participating in the demonstration have found that operating multiple plan types in the same market has been problematic, and we noted that policy changes may be needed to better define the respective roles of each plan type or to consolidate these plans in some fashion (Medicare Payment Advisory Commission 2018a).

This chapter continues our examination of integrated plans by focusing on the most widely used type of integrated plan, the D–SNP. Although these plans are popular, their level of integration with Medicaid is generally low compared with other types of plans such as MMPs. We examine three issues:

- how the extra benefits that D–SNPs provide compare with those provided by traditional MA plans, which helps explain why many dual eligibles enroll in D–SNPs even though their integration with Medicaid is often limited;
- the overlap between the D–SNP and Medicaid managed care markets, which helps explain why the level of integration for many D–SNPs is low; and

**TABLE
12-1**

Dual eligibles had much higher per capita annual spending in 2013 than other Medicare beneficiaries

	Medicare	Medicaid	Total
Dual-eligible beneficiaries			
All dual eligibles	\$18,112	\$11,126	\$29,238
Full-benefit dual eligibles	19,256	15,222	34,478
Partial-benefit dual eligibles	15,200	695	15,895
All other Medicare beneficiaries	8,593	N/A	8,593

Note: N/A (not applicable). Figures include all Medicare (Part A, Part B, and Part D) and Medicaid spending except Medicare or Medicaid spending on Part A, Part B, or Part D premiums. The Medicaid spending for partial-benefit dual eligibles is for coverage of Medicare cost sharing.

Source: MedPAC analysis of linked Medicare–Medicaid enrollment and spending data.

- the use of “look-alike” plans (traditional MA plans targeted at dual eligibles), which indicates that efforts to develop more highly integrated D–SNPs may need to account for potentially offsetting effects elsewhere in the MA program.

Background on dual eligibles

Individuals must separately qualify for both Medicare and Medicaid coverage to become dual-eligible beneficiaries. Roughly half of dual eligibles first qualify for Medicare based on disability (compared with the 17 percent of Medicare beneficiaries who qualify based on disability but are not dual eligibles) and roughly half qualify when they turn 65. Medicaid’s eligibility rules vary somewhat across states, but most dual eligibles qualify because they receive Supplemental Security Income benefits; need nursing home care or have other high medical expenses; or meet the eligibility criteria for the Medicare Savings Programs, which provide assistance with Medicare premiums and cost sharing (Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission 2018). In December 2017, about 10.7 million Medicare beneficiaries (18 percent of the total) were dually eligible.

Dual eligibles divide into two broad groups—“full benefit” and “partial benefit”—based on the Medicaid benefits

they receive. Full-benefit dual eligibles qualify for the full range of Medicaid services covered in their state, which generally includes a broad range of primary and acute care services, nursing home care, and other LTSS. In contrast, partial-benefit dual eligibles receive assistance only with Medicare premiums and, in some cases, assistance with cost sharing. In December 2017, there were 7.6 million full-benefit dual eligibles and 3.1 million partial-benefit dual eligibles.

As a group, dual eligibles are in poorer health than other Medicare beneficiaries and have noticeably higher costs (Table 12-1). Measured on a per capita basis, the average annual Medicare cost for dual eligibles in 2013 (the most recent year of linked Medicare and Medicaid enrollment and spending data available) was over \$18,000, more than twice as high as that of other Medicare beneficiaries. Within the dual-eligible population, those eligible for full Medicaid benefits had higher Medicare costs and much higher Medicaid costs than those eligible only for partial Medicaid benefits.² In 2013, Medicare and Medicaid together spent more than \$34,000 per capita, on average, on full-benefit dual eligibles.

Because of their high costs, dual eligibles account for a disproportionately large share of Medicare spending: In 2013, they represented about 20 percent of Medicare beneficiaries but accounted for about 34 percent of total Medicare spending. They were also costly for Medicaid,

representing about 15 percent of enrollment and about 32 percent of total spending in that program (Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission 2018).

Medicare is the primary payer for services covered by both programs, such as inpatient care and physician services, so Medicaid spending for full-benefit dual eligibles is largely for LTSS, such as nursing home care and home- and community-based waiver programs. Less than half of full-benefit dual eligibles (42 percent) used LTSS in 2013, but spending on those services accounted for about 80 percent of this population's total Medicaid costs (Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission 2018).

Background on integrated plans and D-SNPs

Policymakers have long been concerned that dual eligibles are vulnerable to receiving care that is fragmented or poorly coordinated. Medicare and Medicaid are separate programs—the first purely federal, the second largely operated by states with federal oversight and a mix of federal and state funding. Each program is complex, with its own distinct rules for eligibility, covered services, and administrative processes. Medicare and Medicaid also have relatively little incentive to engage in activities that might benefit the other program. For example, states have relatively little incentive to reduce the use of inpatient care by dual eligibles because Medicare would realize most of the savings. Similarly, Medicare has relatively little incentive to prevent dual eligibles from going into nursing homes, where Medicaid pays for most of their care.

Many observers have argued that the two programs could be better integrated by developing managed care plans that provide both Medicare and Medicaid services. Supporters argue that integrated plans, because of their responsibility for the full range of Medicare and Medicaid benefits, would not have the incentive that each program operating independently has to shift costs to the other program, and such plans would have stronger incentives to coordinate care across the programs. Dual eligibles would also find it easier to understand their coverage and obtain care because they would receive integrated materials (such as a single membership card and provider directory instead of separate Medicare and Medicaid versions) and have one

point of contact for their care needs. Integrated plans, it has been argued, would thus improve the quality of care for dual eligibles and produce savings by reducing the use of high-cost services, such as inpatient hospital and nursing home care.

Over time, policymakers have developed four types of Medicare plans that serve dual eligibles and seek to integrate with Medicaid in some way (Table 12-2, p. 428). The most widely used integrated plan—and the focus of this chapter—is the Medicare Advantage D-SNP. These plans were first offered in 2006, although a small number were established before that as part of earlier CMS demonstrations aimed at developing integrated plans. (Interest in making these demonstration plans a permanent part of Medicare was one motivation for the creation of D-SNPs.) The legislative authority to offer D-SNPs was initially set to expire at the end of 2008 but was extended numerous times before the Congress permanently authorized them in the Bipartisan Budget Act of 2018. In 2019, D-SNPs are available in 42 states and the District of Columbia and have about 2.2 million enrollees.³

In many respects, D-SNPs are identical to traditional MA plans. For example, both are required to provide all Part A and Part B services except hospice and must meet the same adequacy standards for their provider networks. CMS also uses the same methodology to set the payment rates for both plan types. However, D-SNPs have several additional features that are not part of traditional MA plans.

Limited eligibility

MA plans are typically open to all beneficiaries in the plan's service area, but D-SNPs limit their enrollment to beneficiaries who are dually eligible. The rationale for the restriction is that limiting eligibility makes it easier for plan sponsors to tailor plans to meet the distinctive care needs of the dual-eligible population. The two other types of MA special needs plans, which cover beneficiaries with certain chronic conditions (known as C-SNPs) and beneficiaries living in long-term care institutions (known as I-SNPs), have similar eligibility limits.

Model of care

All special needs plans, including D-SNPs, must develop and follow an evidence-based model of care (MOC) that is designed to meet the specialized needs of their enrollees. The MOC must be approved by the National Committee

**TABLE
12-2**

Medicare has four types of plans that integrate with Medicaid in some way

	D-SNP				
	Total	Regular	FIDE-SNP	MMP	PACE
Authorization	Permanent	Permanent	Permanent	Demonstration	Permanent
States where plan is available	43	40	10	9	31
Number of plans	445	400	45	46	126
Enrollment	2,162,127	1,977,848	184,279	388,098	44,440
Level of integration	Varies widely but generally low	Varies widely but generally low	High	High	High

Note: D-SNP (dual-eligible special needs plan), FIDE-SNP (fully integrated dual-eligible special needs plan), MMP (Medicare–Medicaid Plan), PACE (Program of All-Inclusive Care for the Elderly). The District of Columbia is treated as a state. Figures do not include Puerto Rico. Many states have more than one type of plan. Ten states have tested the use of MMPs, but one state (Virginia) has ended its demonstration. The numbers of regular D-SNPs and FIDE-SNPs are based on combinations of contract and plan number; the numbers of MMPs and PACE plans are based on contracts. Enrollment figures are for January 2019. Starting in 2021, regular D-SNPs that have a Medicaid contract to provide long-term services and supports, behavioral health, or both will be classified as highly integrated dual-eligible special needs plans (HIDE SNPs). CMS created this category to implement new requirements for D-SNPs that were enacted in the Bipartisan Budget Act of 2018. The number of plans that will qualify as HIDE SNPs is not yet known.

for Quality Assurance (NCQA) for the plan to participate in Medicare Advantage. CMS and NCQA require each plan’s MOC to describe the plan’s:

- target population,
- process for providing care coordination,
- provider network (for example, whether the network has the specialized expertise needed to serve the target population), and
- process for measuring quality and improving performance (National Committee for Quality Assurance 2018).

The NCQA gives each MOC a score; the MOCs with passing scores are approved for a period of one, two, or three years (those with higher scores receive longer approvals). The MOCs for most D-SNPs are approved for two or three years.

Requirements for Medicaid integration

When D-SNPs were first created, they did not have to have any formal relationship with state Medicaid

programs, but the Congress has taken incremental steps since then to require the plans to be more highly integrated. Since 2010, each D-SNP has been required to have a state contract to “provide [Medicaid] benefits, or arrange for [such] benefits to be provided” (Section 1859(f)(3)(D) of the Social Security Act). These Medicaid contracts are sometimes known as “MIPPA contracts” because the requirement was enacted in the Medicare Improvements for Patients and Providers Act of 2008.⁴ Although D-SNPs must have contracts with states, the reverse is not true. States are not required to sign MIPPA contracts with every plan sponsor that wants to offer a D-SNP; they can sign contracts with a limited number of plans or choose to have no D-SNPs at all.

The level of Medicaid integration required by these contracts is limited. For example, the contract must specify the plan’s service area, which dual eligibles can enroll in the plan, and the process used to verify enrollees’ Medicare and Medicaid eligibility. Consistent with the statutory provision, the contract must also specify the plan’s responsibilities to provide or arrange for Medicaid benefits. However, states do not have to contract with

D-SNPs to provide any Medicaid services, let alone key services such as LTSS or behavioral health. Plans that do provide Medicaid services may cover only a limited subset, such as Medicare cost sharing or certain acute care services. At the same time, states that wish to achieve higher levels of integration have been able to do so by adding provisions to their D-SNP contracts. The net result of the contracting requirement has been that the level of integration between D-SNPs and Medicaid varies widely but is generally low.

Since 2012, D-SNPs with high levels of Medicaid integration have the option of becoming what are known as fully integrated dual-eligible (FIDE) SNPs. D-SNPs must meet several additional requirements to qualify as FIDE-SNPs. For example, they must have a capitated Medicaid contract to provide a range of services that includes LTSS, provide both Medicare and Medicaid benefits through a single managed care plan, and take steps to integrate member materials. FIDE-SNPs can also receive higher payments if their enrollees have sufficiently high levels of functional impairment. (Since the integration requirements for “regular” D-SNPs and FIDE-SNPs differ significantly and FIDE-SNPs can receive higher payment rates than other D-SNPs for enrollees with sufficiently high levels of functional impairment, we show them as distinct plan types in Table 12-2.) The FIDE-SNP option has not been widely used. In 2019, only 10 percent of D-SNPs (45 of 445 plans) are FIDE-SNPs. They are available in 10 states and cover about 184,000 beneficiaries, with 3 states (Massachusetts, Minnesota, and New Jersey) accounting for about 75 percent of the overall enrollment.

Most recently, the Bipartisan Budget Act of 2018 requires D-SNPs to meet additional standards for integration starting in 2021.⁵ Each D-SNP must satisfy one of the following requirements:

- The plan meets requirements (to be determined by the Secretary) aimed at improving the coordination of LTSS, behavioral health, or both.
- The plan is a FIDE-SNP or has a Medicaid contract to provide LTSS, behavioral health, or both on a capitated basis.⁶
- If the plan’s parent company also has a Medicaid plan that provides LTSS or behavioral health, the D-SNP must assume “clinical and financial responsibility” for individuals enrolled in both plans.

Other integrated plans

Besides D-SNPs, the other types of integrated plans are MMPs and the Program of All-Inclusive Care for the Elderly (PACE). Nine states are currently testing the use of MMPs, and those plans have about 388,000 enrollees. MMPs are more highly integrated than D-SNPs, including FIDE-SNPs, because they provide all or almost all Medicaid-covered services and more of their administrative processes have been combined. CMS is conducting the demonstration using the authority of its Center for Medicare & Medicaid Innovation, so potentially CMS could expand the use of MMPs in the future. (See the Commission’s June 2018 report for our most recent update on the financial alignment demonstration (Medicare Payment Advisory Commission 2018a).)

PACE plans are provider-sponsored plans that serve beneficiaries who are 55 and older and need the level of care provided in a nursing home. This program is not targeted specifically at dual eligibles, but in practice virtually all Medicare beneficiaries enrolled in PACE are full-benefit dual eligibles. The program aims to keep people living in the community instead of nursing homes and uses a distinctive model of care based on adult daycare centers that are staffed by an interdisciplinary team that provides therapy and medical services. PACE plans are fully integrated because they provide all Medicare-covered and Medicaid-covered services. The program started as a demonstration in the early 1980s and was permanently authorized in 1997. PACE plans are available in 31 states, but they are typically small, and overall enrollment has always been relatively low (currently about 44,000).

Finally, it is worth noting that dual eligibles can also remain in FFS Medicare or enroll in other types of plans, such as traditional MA plans and special needs plans for individuals who live in long-term care institutions or have certain chronic conditions (provided they meet the additional eligibility requirements for those types of SNPs).

D-SNPs offer extra benefits different from those offered by traditional MA plans

D-SNPs have been the most popular type of Medicare health plan for dual eligibles for many years. In 2017, the most recent year of data, 36 percent of dual eligibles were

**TABLE
12-3**

D-SNPs and traditional MA plans use their rebates in different ways

	Traditional MA plans	D-SNPs
Average monthly rebate in 2019 (per beneficiary)	\$106	\$112
Average allocation of rebates:		
Cost sharing for Part A and Part B services	51%	11%
Supplemental medical benefits	16	78
Supplemental drug benefits	17	3
Reduction in Part B premium	1	<1
Reduction in Part D premium	15	8

Note: D-SNP (dual-eligible special needs plan), MA (Medicare Advantage). Figures do not include employer plans, other types of special needs plans, or plans in Puerto Rico. Components may not sum to 100 percent because of rounding.

Source: MedPAC analysis of MA bid data for 2019.

enrolled in some type of Medicare health plan, with about 17 percent in D-SNPs, 13 percent in traditional MA plans, and the rest in other plans such as MMPs. Since D-SNPs typically provide few, if any, Medicaid services, they have relatively little advantage over other plans in terms of greater integration and instead have other features that make them attractive to dual eligibles.

One of those features is likely the ability of D-SNPs to offer extra benefits that are not covered by FFS Medicare. Under the MA payment system, each plan submits a bid that indicates the amount of funding that the plan requires to provide the Part A and Part B benefit package in a given service area. CMS compares the bid with a benchmark amount for the area, which is determined administratively and equals a certain percentage of local FFS spending. Benchmarks for counties in the highest spending quartile (measured by FFS spending) equal 95 percent of FFS spending, while benchmarks for counties in the second, third, and fourth quartiles (with the fourth quartile having the lowest spending) equal 100 percent, 107.5 percent, and 115 percent of FFS spending, respectively. In addition, plans that have a rating of 4 stars or higher in the CMS star rating system for MA plans also have a bonus amount, usually 5 percent of FFS spending, added to their benchmark.

If the plan’s bid is lower than the benchmark, the plan receives a payment that equals its bid plus a “rebate” that equals a percentage (between 50 percent and 70 percent,

depending on the plan’s star rating) of the difference between the benchmark and the bid. Plans that receive rebates must use them to provide additional benefits to their enrollees, such as reduced cost sharing for Part A and Part B services or coverage of supplemental benefits. If the plan’s bid is higher than the benchmark, the plan receives a payment that equals the benchmark and must charge beneficiaries a supplemental premium that equals the difference between the bid and the benchmark. (Almost all MA plans bid below their benchmarks.) Finally, the payment rates and rebate amounts are both adjusted for differences in beneficiaries’ health status using CMS’s hierarchical condition category model for risk adjustment.⁷

This payment system applies to all MA plans, so other products such as traditional MA plans can (and usually do) offer extra benefits. The key difference is that D-SNPs are limited to dual eligibles while traditional MA plans are open to all beneficiaries in the plans’ service area. As a result, sponsors of D-SNPs can more easily customize extra benefits that meet the specific needs of dual eligibles compared with sponsors of traditional MA plans, who are typically trying to offer products that appeal to a broader Medicare population.

In particular, D-SNPs can account for the fact that many out-of-pocket costs for dual eligibles are already covered by other programs. Medicaid covers the cost sharing for Part A and Part B services for all full-benefit dual eligibles and for about half of the partial-benefit dual

eligibles.⁸ Medicaid also pays the Part B premium for many dual eligibles and covers the Part A premium for many beneficiaries who do not qualify for premium-free coverage. Dual eligibles also qualify automatically for the Part D low-income subsidy (LIS), which covers the premium and all or most beneficiary cost sharing for prescription drug coverage. D–SNPs thus have less reason than traditional MA plans to use their rebates to cover these costs.

The comparison of bids that traditional MA plans and D–SNPs submitted for 2019 illustrates this difference between the plan types (Table 12-3). As part of the bid process, plans indicate how much of their rebate will be used for extra benefits in five categories:

- coverage of cost sharing for Part A and Part B services;
- supplemental medical benefits (services that FFS Medicare does not cover, such as dental benefits or eyeglasses);
- supplemental drug benefits, such as benefits in the Part D coverage gap;
- lowering the Part B premium; and
- lowering the plan’s Part D premium.⁹

For 2019, the rebate amounts for traditional MA plans and D–SNPs are comparable (\$106 and \$112, respectively, on a per member per month basis). However, D–SNPs spend a much larger share of their rebates on supplemental medical benefits (78 percent of their rebate compared with traditional MA plans’ expenditure of 16 percent), while traditional MA plans spend more of their rebates on Part A and Part B cost sharing (51 percent of their rebate compared with D–SNPs’ expenditure of 11 percent) and supplemental drug benefits (17 percent of their rebate vs. 3 percent of D–SNPs’). D–SNPs use a somewhat smaller share of their rebates to lower the Part D premium, and both types of plans spend very little to reduce the Part B premium.

We examined data from the Medicare Plan Finder website and MA plan benefit package files to better understand the types of supplemental medical benefits that D–SNPs and regular plans cover. Both data sources have standardized information about each MA plan’s benefits. CMS has traditionally defined supplemental benefits as services that are not covered by FFS Medicare and are “primarily health

related” (Centers for Medicare & Medicaid Services 2018b). CMS and the Congress have both recently given MA plans more flexibility to cover benefits that are not primarily health related, but these changes are still being implemented, and it is unclear how plans will ultimately use this new flexibility.¹⁰

We found that D–SNPs are more likely than traditional MA plans to offer several types of supplemental benefits (Table 12-4, p. 432). The most prominent are dental, hearing, and vision services, but D–SNPs are also more likely to cover over-the-counter items and transportation. In each benefit category, more than 80 percent of D–SNP enrollees are in plans that cover at least some services in 2019, compared with roughly two-thirds of enrollees in traditional MA plans. The biggest areas of difference are (1) comprehensive dental services, such as extractions or root canals, with 88 percent of D–SNP enrollees and 43 percent of traditional MA enrollees in plans that cover at least one service, and (2) transportation, for which 84 percent of D–SNP enrollees and 30 percent of traditional MA enrollees have coverage.

The MA program allows plans to offer three types of supplemental benefits: basic supplemental benefits that plans provide to all enrollees using their MA rebates, mandatory supplemental benefits that all enrollees are required to purchase by paying an additional premium that covers their full cost, and optional supplemental benefits that beneficiaries can purchase at their discretion by paying an additional premium that covers the full cost of the benefits. (The supplemental benefits shown in Table 12-4 (p. 432) are either basic or mandatory.) More than half of traditional MA enrollees are in plans that offer optional supplemental benefits, while almost no D–SNP enrollees are in plans that offer these optional benefits.

D–SNPs also tend to have more generous coverage of supplemental benefits than traditional MA plans. MA plans typically control their spending on supplemental benefits by limiting the number of services an enrollee can use, limiting the total amount that the plan will spend on a service, or both. We used the MA plan benefit package files to calculate the average maximum amount that plans will spend on supplemental benefits. The coverage of dental, hearing, and vision benefits can vary substantially across plans, so we have provided figures for some common benefit packages in Table 12-4 (p. 432) instead of a single overall figure. For example, the most common arrangement for plans that cover both preventive and

**TABLE
12-4**

D-SNPs have more generous coverage of supplemental medical benefits than traditional MA plans in 2019

	Traditional MA plans	D-SNPs
Share of enrollees in plans with the following coverage:		
Supplemental benefits in basic package		
Preventive dental services (one or more)	68%	85%
Comprehensive dental services (one or more)	43	88
Hearing aids	77	81
Eyeglasses	76	91
Over-the-counter items	60	97
Transportation	30	84
Optional supplemental benefits	52	<1
Average annual maximum coverage amounts:		
Dental services (based on plans that cover both preventive and comprehensive services subject to an overall dollar limit)	\$1,140	\$2,140
Hearing aids (based on plans that have an overall dollar limit on their coverage but no quantity limits)	\$1,610	\$1,960
Eyewear (based on plans that have an overall dollar limit on their coverage but no quantity limits)	\$140	\$270
Over-the-counter items	\$260	\$940
Transportation (number of one-way rides)	24	41

Note: D-SNP (dual-eligible special needs plan), MA (Medicare Advantage). All figures are weighted using January 2019 enrollment. Figures do not include employer plans, other types of special needs plans, or plans in Puerto Rico. "Preventive dental services" are defined as cleanings, dental X-rays, fluoride treatment, office visits, and office exams. "Comprehensive dental services" are defined as diagnostic services, endodontics, extractions, nonroutine services, periodontics, prosthodontics, and restorative services.

Source: MedPAC analysis of Medicare Plan Finder data and Medicare Advantage plan benefit package data for 2019.

comprehensive dental services is to use a single dollar limit that covers all dental services. About 43 percent of traditional plan enrollees and 47 percent of D-SNP enrollees have this type of coverage (figures not shown in table), and the average maximum coverage amount for D-SNPs is about a thousand dollars higher than the amount for traditional MA plans (\$2,140 vs. \$1,140). The maximum coverage amounts for other services were also higher for D-SNPs than for traditional MA plans, although the percentage difference between the two figures varied from service to service.

These supplemental benefits may be particularly appealing to dual eligibles because Medicaid's coverage

of those services is often limited. For example, Medicaid classifies dental, hearing, and vision services as "optional" services, which means that states can cover them if they wish but are not required to do so (Centers for Medicare & Medicaid Services 2018d). One study found that, in 2012, 4 states did not cover any dental services for adults and 20 states limited coverage for some or all adults to emergency treatment or trauma care (Kaiser Family Foundation 2018). Another study found that 22 states did not cover hearing aids in 2016 and that only 8 states had excellent coverage (Arnold et al. 2017). Even when a state covers a particular service, individuals may have difficulty obtaining care because the number

**TABLE
12-5**

D-SNPs and traditional MA plans have different benefit structures and premiums in 2019

	Traditional MA plans	D-SNPs
Share of enrollees in plans with the following features:		
Plan benefit structure		
Maximum out-of-pocket limit (\$6,700)	31%	68%
No Part D deductible	46	2
Maximum Part D deductible (\$415)	3	92
Monthly plan premium (includes any Part D premium but does not include the Part B premium)		
\$0	55	<1
\$1 to \$10	1	2
\$11 to \$20	5	8
\$21 to \$30	7	48
\$31 to \$40	6	42
\$41 to \$50	5	1
Over \$50	22	<1
Premium is at or below Part D LIS subsidy amount	70	99

Note: D-SNP (dual-eligible special needs plan), MA (Medicare Advantage), LIS (low-income subsidy). All figures are weighted using January 2019 enrollment. The figures do not include employer plans, other types of special needs plans, or plans in Puerto Rico. Components may not sum to 100 percent because of rounding.

Source: MedPAC analysis of Medicare Advantage landscape files for 2019.

of providers (particularly dentists) who accept Medicaid may be limited.

There are also notable differences between D-SNPs and traditional MA plans in their benefit structures and premiums (Table 12-5):

- CMS requires all MA plans to have an annual cap on beneficiary out-of-pocket costs that does not exceed a specified dollar amount (\$6,700 in 2019). One way for plans to use their rebates to cover Part A and Part B cost sharing is by having a lower cap. D-SNPs tend to have higher caps than traditional MA plans, likely because a lower cap provides little benefit to most dual eligibles.
- The Part D benefit has a deductible (\$415 in 2019), but plans can lower or eliminate it by using an alternative cost-sharing structure or offering supplemental drug coverage. A significant share of beneficiaries enrolled

in traditional MA plans (46 percent) have no deductible for drug coverage, and very few (3 percent) have the maximum deductible of \$415. In contrast, more than 90 percent of D-SNP enrollees are in plans that use the maximum deductible, which is covered by the Part D low-income subsidy that all dual eligibles receive.

- The premiums charged by traditional MA plans vary significantly. More than half of the beneficiaries enrolled in these plans (55 percent) are in “zero-premium” plans that use their rebates to cover the Part D premium that enrollees would otherwise pay. These plans are popular with many beneficiaries, but about 45 percent of traditional MA enrollees are in plans that do have premiums, and 22 percent are in plans that have premiums of more than \$50 per month. (The plan’s premium is separate from the standard Part B premium and includes any amount that enrollees are required to pay for mandatory supplemental benefits.) D-SNPs have different incentives. There is

no advantage to offering a zero-premium plan because the Part D premiums for dual eligibles are covered by the LIS. Using rebates to fully cover the plan's Part D premium thus provides no real benefit to dual eligibles and reduces the amount that the plan can use in other areas such as supplemental benefits. At the same time, the LIS premium subsidy is capped at a specific dollar amount, so D-SNPs have a strong incentive to keep their premiums below the LIS subsidy amount (generally between \$21 and \$40 per month, depending on the state). As a result, almost no D-SNP enrollees are in zero-premium plans, and almost all enrollees are in plans with premiums that are fully covered by the LIS. About 40 percent of D-SNP enrollees are in plans that have premiums that are within \$1 of the LIS subsidy amount (data not shown in Table 12-5 p. 433).

The behavior of dual eligibles who receive partial Medicaid benefits demonstrates the relative appeal of D-SNPs and traditional MA plans. These beneficiaries generally have income between 75 percent and 135 percent of the federal poverty level, but the extent of their Medicaid coverage varies.¹¹ The key difference is that Medicaid covers Part A and Part B cost sharing for beneficiaries with income between 75 percent and 100 percent of the federal poverty level but not for those with income between 100 percent and 135 percent of the federal poverty level.

Both groups of beneficiaries have the option of enrolling in a D-SNP or traditional MA plan in most states, but they prefer different types of plans (Figure 12-1). In 2017, those who had Medicaid coverage of their cost sharing were more likely to enroll in D-SNPs than traditional MA plans, by a margin of 56 percent to 41 percent, and the share enrolled in D-SNPs has been rising steadily, up from 42 percent in 2012. In contrast, beneficiaries who did not have Medicaid coverage of their cost sharing strongly preferred traditional MA plans, by a margin of 79 percent to 17 percent in 2017, a pattern that has changed relatively little in recent years.

This difference in preferences suggests that the presence (or lack) of Medicaid coverage of cost sharing is an important factor in plan selection. Those who already have their cost sharing covered by Medicaid appear to prefer the richer coverage of supplemental medical benefits that D-SNPs typically offer, while those who do not have their cost sharing covered by Medicaid appear to prefer plans that use more of their MA rebates to cover cost sharing.

The differences in the extra benefits for D-SNPs and traditional MA plans will be an important consideration later in the chapter, when we examine whether partial-benefit dual eligibles should be allowed to enroll in D-SNPs and whether some MA plan sponsors might try to circumvent efforts to increase the level of Medicaid integration in D-SNPs.

Comparing the D-SNP and Medicaid managed care markets

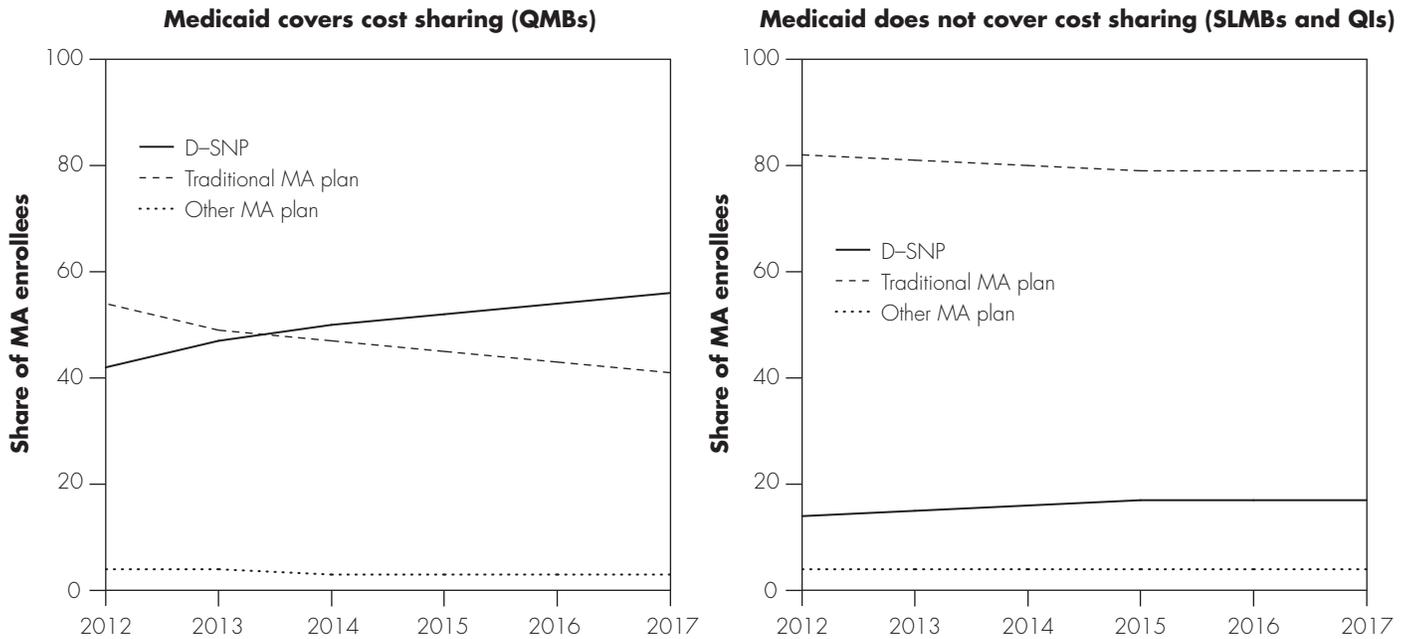
The generally low level of Medicare and Medicaid integration in D-SNPs is a concern because plans will not have the proper incentives to coordinate care unless they are responsible for providing both Medicare and Medicaid services. As we have seen, there is relatively robust interest in serving dual eligibles in the Medicare managed care sector. However, the development of integrated plans also depends on whether states use capitated managed care to provide Medicaid services to dual eligibles.

For many years, states were much less likely to use Medicaid managed care for their aged and disabled enrollees, many of whom are dual eligibles, than for other enrollees such as children and pregnant women. This discrepancy was largely due to a lack of experience with using managed care to provide LTSS, which presents distinct challenges for health plans because its services and providers can differ greatly from traditional medical services. As recently as 2004, only eight states had programs that used managed care plans to deliver LTSS to at least some beneficiaries (Saucier et al. 2012). But there has been rapid growth since then, and today 24 states have what are known as managed LTSS (MLTSS) programs (Lewis et al. 2018). (North Carolina is one of those states, but its MLTSS plans are quasi-governmental entities that provide a limited set of benefits—behavioral health and substance abuse treatment services—and do not operate other health plans. We decided to exclude it from our analysis and thus have 23 states with MLTSS programs in the material below.) The use of MLTSS will likely grow in the future as more states develop programs and the states that already have programs expand them.

Although these programs are often referred to as MLTSS programs, their scope is usually broader than LTSS, and many could also be described as comprehensive Medicaid managed care programs. In these cases, the MLTSS

**FIGURE
12-1**

Partial-benefit dual eligibles are more likely to enroll in D-SNPs if Medicaid covers their Medicare cost sharing



Note: D-SNP (dual-eligible special needs plan), QMB (qualified Medicare beneficiary), SLMB (specified low-income Medicare beneficiary), QI (qualifying individual), MA (Medicare Advantage). QMBs have income below 100 percent of the federal poverty level; Medicaid covers their Part A and Part B cost sharing, Part B premiums, and Part A premiums if necessary. SLMBs and QIs have income between 100 percent and 135 percent of the federal poverty level; Medicaid covers their Part B premiums only. Figure does not include plans in Puerto Rico. The figures for traditional MA plans do not include employer plans. The beneficiaries in the "Other MA plan" category are largely enrolled in special needs plans for individuals with chronic conditions.

Source: MedPAC analysis of common Medicare environment and denominator files and MA cross-walk files.

component is just part of a larger effort to use managed care to integrate the delivery of all or most Medicaid-covered services. The health plans in these programs thus typically provide primary care, acute care, and at least some behavioral health services in addition to LTSS. As a result, even though more than half of dual eligibles do not use LTSS in any given year, the growth in MLTSS programs provides an opportunity to develop integrated plans that serve a wide range of dual eligibles, including those who do not use LTSS.

States can be divided into three broad groups based on their use of MLTSS:

- **States with full MLTSS programs** (15 states) have developed programs that operate statewide and require at least some dual eligibles to enroll in MLTSS plans

to receive their Medicaid-covered services.¹² These programs nonetheless vary in terms of the recipients who are affected (most states have initially developed MLTSS programs for individuals who are elderly or have physical disabilities but have been slower to enroll individuals with intellectual or developmental disabilities, so a program may not cover all dual eligibles) and the plans' responsibility to provide services other than LTSS (plans typically provide medical services such as primary care and acute care but often do not provide all Medicaid-covered behavioral health services).

- **States with limited MLTSS programs** (8 states) have programs that operate in only certain parts of the state, do not require recipients to enroll in plans (i.e., enrollment is voluntary), or both. Many of these states

**TABLE
12-6**

Overlap between D-SNPs and Medicaid MLTSS plans, January 2019

	Full MLTSS program	Limited MLTSS program	No MLTSS program	Total
Number of states	15	8	28	51
Number of D-SNPs	253	85	113	451
D-SNP enrollment				
Full-benefit dual eligibles	970,000	289,000	307,000	1,566,000
Partial-benefit dual eligibles	<u>344,000</u>	<u>33,000</u>	<u>201,000</u>	<u>578,000</u>
Total	1,314,000	322,000	508,000	2,144,000
For full-benefit dual eligibles:				
Parent company of D-SNP operates an MLTSS plan in the same state				
Yes	812,000	155,000	N/A	967,000
No	<u>158,000</u>	<u>134,000</u>	<u>307,000</u>	<u>599,000</u>
Total	970,000	289,000	307,000	1,566,000
Beneficiary lives within the service area of the companion MLTSS plan				
Yes	585,000	105,000	N/A	690,000
No	<u>227,000</u>	<u>50,000</u>	<u>N/A</u>	<u>277,000</u>
Total	812,000	155,000	N/A	967,000
Beneficiary is also enrolled in the parent company's MLTSS plan				
Yes	282,000	104,000	N/A	386,000
No	<u>303,000</u>	<u>1,000</u>	<u>N/A</u>	<u>304,000</u>
Total	585,000	105,000	N/A	690,000

Note: D-SNP (dual-eligible special needs plan), MLTSS (managed long-term services and supports), N/A (not applicable). The District of Columbia is treated as a state. Table does not include Puerto Rico. The numbers of D-SNPs are based on combinations of state, contract number, and plan number; a small number of D-SNPs operate in multiple states and are counted more than once.

Source: MedPAC analysis of Medicaid MLTSS plans and D-SNP landscape and enrollment data.

have developed their MLTSS programs as part of the financial alignment demonstration and are thus using MMPs instead of D-SNPs as their vehicle for greater Medicare–Medicaid integration. For some states, the demonstration will likely be an interim step in the development of statewide, mandatory programs. For example, Virginia has transitioned from the demonstration to a statewide, mandatory program that uses D-SNPs, and Ohio has discussed expanding its MLTSS program to cover the entire state.

- **States without MLTSS programs** (27 states and the District of Columbia) currently provide LTSS on a fee-for-service basis. Given the shift underway in

Medicaid toward greater use of managed care for aged and disabled enrollees, some states in this group will likely develop MLTSS programs in the future and migrate to one of the categories described above.

To better understand the overlap between the D-SNP and MLTSS markets, we developed an inventory of the MLTSS plans that were operating in January 2019. This inventory had information for 153 plans in 23 states and included the state where the plan was offered, the associated MLTSS program (some states have more than one), service area, and parent company. We matched these plans to a corresponding inventory of D-SNPs by

looking for instances in which a parent company offers both an MLTSS plan and a D–SNP in a given state. The areas where the two markets overlap are best positioned to achieve higher levels of integration. We then used this linked plan landscape to break down D–SNP enrollment as of January 2019 for the 50 states and the District of Columbia based on each state’s use of MLTSS and whether the D–SNP’s parent company also offers an MLTSS product (Table 12-6).

Looking at the two markets in tandem suggests that the lack of integration in many D–SNPs stems from three features of the D–SNP model:

- partial-benefit dual eligibles can enroll in most D–SNPs,
- D–SNPs are not required to have capitated Medicaid contracts for the delivery of major services such as LTSS, and
- most states with MLTSS programs allow dual eligibles to enroll in D–SNPs and MLTSS plans offered by different parent companies.

Enrollment of partial-benefit dual eligibles

Partial-benefit dual eligibles can enroll in a D–SNP if the state authorizes it in its Medicaid contract with the plan; 36 of the 43 states with D–SNPs currently allow it.¹³ As shown in Table 12-6, about 578,000 D–SNP enrollees, or 27 percent of the total, qualify for partial Medicaid benefits only. However, only about a third of the partial-benefit dual eligibles enrolled in MA plans have selected D–SNPs; most of these beneficiaries (about 60 percent) are in traditional MA plans (data not shown).

The enrollment of partial-benefit dual eligibles in D–SNPs makes greater integration more difficult because their Medicaid coverage is so limited compared with dual eligibles who qualify for full benefits. Simply put, there is not much to integrate. About half of partial-benefit dual eligibles receive assistance with the Part B premium only, which does not involve the plan at all. The other half receives assistance with both the Part B premium and Part A and Part B cost sharing, so that Medicaid functions somewhat like a medigap plan. Some states provide a monthly capitated payment to D–SNPs to cover this cost sharing, but even in these situations, the plan itself plays a very limited role and D–SNPs provide little obvious benefit over other MA plans in terms of integrating Medicare and Medicaid coverage. States also routinely

exclude partial-benefit dual eligibles from Medicaid managed care programs because they are not eligible for full benefits. However, some partial-benefit dual eligibles may nonetheless benefit from enrolling in D–SNPs because of the extra benefits they offer.

The presence of partial-benefit dual eligibles is also an obstacle to greater integration for full-benefit dual eligibles. For example, enrolling both groups in the same plan makes it difficult to develop a single care coordination process that oversees all Medicare and Medicaid service needs (states have little incentive to help finance the costs of care coordination for partial-benefit dual eligibles) or use a single set of integrated member materials (each group needs its own version of documents such as the summary of benefits). As a result, every state with FIDE–SNPs—the D–SNPs with the highest levels of integration—limits enrollment in those plans to full-benefit dual eligibles.

One potential argument for allowing partial-benefit dual eligibles to enroll in D–SNPs is that some will ultimately become full-benefit dual eligibles and then could benefit from the greater care coordination that D–SNPs provide compared with traditional MA plans. However, as we noted in our June 2018 report to the Congress, the share of partial-benefit dual eligibles who later qualify for full Medicaid benefits is relatively small (Medicare Payment Advisory Commission 2018a).¹⁴

Another potential argument for allowing partial-benefit dual eligibles to enroll in D–SNPs is that they have greater health needs than other Medicare beneficiaries. As shown in Table 12-1 (p. 426), average per capita spending for partial-benefit dual eligibles is about 75 percent higher than for beneficiaries who are not dually eligible. Along this line of argument, partial-benefit dual eligibles might receive better care in D–SNPs than in traditional MA plans since D–SNPs are designed to serve a high-cost population and must follow an evidence-based model of care.

We tested this hypothesis using data from the Healthcare Effectiveness Data and Information Set[®] (HEDIS[®]), a set of clinical quality measures that MA plans submit annually. We used HEDIS person-level data for 2016 (the most recent data available) to compare partial-benefit dual eligibles enrolled in D–SNPs with those enrolled in traditional MA plans. We limited our analysis to beneficiaries who had no months of full dual eligibility and were enrolled in the same plan for the entire year to maximize the amount of time beneficiaries were enrolled

**TABLE
12-7****D-SNPs and traditional MA plans had similar performance on most HEDIS® measures for partial-benefit dual eligibles, measurement year 2016**

	Enrollees under age 65	Enrollees age 65 and older
Number of HEDIS measures evaluated	39	42
Number of measures where:		
D-SNP and traditional MA performance was similar	35	36
Traditional MA plans performed better than D-SNPs	2	2
D-SNPs performed better than traditional MA plans	2	4

Note: D-SNP (dual-eligible special needs plan), MA (Medicare Advantage), HEDIS® (Healthcare Effectiveness Data and Information Set®). Better performance means that the average measure value for one type of plan was at least 5 percentage points greater than the average measure value for the other type of plan and that the difference between the average measure values was statistically significant. This analysis is based on beneficiaries who had at least one month of partial-benefit dual eligibility and no months of full-benefit dual eligibility during the year, were enrolled in the same D-SNP or traditional MA plan for the entire year, and were enrolled in Medicare for the entire year. Figures do not include employer plans, other types of special needs plans, or plans in Puerto Rico. HEDIS is a registered trademark of the National Committee for Quality Assurance.

Source: MedPAC analysis of HEDIS data for 2017 (for measurement year 2016) and common Medicare environment and denominator files.

in each type of plan.¹⁵ We also looked separately at enrollees who were under 65 and enrollees who were 65 and older because the under-65 population tends to have poorer HEDIS results.

We found that D-SNPs and traditional MA plans had similar performance on 85 percent to 90 percent of HEDIS measures (35 of 39 measures for enrollees under 65; 36 of 42 measures for enrollees 65 and older), which suggests that partial-benefit dual eligibles fare about equally well in either plan type (Table 12-7). However, the partial-benefit dual eligibles in D-SNPs tend to be in somewhat poorer health than those enrolled in traditional MA plans, with average risk scores of 1.56 and 1.41, respectively (data not shown). (Risk scores show how the expected costs for a beneficiary compare with the average for all FFS Medicare beneficiaries. A score of 1.0 means that a beneficiary's expected costs equal the average, while a score of 1.2 means that a beneficiary's expected costs are 20 percent higher than the average.) We checked to see whether this difference could affect these results by comparing HEDIS measures for subsets of beneficiaries with similar risk scores, and we found similar results.

The partial-benefit dual eligibles in D-SNPs were also more likely to have income between 75 percent and 100 percent of the federal poverty level than those enrolled in traditional MA plans (72 percent vs. 31 percent) and less likely to have income between 100 percent and 135

percent of the federal poverty level (28 percent vs. 69 percent). These two subgroups of partial-benefit dual eligibles could differ in numerous ways, so we compared HEDIS measures for each subgroup and again found that D-SNPs and traditional MA plans performed very similarly.

Many D-SNPs are offered by companies that do not have Medicaid MLTSS contracts

Although all D-SNPs must have Medicaid contracts, the minimum standards for those contracts do not require states to make capitated payments for any Medicaid services and, by themselves, do relatively little to promote greater integration of Medicare and Medicaid benefits. For dual eligibles with full Medicaid benefits, the presence or absence of an MLTSS program is a more important factor in determining how much integration is achievable. (As we noted earlier, many MLTSS plans are really comprehensive Medicaid managed care plans and thus have the potential to provide integrated care to a wide range of dual eligibles, including those who do not use LTSS.) D-SNPs in states with these programs can have much higher levels of integration if the D-SNP's parent company also offers an MLTSS plan. Having an MLTSS contract allows the parent company to either combine the two products into a single plan, as in the FIDE-SNP model, or operate them in tandem as "companion" or "aligned" plans.

We estimate that less than half of the full-benefit dual eligibles in D–SNPs (690,000 out of almost 1.6 million, or 44 percent) are in plans where the parent company operates an MLTSS plan in the same area (middle of Table 12-6, p. 436). Most of these beneficiaries (585,000) live in the 15 states with full MLTSS programs. D–SNPs may not have a companion plan for several reasons, and these differences are worth highlighting before considering policies to promote greater Medicare–Medicaid integration.

Some D–SNPs are in states without MLTSS programs

As we noted earlier, 27 states and the District of Columbia currently do not have MLTSS programs. We estimate that about 307,000 full-benefit dual eligibles are enrolled in the D–SNPs that operate in these states, which equals 14 percent of D–SNP enrollment nationwide, a relatively small share because many states without MLTSS programs have smaller populations. (For example, Georgia is the only state that ranks in the top 10 in population but does not have an MLTSS program.) The D–SNPs in these states appear to have low levels of integration; they may provide no Medicaid services at all or receive capitated payments for selected services such as payment of Medicare cost sharing. Some plan sponsors—particularly those that operate MLTSS plans elsewhere—might be willing to develop more highly integrated plans, but they will be unable to do so while the state continues to provide key services such as LTSS and behavioral health on an FFS basis.

Some D–SNPs are in states with MLTSS programs but do not have an MLTSS contract themselves

When states develop MLTSS programs, they generally use competitive procurements to select the participating plans. States use this approach because it helps them obtain more favorable payment rates, makes it easier to oversee the MLTSS program, and helps ensure that each plan has enough enrollment to be financially viable. However, the use of competitive procurement means that some companies that sponsor D–SNPs in the state may not receive an MLTSS contract, either because they do not submit bids or because they are not selected. To give one example, 10 companies currently offer D–SNPs in Pennsylvania, but only 3 have MLTSS contracts (Pennsylvania Department of Human Services 2016).¹⁶

We estimate that 292,000 full-benefit dual eligibles are enrolled in D–SNPs that operate in states that have

MLTSS programs, but the D–SNPs are offered by parent companies that do not have MLTSS contracts (158,000 beneficiaries in states with full MLTSS programs and 134,000 beneficiaries in states with limited programs). Like the D–SNPs in states without MLTSS programs, these plans may be willing to offer a more highly integrated product but cannot do so. These plans could receive an MLTSS contract in the future, but states usually award multiyear contracts and the next opportunity to win a contract could be several years away, particularly for D–SNPs in states with full programs. The prospects for D–SNPs in states with limited programs are less clear cut because those programs are still evolving and could ultimately expand to include more plans.

One key difference between these “Medicare-only” D–SNPs and those in states without MLTSS programs is that more highly integrated plans are usually available. We found that a substantial majority of MLTSS plans (123 of 153, or 80 percent) have a companion Medicare product (Table 12-8, p. 440). Ten states require their MLTSS plans to offer companion D–SNPs to encourage greater integration, while the MLTSS plans that are part of the financial alignment demonstration all have companion MMPs (Health Management Associates 2018). About half of the MLTSS plans without companion Medicare products are in New York. That state’s MLTSS program is unusual because many of its plans are sponsored by LTSS providers that do not have a broader health insurance business (such as MA products or traditional Medicaid plans). Several of these plans developed MMPs for the state’s financial alignment demonstration but have dropped out because of low enrollment.

States can use their control over D–SNPs’ Medicaid contracts to shut down plans offered by companies that do not have MLTSS contracts. (Although all D–SNPs must have a Medicaid contract, states are not required to sign contracts with every company that wants to offer a D–SNP, which lets states control which plans participate in their D–SNP markets.) At least six states with MLTSS programs do not allow companies to offer a D–SNP unless they have an MLTSS contract; thus, such states do not have any “Medicare-only” D–SNPs. When these states reprocure their MLTSS plans, any incumbent plans that do not win new contracts terminate their D–SNPs, while any new plans are typically required to begin offering D–SNPs.

**TABLE
12-8**

Most Medicaid MLTSS plans have companion Medicare plans

	Number	Percentage
Total number of MLTSS plans, as of January 2019	153	100%
MLTSS plan offers a companion Medicare plan		
Yes	123	80
No	30	20
Type of companion Medicare plan:		
D-SNP only	77	50
MMP only	32	21
D-SNP and MMP	14	9

Note: MLTSS (managed long-term services and supports), D-SNP (dual-eligible special needs plan), MMP (Medicare-Medicaid Plan). Table does not include the Program of All-Inclusive Care for the Elderly.

Source: MedPAC analysis of Medicaid MLTSS plans and D-SNP/MMP landscape data.

However, many states with MLTSS programs sign D-SNP contracts with a broader range of plans. The size of the D-SNP market when the MLTSS program is first implemented appears to be a key factor in states’ decision-making. The six states that require their D-SNPs to have an MLTSS contract had either no D-SNPs or very few D-SNPs when they launched their MLTSS programs. For example, New Jersey had no D-SNPs when it began developing its program, and Virginia had 2 D-SNPs with about 2,000 enrollees. States that already had a significant D-SNP market—such as Florida, Pennsylvania, and Texas—have continued to sign D-SNP contracts with a broad range of plans, including those without MLTSS contracts.

Some D-SNPs have companion MLTSS plans but their service areas differ

When states select plans for their MLTSS programs, they can award contracts for the entire state or for particular geographic regions. For example, Tennessee uses statewide contracts, while Florida and Texas are divided into 11 and 13 regions, respectively. As a result, MLTSS plans in states that use geographic regions do not necessarily serve the entire state. In contrast, MA plans typically determine their own service areas. “Local” plans serve one or more counties, while “regional” plans serve CMS-defined regions composed of one or more states. Almost all D-SNPs are local plans.

These differences in how service areas are defined can mean that a company that operates a D-SNP and an MLTSS plan in a given state can nonetheless have counties where only one of those products is available. In these counties, the company is unable to offer a more integrated product, even though it does so elsewhere in the state. We estimate that about 277,000 full-benefit dual eligibles are enrolled in a D-SNP that has a companion MLTSS plan, but it is not offered in the beneficiary’s county. We do not have the data to estimate how many dual eligibles are in the reverse situation (i.e., enrolled in an MLTSS plan that has a companion D-SNP, but the D-SNP is not available in their county).

States can ensure that D-SNPs have the same service area as their companion MLTSS plans by using their control over the D-SNP contracting process in two ways:

- They can prohibit D-SNPs from operating in counties located outside the service area of the companion MLTSS plan.
- They can require MLTSS plans to offer companion D-SNPs throughout the MLTSS plan’s service area.

Misaligned enrollment

Even when a company offers a D-SNP and an MLTSS plan in the same area, many dual eligibles may be enrolled

in only one of those products. Some of these discrepancies can occur because the MLTSS plan has more-restrictive eligibility requirements than the D-SNP. For example, some full-benefit dual eligibles, like those in certain home- and community-based waiver programs, might be excluded from the state's MLTSS program.

However, even when dual eligibles can (or are required to) enroll in an MLTSS program, they can receive their Medicare benefits from the FFS program or an MA plan offered in their area (which could include a variety of traditional plans and D-SNPs as well as other types of special needs plans). As a result, dual eligibles can be enrolled in MLTSS plans and D-SNPs that are offered by separate companies. These cases of misaligned enrollment are unlikely to lead to any meaningful integration given the inherent challenges of coordinating the efforts of two separate managed care companies. States have the authority to limit enrollment in D-SNPs to dual eligibles who are already enrolled in the parent company's MLTSS plan, but only four states have done so for all of their D-SNPs.

Misaligned enrollment appears to significantly limit the amount of integration in D-SNPs. We estimate that 56 percent of full-benefit dual eligibles in D-SNPs that have companion MLTSS plans (386,000 of 690,000) receive their Medicare and all or most of their Medicaid benefits from the same parent company (bottom of Table 12-6, p. 436). Put another way, only about 18 percent of D-SNP enrollees are in plans with a significant level of Medicaid integration. The beneficiaries who get their Medicare and Medicaid benefits from the same parent company are split about evenly between those enrolled in FIDE-SNPs (184,000) and those enrolled in regular D-SNPs that have companion MLTSS plans (202,000) (data not shown). We do not have enough Medicaid data to determine how many of the remaining 304,000 full-benefit dual eligibles could enroll in their D-SNP's companion MLTSS plan and thus receive more integrated care.

The growing use of “look-alike” plans to circumvent D-SNP requirements

The widespread availability of D-SNPs indicates that MA plan sponsors find it profitable to enroll dual-eligible beneficiaries. As a result, plan sponsors that do not have access to the D-SNP market have an incentive to find

other ways to enroll this population. One strategy is to develop products known as “look-alike” plans, which are traditional MA plans that have some of the same features as D-SNPs. D-SNPs largely appeal to beneficiaries because of their coverage of supplemental medical benefits, such as dental, hearing, and vision services, rather than their ability to offer a product that integrates Medicare and Medicaid coverage. These extra benefits are financed using MA rebates—Medicaid funding plays no role—so plan sponsors can develop traditional MA plans with coverage similar to that offered by D-SNPs. And since traditional MA plans do not have to meet the extra requirements that apply to D-SNPs (such as having a state Medicaid contract), plan sponsors can use look-alike plans to circumvent any restrictions that states might apply to their D-SNP markets.

Look-alike plans can thus undermine efforts to develop more highly integrated D-SNPs by encouraging dual eligibles to enroll instead in plans that provide many of the same extra benefits as D-SNPs but do nothing to integrate Medicaid coverage. However, there is no agreed-on definition of look-alike plans, and little research has been done about their prevalence in the MA program. In this section, we take a closer look at how many traditional MA plans primarily serve dual-eligible beneficiaries.

One way to identify look-alike plans is to determine what share of each plan's enrollees are dual eligibles and classify plans that exceed a certain threshold as look-alikes. We calculated these percentages for 2017, the most recent data available, to demonstrate how much the share of enrollees who are dual eligibles varies across plans. We included both full-benefit and partial-benefit dual eligibles in our calculation. We also limited our analysis to traditional MA plans with prescription drug coverage (all D-SNPs have drug coverage, and we assume that look-alike plans do as well) and excluded employer-sponsored plans and all types of special needs plans.

Dual eligibles were a relatively small share of enrollment in most traditional MA plans in 2017 (Table 12-9, p. 442). They accounted for less than 10 percent of enrollment in just over half of plans and less than 30 percent of enrollment in about 95 percent of plans, which is roughly in line with their overall prevalence in the Medicare population.¹⁷ However, dual eligibles were a much larger share of enrollment in some plans: These beneficiaries were a majority of enrollees in 44 plans; in 31 of those plans, dual eligibles made up more than 80 percent of

**TABLE
12-9****Dual eligibles were a large share of enrollment in a small number of traditional MA plans in 2017**

	Traditional MA plans with drug coverage		Enrollees (in thousands)	
	Number	Percent	Number	Percent
Share of plan enrollees who were dual eligibles				
0% to 10%	893	51.6%	6,495	53.5%
10% to 20%	605	35.0	4,683	38.6
20% to 30%	137	7.9	568	4.7
30% to 40%	36	2.1	125	1.0
40% to 50%	15	0.9	68	0.6
50% to 60%	9	0.5	53	0.4
60% to 70%	4	0.2	6	<0.1
70% to 80%	0	0	0	0
80% to 90%	4	0.2	6	<0.1
90% to 100%	27	1.6	145	1.2
Total	1,730	100.0	12,148	100.0
Greater than 50%	44	2.5	209	1.7
Greater than 80%	31	1.8	151	1.2

Note: MA (Medicare Advantage). The figures in this table are based on December 2017 enrollment in traditional Medicare Advantage plans that provided drug coverage. Employer plans, special needs plans, cost plans, Medicare Savings Account plans, and plans in Puerto Rico are excluded. Figures for share of plan enrollees who were dual eligibles include both full-benefit and partial-benefit dual eligibles. Components may not sum to totals because of rounding.

Source: MedPAC analysis of enrollment data from CMS.

enrollees. The 44 plans in which dual eligibles were a majority of enrollees were located in 16 states, comprising about 209,000 enrollees. Most enrollees were in California (19 plans and 106,000 enrollees) and Florida (4 plans and 76,000 enrollees).

We then used MA bid data for 2019 to assess whether the number of traditional MA plans that primarily serve dual eligibles has changed since 2017. The bid data include each plan's estimate of its enrollment for the plan year, broken down into dual eligibles and all other beneficiaries. As with the 2017 data, we limited our analysis to traditional MA plans with drug coverage. Although these figures are only estimates, they are useful in identifying plans that expect a large share of their enrollees to be dual eligibles. If anything, the figures in the bid data may be conservative: We compared the estimates in the bid data for 2017 with plans' actual enrollment and found that

traditional MA plans almost always underestimated the share of their enrollment that was dually eligible.

The bid data indicate that the number of plans that primarily serve dual eligibles has grown significantly (Table 12-10). For 2019, 95 traditional MA plans projected that more than 50 percent of their enrollees would be dual eligibles. These plans are in 35 states and have a total projected enrollment of about 220,000 beneficiaries. The number of plans and states have both more than doubled since 2017. The increase in enrollment is also larger than it appears because some plans that met the 50 percent threshold in 2017 did not meet it in 2019, either because the plan left the MA program or because the plan sponsor projected that less than half of its enrollees in 2019 would be dual eligibles. There has also been substantial growth in the number of plans in which more than 80 percent of enrollees are dually eligible.

**TABLE
12-10**

The number of traditional Medicare Advantage plans that primarily serve dual eligibles grew substantially from 2017 to 2019

	2017 (Actual)	2019 (Projected)
More than 50 percent of plan enrollees are dual eligibles:		
Number of plans	44	95
Number of states with at least one plan	16	35
Enrollment	209,000	220,000
More than 80 percent of plan enrollees are dual eligibles:		
Number of plans	31	54
Number of states with at least one plan	10	13
Enrollment	151,000	193,000

Note: The figures in this table are based on traditional Medicare Advantage plans that provide drug coverage. Employer plans, special needs plans, cost plans, Medicare Savings Account plans, and plans in Puerto Rico are excluded. Figures for share of plan enrollees who are dual eligibles include both full-benefit and partial-benefit dual eligibles.

Source: MedPAC analysis of enrollment data and Medicare Advantage bid data from CMS.

More than half of the plans that projected a majority of their enrollees would be dual eligibles in 2019 (56 of 95 plans) are new, and many of the plans that have entered the market since 2017 are being offered by Humana and UnitedHealth, the two leading MA plan sponsors. Both companies are now offering what appear to be look-alike plans in multiple states: Humana has 36 plans in 27 states under the “Humana Value Plus” name, while UnitedHealth has 18 plans in 8 states under the “UnitedHealthcare MedicareComplete Assure” name. A few of the Humana plans did not project that more than 50 percent of their 2019 enrollees would be dual eligibles and are not included in the figures in Table 12-10.

We examined the parent organizations and service areas for these 95 plans and found further evidence that most of them are look-alike plans. Most are being offered in situations that enable plan sponsors to circumvent restrictions on offering a D-SNP:

- States without D-SNPs (12 plans).** Eight states do not have any D-SNPs, usually because the state has decided as a matter of policy that it will not sign Medicaid contracts with them. Look-alike plans operate in six of those states. The only exceptions are Alaska, which does not have any MA plans, and Wyoming.
- California’s financial alignment demonstration (24 plans).** Look-alike plans operate in the seven counties that are part of California’s Cal MediConnect demonstration. The state has frozen D-SNP enrollment in these counties to encourage dual eligibles to enroll in the demonstration’s Medicare–Medicaid Plans, but this policy has also spurred many plan sponsors to offer look-alike plans. We discussed the role that look-alike plans have played in Cal MediConnect in greater detail in our June 2018 report (Medicare Payment Advisory Commission 2018a).
- States where the parent organization does not participate in the D-SNP market (36 plans).** These plans operate in states that sign contracts with D-SNPs but the look-alike plans’ parent organizations do not offer a D-SNP there. This group includes Idaho, Minnesota, and New Jersey, which have been leaders in developing FIDE-SNPs and limit their D-SNP markets to plans with comprehensive Medicaid managed care contracts.
- States where the parent organization also offers a D-SNP (23 plans).** These look-alike plans would normally be competitors with their parent company’s D-SNP since both products serve the dual-eligible population, but in many cases the overlap between them is limited or might be explained by other factors.

For example, this category includes 13 Humana plans, but there is almost no overlap between their service areas and the service areas of the Humana D–SNPs in their states: Look-alike plans are offered in 437 counties and D–SNPs are offered in 286 counties, but there are only 3 counties where both types of plans are offered. Another three plans in this category are in states that recently conducted a new procurement for their comprehensive Medicaid managed care plans and do not allow plan sponsors to offer D–SNPs unless they have a Medicaid plan. In these cases, look-alike plans may have been created as a contingency in case the plan sponsor lost its Medicaid and D–SNP contracts.

Policy options to promote greater integration in D–SNPs

Federal policymakers’ efforts to promote greater integration in D–SNPs, as with many issues involving Medicaid, must weigh the tradeoffs between setting uniform federal standards and giving states flexibility to design their own programs. In this section, we examine four potential policies that would improve the integration between D–SNPs and Medicaid:

- prohibiting beneficiaries who receive partial Medicaid benefits from enrolling in D–SNPs or requiring plan sponsors to cover them in separate plans;
- requiring D–SNPs to have comprehensive Medicaid contracts;
- limiting enrollment in D–SNPs to dual eligibles who are enrolled in an MLTSS plan from the same parent company, an approach known as *aligned enrollment*; and
- preventing plan sponsors from offering look-alike plans.

States can already implement some of these policies by adding extra provisions to their D–SNP contracts, but few have done so, likely for a variety of reasons. For example, states may be reluctant to make significant changes to their D–SNPs because of potential opposition from beneficiaries (because some would have to change their D–SNP or their Medicaid plan) and plan sponsors (because some could lose access to the D–SNP market).

States also have limited incentives to develop more highly integrated D–SNPs because they do not benefit financially from any Medicare savings that those plans might generate. Given the lack of integration in many D–SNPs, federal policymakers may want to be more prescriptive and turn these policies into standard requirements that apply to all D–SNPs, particularly those in states with MLTSS programs.

Partial-benefit dual eligibles and D–SNPs

The rationale for D–SNPs is that dual eligibles may have difficulty obtaining high-quality care because of the unique challenges of coordinating Medicare and Medicaid coverage and would thus benefit by enrolling in a specialized MA plan that is tailored to their needs instead of a traditional MA plan. However, the Medicaid coverage for partial-benefit dual eligibles is so limited that a specialized MA plan provides little, if any, benefit in terms of integrating Medicare and Medicaid coverage, and all of the states with the most highly integrated D–SNPs have chosen to limit enrollment to full-benefit dual eligibles. Our analysis of HEDIS data also suggests that D–SNPs perform about the same as traditional MA plans in caring for partial-benefit dual eligibles.

However, for some partial-benefit dual eligibles, there may nonetheless be an advantage to enrolling in D–SNPs because those plans are more likely than traditional MA plans to offer coverage of dental, hearing, vision, and transportation services. These additional benefits are particularly attractive to the subset of partial-benefit dual eligibles who have their Medicare cost sharing covered by Medicaid.

Given these considerations, policymakers could change the rules governing the enrollment of partial-benefit dual eligibles in one of two ways:

- **Limit enrollment in D–SNPs to dual eligibles with full Medicaid benefits.** Under this approach, partial-benefit dual eligibles could enroll in other types of MA plans, but they would not be allowed to enroll in D–SNPs. Seven states restrict D–SNP enrollment this way. The partial-benefit dual eligibles who are now enrolled in D–SNPs (who represent about a third of the partial-benefit dual eligibles in MA plans) would need to select either another MA plan or FFS coverage. Policymakers could lessen the disruption for these beneficiaries by allowing plan sponsors to transfer them into one of their traditional MA plans.

Nevertheless, some partial-benefit dual eligibles who are now enrolled in D–SNPs may find the extra benefits offered by other MA plans less attractive.

- **Require plan sponsors to have separate D–SNPs for partial-benefit and full-benefit dual eligibles.** Under this approach, partial-benefit dual eligibles could enroll in D–SNPs where states allow it. However, plan sponsors would no longer be able to enroll partial-benefit and full-benefit dual eligibles in the same D–SNP. Instead, sponsors would be required to have separate D–SNPs, one for partial-benefit dual eligibles and one for full-benefit dual eligibles. Some plan sponsors already use this approach.¹⁸ Many plan sponsors would probably be willing to operate separate D–SNPs because these plans are generally profitable (Medicare Payment Advisory Commission 2018b). This approach would be less disruptive than excluding partial-benefit dual eligibles because most would just be transferred to a new D–SNP offered by their current plan sponsor, thus retaining the specialized extra benefits that many D–SNPs provide.

The prospects of greater Medicare–Medicaid integration for partial-benefit dual eligibles are inherently low because of their limited Medicaid coverage, but both options outlined above would make higher levels of integration more feasible because all D–SNP enrollees (or those enrolled in certain D–SNPs, under the second option) would be full-benefit dual eligibles, the subset of dual eligibles that uses far more Medicaid services and thus stands to benefit the most from integrated care.

Require D–SNPs to have comprehensive Medicaid contracts

The appeal of integrated plans is based on evidence from states such as Minnesota, which suggests better coordinated care can result from making these plans responsible for the delivery of both Medicare and Medicaid services. However, many D–SNPs do not have Medicaid contracts under which states make capitated payments for the delivery of Medicaid-covered services, and so the level of integration for most D–SNPs is low.

Policymakers could address this limitation by requiring D–SNPs (or their parent companies) to have comprehensive contracts for the delivery of Medicaid-covered services. For example, these contracts could be required to meet the higher standard that now applies to FIDE–SNPs, which must have a contract that “includes coverage of specified primary, acute, and long-term care

benefits and services, consistent with state policy, under risk-based financing” (Centers for Medicare & Medicaid Services 2018c).

States vary greatly in their ability to contract more extensively with D–SNPs. The states with MLTSS programs would be in the best position to meet this requirement. LTSS makes up the bulk of Medicaid’s spending on dual eligibles, so the ability to make capitated payments for these services is a key element in giving D–SNPs more responsibility for providing Medicaid services. In addition, most states with MLTSS programs have also developed the ability to use capitation for other Medicaid services, such as acute care and (in some cases) behavioral health, so their MLTSS plans usually have comprehensive Medicaid contracts. Even so, these states would need to decide what to do with their “Medicare-only” D–SNPs—the D–SNPs that do not have MLTSS contracts. Some states may be willing to offer MLTSS contracts to some or all of these plans, which would allow them to continue operating, but other states may decide to keep their current roster of MLTSS plans, which would force the Medicare-only D–SNPs to leave the market.

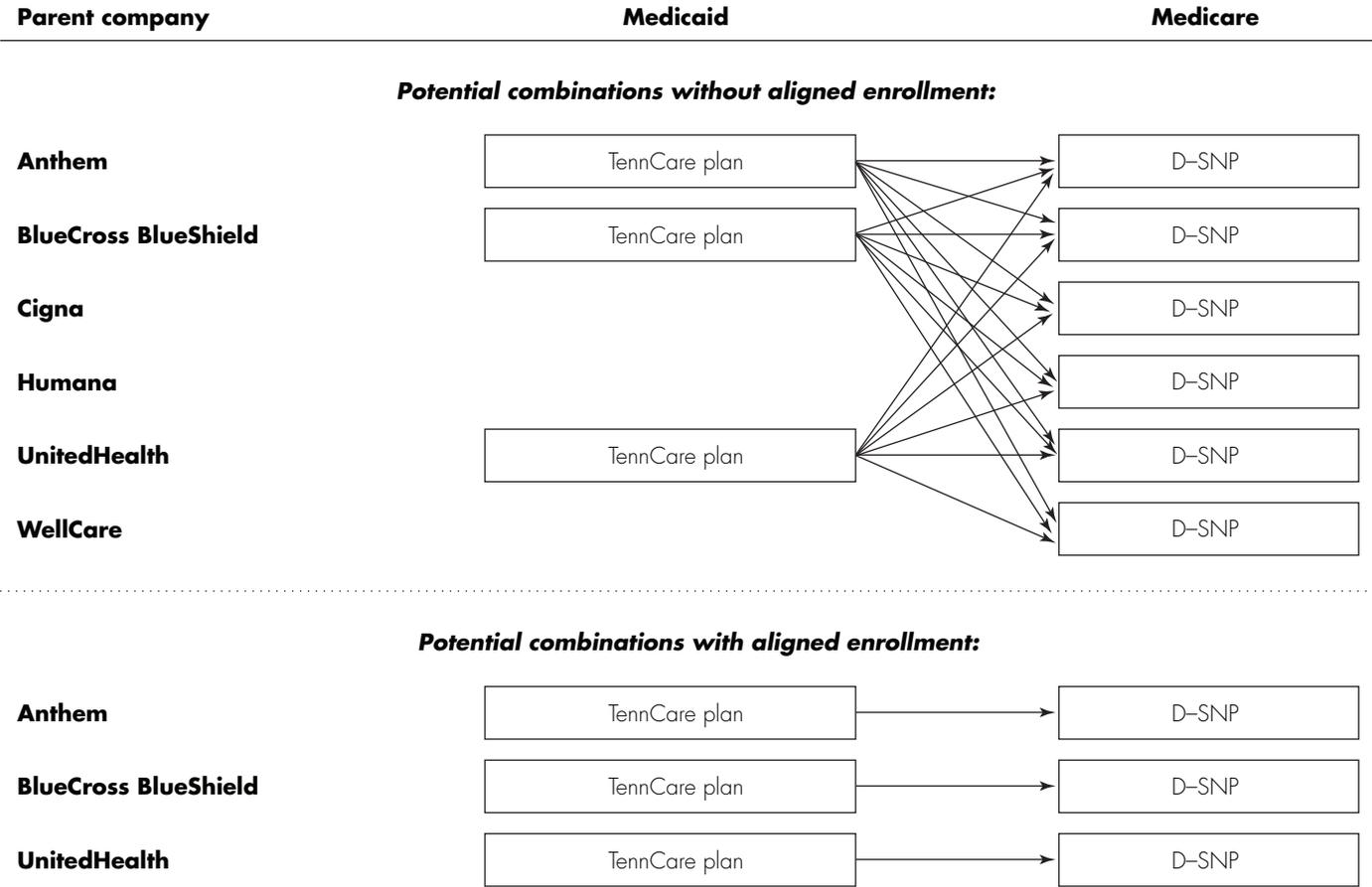
One important question is whether the requirement of a comprehensive Medicaid contract should apply to D–SNPs in states that do not have MLTSS programs. If the requirement did apply, it might prompt some states to develop programs, particularly those that have previously explored the idea. States usually need several years to develop an MLTSS program, so policymakers would also need to give states time before the requirement took effect.

However, most of these states would probably not be persuaded to develop an MLTSS program. Research suggests that states mainly develop these programs to control Medicaid spending, improve quality, and encourage the use of community-based care instead of nursing home care (Libersky et al. 2016). Improving Medicare–Medicaid integration for dual eligibles may be another motivation, but it is often secondary. As a result, requiring D–SNPs to have MLTSS contracts may not fundamentally change states’ views on the merits of developing an MLTSS program, and plan sponsors would need to terminate their D–SNPs in many states without MLTSS programs. Given these tradeoffs, policymakers could limit the application of this requirement to D–SNPs in states with MLTSS programs.

One potential concern about this requirement is that states may not adequately consider a parent company’s Medicare

**FIGURE
12-2**

Illustration of how aligned enrollment ensures that D-SNP enrollees receive their Medicare and Medicaid benefits from the same company



Note: D-SNP (dual-eligible special needs plan). This figure is based on Tennessee’s Medicaid program, known as TennCare, but reflects some simplifying assumptions. First, some D-SNPs do not operate in all parts of the state, so dual eligibles in some counties do not have access to every D-SNP shown here. Second, the figure excludes other important options that beneficiaries have for their Medicare coverage (fee-for-service Medicare or another Medicare Advantage plan). Third, the figure does not include a fully integrated dual-eligible special needs plan sponsored by UnitedHealth.

experience when selecting their MLTSS plans. States award MLTSS contracts based on the parent company’s Medicaid expertise and its ability to provide Medicaid-covered services at a reasonable cost, but the company would also be expected to provide Medicare services through a D-SNP, and Medicare is the primary payer for most services other than LTSS. In these situations, policymakers could consider whether MLTSS plan sponsors should be required to demonstrate that they have sufficient Medicare experience. For example, CMS generally allowed states to determine which companies could offer MMPs under the financial alignment

demonstration. California chose to use the companies that operate its Medicaid managed care plans, but CMS required the state to allow additional plans to participate in Los Angeles because one company had a record of poor performance in its MA products.

Require D-SNPs to have aligned enrollment

Even if states create a one-to-one relationship between their D-SNPs and Medicaid managed care plans (for example, by requiring all MLTSS plans to offer companion D-SNPs and vice versa), misaligned enrollment poses another barrier to greater integration.

Enrollment is misaligned when beneficiaries are enrolled in Medicaid plans and D–SNPs offered by different companies. Since each plan is responsible for only part of a beneficiary’s care, neither can integrate care on its own.

Federal policymakers could address this issue by requiring D–SNPs to follow a practice known as aligned enrollment, under which beneficiaries cannot enroll in a D–SNP unless they also enroll in its companion Medicaid plan. This practice makes D–SNPs more highly integrated because it ensures that enrollees receive their Medicare benefits and all or most of their Medicaid benefits from the same parent company. Four states—Idaho, Massachusetts, Minnesota, and New Jersey—currently use aligned enrollment. Almost all D–SNPs in these states are FIDE–SNPs.¹⁹

Figure 12-2 illustrates how aligned enrollment would improve integration in a state that does not currently require it. The example in this figure is based on Tennessee’s Medicaid program, known as TennCare, which uses managed care to deliver most services, including LTSS, and requires almost all recipients to enroll in plans. TennCare has three plans, sponsored by Anthem, BlueCross BlueShield, and UnitedHealth. The state also has six D–SNPs—three offered by the TennCare plan sponsors and three from other companies. Dual eligibles must enroll in a TennCare plan for their Medicaid coverage and can enroll in any D–SNP for their Medicare coverage. (They can also enroll in FFS Medicare or another MA plan, but we excluded those options to simplify the figure.) The TennCare plans and the D–SNPs can thus be combined in many ways, as shown by the arrows. For example, beneficiaries who are enrolled in Anthem’s TennCare plan for their Medicaid benefits can enroll in any of the six D–SNPs for their Medicare benefits.

The use of aligned enrollment would simplify this arrangement considerably. The number of D–SNPs would be reduced from six to three, and dual eligibles would not be able to “mix and match” by enrolling in TennCare plans and D–SNPs from different companies. For example, beneficiaries could enroll in the Anthem D–SNP only if they were also enrolled in the Anthem TennCare plan. As a result, all D–SNP enrollees would receive their Medicare and Medicaid benefits from the same company, which would help set the stage for the D–SNPs to become FIDE–SNPs.

Aligned enrollment, in effect, simultaneously addresses all of the barriers to greater integration discussed in this

chapter. Partial-benefit dual eligibles cannot enroll in comprehensive Medicaid plans, so aligned enrollment limits enrollment in D–SNPs to full-benefit dual eligibles. The use of aligned enrollment also has the same effect as requiring D–SNPs to have comprehensive Medicaid contracts since plan sponsors could offer D–SNPs only as a companion product to a comprehensive Medicaid plan such as most MLTSS plans. In addition, aligned enrollment bars D–SNPs from operating in counties that are not part of the companion Medicaid plan’s service area. Since aligned enrollment would tightly link D–SNPs to Medicaid plans, it may be more practical to limit its use to states with comprehensive Medicaid managed care programs.

The use of aligned enrollment would also make it possible to achieve higher levels of integration in other important areas, such as the development of a single care coordination process that manages all of a beneficiary’s Medicare and Medicaid service needs, an integrated set of member materials, and a unified process for handling grievances and appeals.

The use of aligned enrollment would require a significant number of D–SNP enrollees to change plans. For example, in states with full MLTSS programs, we estimate that 688,000 full-benefit dual eligibles would need to select a new plan. For some beneficiaries, however, this selection might entail changing their MLTSS plan instead of their D–SNP. The decision could be left to beneficiaries (under current rules, those who did not select a plan would be placed in FFS Medicare), or policymakers could consider using passive enrollment to assign beneficiaries to a matching D–SNP and Medicaid plan. The states in the financial alignment demonstration have passively enrolled beneficiaries in MMPs and have used a variety of “intelligent assignment” strategies to determine which plan is the best fit for an enrollee based on factors such as the plan’s provider network and formulary. However, our impression from the site visits we made to 7 of the 10 states testing MMPs is that any approach inevitably has shortcomings due to data limitations and the diverse care needs of the dual-eligible population.

Prevent plan sponsors from developing look-alike plans

The policies outlined above would significantly reshape D–SNPs by linking them more closely to Medicaid managed care programs. The ability of plan sponsors to offer D–SNPs would be tied to their participation in

the Medicaid MLTSS market, which usually has fewer plans, and enrollment in D–SNPs could be limited to beneficiaries enrolled in companion Medicaid plans. These policies would likely reduce overall D–SNP availability and enrollment, at least in the short term, although the number of beneficiaries enrolled in plans with a meaningful level of Medicaid integration would increase.

Some plan sponsors might try to circumvent these restrictions by developing look-alike plans. As a result, policymakers interested in achieving better Medicare–Medicaid integration would need to account for potentially offsetting effects in the market for traditional MA plans. Although look-alikes give dual eligibles a broader selection of MA plans, especially plans with richer coverage of supplemental medical benefits, ultimately they encourage dual eligibles to enroll in plans with no Medicaid integration instead of the more highly integrated D–SNPs.

Broadly speaking, policymakers could use two approaches to prevent plan sponsors from developing look-alike plans. The first would apply to plans after they have entered the MA market, while the second would be used when sponsors apply to offer new MA plans. These approaches are complementary and would likely be more effective if used together.

Under the first approach, CMS could monitor the share of enrollees in MA plans who are dually eligible and designate plans that exceed a certain threshold—for example, between 50 percent and 75 percent—as look-alike plans. Setting the threshold below 50 percent would be difficult to justify because it could affect plans where dual eligibles are less than half of enrollment. At the same time, setting the threshold above 75 percent would be too restrictive: The distribution in Table 12-9 (p. 442) indicates that plans in which dual eligibles are more than 75 percent of enrollment are far outside the typical experience for traditional MA plans. CMS could regularly make these calculations using MA plan enrollment transactions and the files that states submit that identify their dual-eligible beneficiaries. This monitoring would focus on traditional MA plans with drug coverage, but should exclude plans with very low enrollment since the share of dual-eligible enrollees in these plans is more likely to fluctuate. This monitoring would also not apply to special needs plans for beneficiaries with chronic conditions or beneficiaries living in long-term care institutions.

One concern in setting a threshold is whether plans that are targeted at dual eligibles (look-alikes) can be

distinguished from plans that simply operate in areas where dual eligibles are a large share of the Medicare population. For example, a plan where dual eligibles are 55 percent of enrollment might be treated as a look-alike plan if it serves an area where dual eligibles are 15 percent of all beneficiaries, but not if it serves an area where dual eligibles are 50 percent of all beneficiaries.

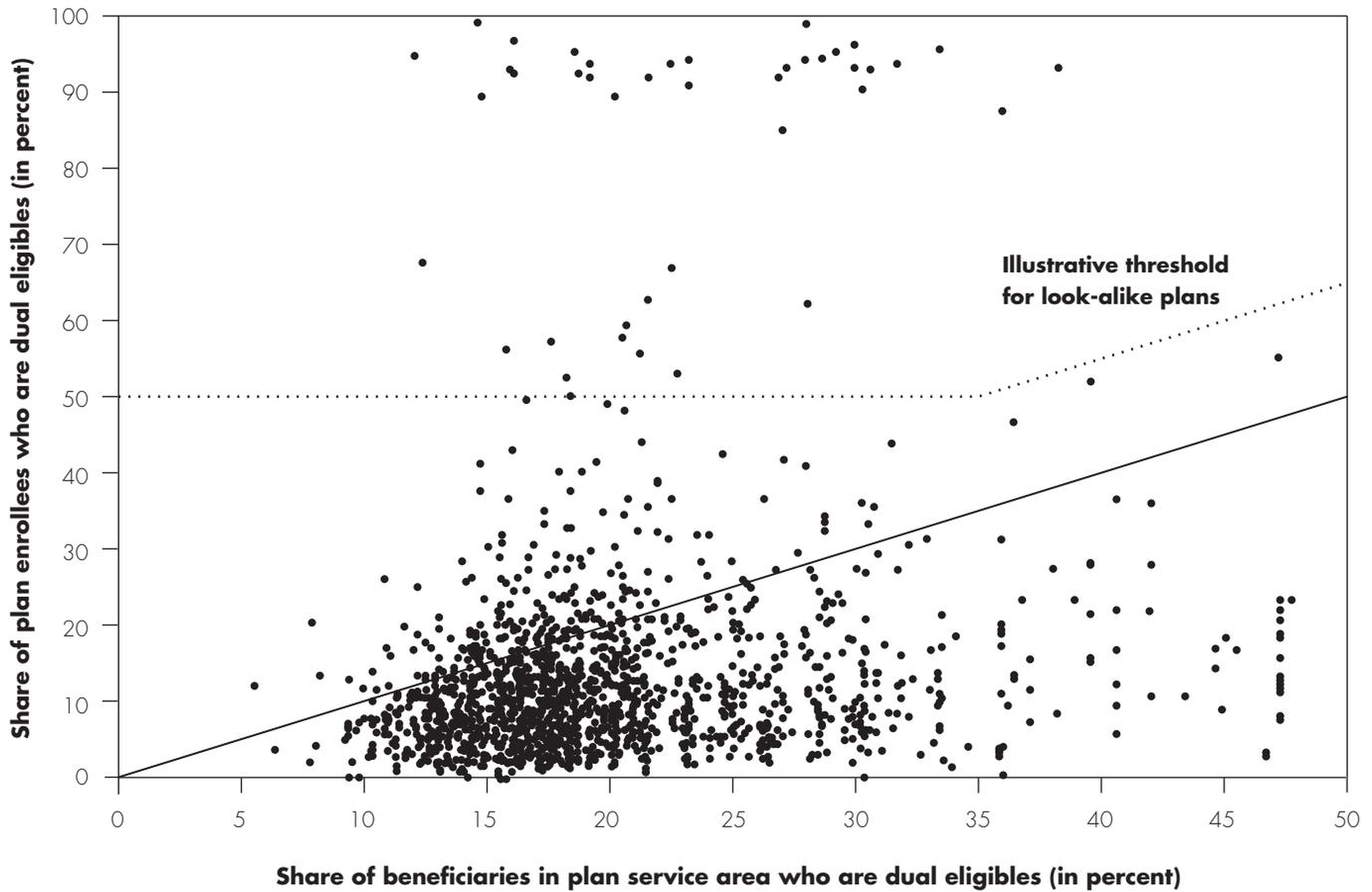
Policymakers could set the threshold in a way that accounts for this variation in plans' service areas. Figure 12-3 compares the share of a plan's enrollees who were dual eligibles with the corresponding figure for the plan's service area. Like Table 12-9 (p. 442), Figure 12-3 uses 2017 data for traditional MA plans with drug coverage. Each point in the figure represents an individual plan. The horizontal axis shows the share of beneficiaries in the plan's service area who were dual eligibles, which ranged from 6 percent to 48 percent. The vertical axis shows the share of plan enrollees who were dual eligibles. The solid diagonal line shows where the two shares are equal; plans above this line had a disproportionately high share of enrollees who were dual eligibles and plans below this line had a disproportionately low share.

The figure shows that, even if the threshold for look-alike plans were set at a relatively low 50 percent, the share of enrollees who are dual eligibles in almost every plan that exceeded the threshold was much higher than the corresponding figure for the plan's service area—by 30 percentage points or more, in most cases. Only two plans modestly exceeded the threshold (i.e., between 50 percent and 60 percent of their enrollees were dual eligibles) and operated in areas with a very large dual-eligible population (more than 35 percent of all beneficiaries). One way to prevent these plans from being classified as look-alikes would be to use a higher threshold in areas where dual eligibles are a large share of the Medicare population. The dotted line in Figure 12-3 illustrates this approach by showing a threshold set at the greater of (1) 50 percent or (2) the share of beneficiaries in the plan's service area who are dual eligibles plus 15 percentage points.

Once CMS has identified a look-alike plan, the agency could be given authority to treat it as a de facto D–SNP and require it to meet the same standards that apply to traditional D–SNPs, such as having a Medicaid contract and an NCQA-approved model of care. Requiring look-alike plans to have Medicaid contracts would be particularly important because states could then close look-alike plans that undermined integrated care programs.

**FIGURE
12-3**

A threshold for identifying look-alike plans could account for the share of beneficiaries in each plan's service area who are dual eligibles



Note: The solid diagonal line shows where the share of plan enrollees who are dual eligibles equals the share of beneficiaries in the plan's service area who are dual eligibles. Plans above this line had a disproportionately high share of enrollees who were dual eligibles, and plans below this line had a disproportionately low share. This figure is based on December 2017 enrollment in traditional Medicare Advantage plans that provided drug coverage. Employer plans, special needs plans, cost plans, Medicare Savings Account plans, and plans in Puerto Rico are excluded. "Dual eligibles" include both full-benefit and partial-benefit dual eligibles.

Source: MedPAC analysis of enrollment data from CMS and Medicare Advantage landscape files.

As part of this process, CMS could be given authority to freeze enrollment in look-alike plans while the state decided whether it would sign a Medicaid contract with the plan. If the state informed CMS that it was willing to sign a contract, the freeze could be lifted while the plan worked to obtain the contract and meet the other D-SNP requirements (a process that could take a year or more). However, if the state indicated that it would not sign a contract, the freeze would remain in effect and the look-alike plan would close at the end of the plan year.

CMS would also need to decide whether to take action against look-alike plans in states that do not have D-SNPs. The agency could decide that look-alike plans

are beneficial in these states, since they may provide extra benefits that are more attractive to dual eligibles than those offered by traditional MA plans, and allow them to continue. However, the limits on look-alike plans should apply in states that do not have D-SNPs but use other types of plans to provide integrated care.²⁰

Under the second approach, CMS could be given authority to reject applications to offer traditional MA plans that are targeted at dual eligibles. This approach would be less disruptive than closing look-alike plans after they entered the MA market, but its effectiveness would depend on how well CMS could identify look-alike plans when they first applied to participate in the MA program.

One way to identify look-alike plans would be to use the enrollment projections that plans submit as part of their MA bid. This method is straightforward, but these projections tend to underestimate dual eligibles as a share of plan enrollment, and plan sponsors that want to offer look-alike plans would have an incentive to further underestimate their enrollment of dual eligibles to avoid triggering a possible rejection.

CMS could also try to identify look-alike plans by examining their benefit designs for features that are common in look-alikes but rare in other traditional MA plans. Compared with the enrollment projections, this method could be more difficult for plan sponsors to manipulate because it would rely on features that are more intrinsic to look-alike plans.

We tested this concept with 2019 bid data by looking for features in plans that projected more than half of their enrollees would be dual eligibles. We found that 89 of 95 plans met 4 criteria:

- The plan provides Part D drug coverage.
- The plan does not have a supplemental premium for Part A and Part B benefits.
- The plan has a Part D premium, but it does not exceed the amount covered by the Part D low-income subsidy.²¹
- The plan uses more than half of its MA rebates (excluding any amounts used to lower the Part D premium) to provide supplemental medical benefits.

In addition to the 6 “false negatives” (plans that projected more than half of their enrollees would be dual eligibles but did not meet the four criteria listed above), this method also produced 12 “false positives” (plans that projected less than half of their enrollees would be dual eligibles but met the 4 criteria). However, some discrepancies may reflect inaccurate enrollment projections. For example, four false negative plans are being offered by a sponsor that is new to the MA program, three false positive plans are Humana Value Plus plans (part of the company’s apparent line of look-alike plans), and three other false positive plans were majority dual eligible in 2017.

If CMS denied an application for a product that it identified as a look-alike plan, the plan sponsor could be given an opportunity to modify the plan’s benefit design so that it did not target dual eligibles as directly. At the same time, the agency might need to modify the criteria it uses

to identify look-alikes over time if plan sponsors could develop other benefit designs that target dual eligibles. CMS could also consult with the states where the look-alike plans would be offered to get their views on whether the plans should be allowed to enter the MA market.

Developing a new framework for managed care plans that serve dual-eligible beneficiaries

In our June 2018 report, we noted that Medicare’s four types of health plans that serve dual eligibles—D–SNPs, FIDE–SNPs, MMPs, and PACE—differ in several key respects, and that operating more than one type of plan in the same market can be problematic. We concluded that policymakers may want to consider consolidating these plans or better defining their roles.

The policies outlined in this chapter could be part of a new framework that uses the presence of Medicaid managed care programs, especially MLTSS programs, and the beneficiary’s level of Medicaid eligibility to determine which plan type would be used. Under this framework, the existing D–SNP model with its low level of integration would be sufficient for partial-benefit dual eligibles (unless policymakers decided to prohibit them from enrolling D–SNPs altogether, as some states have done).

The plan type best suited for full-benefit dual eligibles would depend on the state’s use of Medicaid managed care. States that either do not use managed care or have only limited programs could continue using the existing D–SNP model. However, states with comprehensive managed care programs—where plans provide all or most Medicaid services, including LTSS, and individuals must enroll in managed care—would use highly integrated plans similar to FIDE–SNPs or MMPs. Given the similarities between these plans, policymakers may want to combine them into a single product that could incorporate elements from both models. The policies outlined in this chapter would be important elements in moving D–SNPs to this more highly integrated model and would be consistent with the Commission’s past support for greater integration.

Conclusion

The development of managed care plans that provide both Medicare and Medicaid services has the potential to improve quality and reduce spending for dual-eligible

beneficiaries, but these plans have been difficult to develop. D-SNPs have the largest enrollment of the Medicare health plans that serve dual eligibles, but their appeal may be due more to the extra benefits that they provide than to their integration with Medicaid, which is often limited. The low level of integration in these plans is due to factors such as the limited Medicaid coverage for partial-benefit dual eligibles and variation in states' use of Medicaid managed care for full-benefit dual eligibles. However, higher levels of integration are now feasible in the growing number of states with comprehensive

Medicaid managed care programs that include LTSS. Policymakers may want to consider requiring D-SNPs in these states to meet higher standards for integration, such as having comprehensive Medicaid managed care contracts and using aligned enrollment, and to prevent plan sponsors from circumventing efforts to promote more highly integrated D-SNPs by offering look-alike plans. The changes outlined in this chapter could reduce overall D-SNP enrollment, at least in the short term, but they would increase enrollment in plans with meaningful integration. ■

Endnotes

- 1 This figure should not be confused with the figure in the chapter summary noting that 17 percent of D–SNP enrollees are in plans with a significant degree of integration. Both figures measure the enrollment of dual eligibles in integrated plans, but they use different denominators (the 8 percent figure uses all full-benefit dual eligibles, while the 17 percent figure uses full-benefit and partial-benefit dual eligibles who are enrolled in D–SNPs) and numerators (the 8 percent figure counts enrollment in Medicare–Medicaid Plans, fully integrated D–SNPs, and the Program of All-Inclusive Care for the Elderly, while the 17 percent figure counts enrollment in D–SNPs with a significant degree of integration).
- 2 Put another way, partial-benefit dual eligibles represented about 29 percent of all dual eligibles, but they accounted for only about 2 percent of Medicaid’s spending on dual eligibles in 2013 (Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission 2018).
- 3 Like all MA plans, each D–SNP serves a specific geographic area composed of one or more counties. Very few D–SNPs serve an entire state, and some dual eligibles in those 42 states do not have access to a D–SNP.
- 4 The Commission recommended in its March 2008 report that D–SNPs be required to contract with states to coordinate Medicaid benefits (Medicare Payment Advisory Commission 2008).
- 5 The legislation also requires the Commission to periodically compare the quality of care that dual eligibles receive in these three groups of D–SNPs, in the Medicare–Medicaid Plans in the financial alignment demonstration, and in other MA plans. The first study is due in 2022 and must be updated every two years through 2032. After that, the schedule for completing the studies changes; the subsequent study is due in 2033 and must be updated every five years. The Commission must consult with the Medicaid and CHIP Payment and Access Commission as part of this work.
- 6 Starting in 2021, regular D–SNPs that have a Medicaid contract to provide LTSS, behavioral health, or both will be classified as highly integrated dual-eligible special needs plans (HIDE SNPs). CMS created this category to implement new requirements for D–SNPs that were enacted in the Bipartisan Budget Act of 2018. The number of plans that will qualify as HIDE SNPs is not yet known.
- 7 The risk scores used to adjust payment rates are revised during the plan year to account for updated information on beneficiaries’ diagnoses and other factors such as Medicaid eligibility. In contrast, the rebate amounts are adjusted based on risk scores that plans submit during the MA bid process and are not adjusted later.
- 8 States may not pay the full amount of the cost sharing. Medicaid allows states to limit their payments for cost sharing to the difference between the state’s payment rate for the service and the Medicare payment amount, instead of the difference between the Medicare allowable amount (which is usually higher than the state’s Medicaid rate) and the Medicare payment amount. Most states use this “lower-of” approach for at least some services. However, beneficiaries are not liable for the remaining cost sharing when this occurs.
- 9 All D–SNPs and most other MA plans have prescription drug benefits. These plans follow a separate bidding process to determine the cost of providing Part D drug coverage and can use their MA rebates to cover some or all of the Part D premium that beneficiaries would otherwise have to pay.
- 10 Starting in 2019, CMS has expanded its definition of supplemental benefits to include services that maintain a beneficiary’s health instead of preventing, curing, or diminishing an illness or injury (Centers for Medicare & Medicaid Services 2018a). Starting in 2020, Section 50322 of the Bipartisan Budget Act of 2018 gives MA plans additional flexibility to provide supplemental benefits that are aimed at “improving or maintaining the health or overall function” of chronically ill enrollees.
- 11 Individuals who have income below 75 percent of the federal poverty level can usually qualify for full Medicaid benefits.
- 12 Unlike Medicare, states can require Medicaid recipients to enroll in managed care.
- 13 The seven states that limit D–SNP enrollment to full-benefit dual eligibles are Arizona, Hawaii, Idaho, Massachusetts, Minnesota, New Jersey, and Virginia.
- 14 Of the individuals who were partial-benefit dual eligibles at a given point in time, we found that about 6 percent were eligible for full Medicaid benefits one year later. About 10 percent were eligible for full benefits three years later.
- 15 Roughly two-thirds of the partial-benefit dual eligibles enrolled in MA plans in 2016 met these criteria. We excluded beneficiaries with any months of full Medicaid eligibility because they spent more time as full-benefit dual eligibles, on average, than they did as partial-benefit dual eligibles, and are arguably better viewed as part of the full-benefit population.

- 16 Pennsylvania selected three companies for its MLTSS program; the other winning company was new to the state and did not have an existing D–SNP.
- 17 About 18 percent of all Medicare beneficiaries in 2017 were dually eligible.
- 18 In 2017, there were 26 D–SNPs in which more than 90 percent of the plan’s enrollees were partial-benefit dual eligibles. These plans had a combined enrollment of about 107,000 and accounted for between 20 percent and 25 percent of all partial-benefit dual eligibles enrolled in D–SNPs. The sponsors of these plans had another D–SNP for full-benefit dual eligibles in the same geographic area. The practice of plan sponsors offering multiple D–SNPs in the same area appears to have originated in Florida but is now also being used in some other states.
- 19 The exceptions are in Minnesota, which has separate MLTSS programs for individuals under age 65 and those 65 and older. The D–SNPs affiliated with the program for those 65 and older, known as Minnesota Senior Health Options, are all FIDE–SNPs. The D–SNPs affiliated with the program for those under age 65, known as Special Needs Basic Care, also use aligned enrollment but do not qualify as FIDE–SNPs because their coverage of LTSS is too limited.
- 20 Two states that do not have D–SNPs are using other avenues to develop integrated care programs. Illinois has decided to use MMPs as its platform for integrating care and closed its D–SNPs at the end of 2017. New Hampshire has never had D–SNPs but is developing an integrated care program based on PACE.
- 21 We counted plans as meeting this requirement if their Part D premium exceeded the amount covered by the low-income subsidy by a trivial amount (less than 10 cents).

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A P P E N D I X

A

**Commissioners' voting
on recommendations**



Commissioners' voting on recommendations

In the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, the Congress required MedPAC to call for individual Commissioner votes on each recommendation and to document the voting record in its report. The information below satisfies that mandate.

Chapter 1: Beneficiary enrollment in Medicare: Eligibility notification, enrollment process, and Part B late-enrollment penalties

No recommendations

Chapter 2: Restructuring Medicare Part D for the era of specialty drugs

No recommendations

Chapter 3: Medicare payment strategies to improve price competition and value for Part B drugs

No recommendations

Chapter 4: Mandated report on clinician payment in Medicare

No recommendations

Chapter 5: Issues in Medicare beneficiaries' access to primary care

5-1 The Congress should require advanced practice registered nurses and physician assistants to bill the Medicare program directly, eliminating “incident to” billing for services they provide.

Yes: Bricker, Buto, Christianson, Crosson, DeBusk, DeSalvo, M. Ginsburg, P. Ginsburg, Grabowski, Jaffery, Perlin, Pyenson, Ryu, Safran, Thomas, Thompson, Wang

5-2 The Secretary should refine Medicare’s specialty designations for advanced practice registered nurses and physician assistants.

Yes: Bricker, Buto, Christianson, Crosson, DeBusk, DeSalvo, M. Ginsburg, P. Ginsburg, Grabowski, Jaffery, Perlin, Pyenson, Ryu, Safran, Thomas, Thompson, Wang

Chapter 6: Assessing the Medicare Shared Savings Program’s effect on Medicare spending

No recommendations

Chapter 7: Ensuring the accuracy and completeness of Medicare Advantage encounter data

The Congress should direct the Secretary to establish thresholds for the completeness and accuracy of Medicare Advantage (MA) encounter data and:

- rigorously evaluate MA organizations’ submitted data and provide robust feedback;
- concurrently apply a payment withhold and provide refunds to MA organizations that meet thresholds; and
- institute a mechanism for direct submission of provider claims to Medicare Administrative Contractors
 - as a voluntary option for all MA organizations that prefer this method
 - starting in 2024, for MA organizations that fail to meet thresholds or for all MA organizations if program-wide thresholds are not achieved.

Yes: Bricker, Buto, Christianson, Crosson, DeBusk, M. Ginsburg, P. Ginsburg, Grabowski, Jaffery, Perlin, Pyenson, Ryu, Safran, Thomas, Thompson, Wang

No: DeSalvo

Chapter 8: Redesigning the Medicare Advantage quality bonus program

No recommendations

Chapter 9: Payment issues in post-acute care

No recommendations

Chapter 10: Mandated report: Changes in post-acute and hospice care after implementation of the long-term care hospital dual payment-rate structure

No recommendations

Chapter 11: Options for slowing the growth of Medicare fee-for-service spending for emergency department services

The Secretary should develop and implement a set of national guidelines for coding hospital emergency department visits under the outpatient prospective payment system by 2022.

Yes: Bricker, Buto, Christianson, Crosson, DeBusk, DeSalvo, M. Ginsburg, P. Ginsburg, Grabowski, Jaffery, Perlin, Pyenson, Ryu, Safran, Thomas, Thompson, Wang

Chapter 12: Promoting integration in dual-eligible special needs plans

No recommendations

Acronyms

Acronyms

24/7	24 hours per day, 7 days per week	CMCS	Center for Medicaid and CHIP Services
AAMC	American Association of Medical Colleges	CMMI	Center for Medicare & Medicaid Innovation
AANP	American Association of Nurse Practitioners	CMS	Centers for Medicare & Medicaid Services
A-APM	advanced alternative payment model	CMS-HCC	CMS hierarchical condition categories
ACEP	American College of Emergency Physicians	CNM	certified nurse midwife
ACH	acute care hospital	CNS	central nervous system
ACO	accountable care organization	CNS	clinical nurse specialist
ADL	activity of daily living	COBRA	Consolidated Omnibus Budget Reconciliation Act of 1985
AHA	American Hospital Association	COP	condition of participation
AHIMA	American Health Information Management Association	COPD	chronic obstructive pulmonary disease
AHRQ	Agency for Healthcare Research and Quality	CPT	Current Procedural Terminology
ALS	amyotrophic lateral sclerosis	CRNA	certified registered nurse anesthetist
AMNOG	Act to Reorganize the Pharmaceuticals' Market in the Statutory Health Insurance System	C-SNP	chronic condition special needs plan
APC	ambulatory payment classification	CT	computed tomography
APR-DRG	all-patient refined–diagnosis related group	CWF	Common Working File
APRN	advanced practice registered nurse	CY	calendar year
AQC	Alternative Quality Contract	DHA	Australian Government Department of Health and Ageing
ASP	average sales price	DME	durable medical equipment
ASP +		DO	doctor of osteopathic medicine
6 percent	average sales price plus 6 percent	DoD	Department of Defense
ASPE	Assistant Secretary for Planning and Evaluation	DRG	diagnosis related group
AWP	average wholesale price	DSH	disproportionate share hospital
AWV	annual wellness visit	D-SNP	dual-eligible special needs plan
B	billion	DVP	Drug Value Program
BPCI	Bundled Payments for Care Improvement	E&M	evaluation and management
BPCI-A	Bundled Payments for Care Improvement–Advanced	ECMO	extracorporeal membrane oxygenation
CAH	critical access hospital	ED	emergency department
CAHPS®	Consumer Assessment of Healthcare Providers and Systems®	EDS	Encounter Data System
CARE	Continuity Assessment Record and Evaluation	EHR	electronic health record
CAUTI	catheter-associated urinary tract infection	EKG	electrocardiogram
CBO	Congressional Budget Office	EMC	emergency medical condition
CCI	chronically critically ill	EMTALA	Emergency Medical Treatment and Labor Act
CCJR	Comprehensive Care for Joint Replacement	EQRO	external quality review organization
CFPB	Consumer Financial Protection Bureau	ESRD	end-stage renal disease
CFC	condition for coverage	FDA	Food and Drug Administration
CFR	Code of Federal Regulations	FFS	fee-for-service
CHIP	Children's Health Insurance Program	FIDE-SNP	fully integrated dual-eligible special needs plan
CLABSI	central line–associated bloodstream infection	FIM™	Functional Independence Measure™
		FPL	federal poverty level
		FQHC	federally qualified health center

FY	fiscal year	LCA	least costly alternative
GAO	Government Accountability Office	LIS	low-income [drug] subsidy
GEP	General Enrollment Period	LRP	Loan Repayment Program
GME	graduate medical education	LTCH	long-term care hospital
GPCI	geographic practice cost index	LTSS	long-term services and supports
HCC	hierarchical condition category	MA	Medicare Advantage
HCCI	Health Care Cost Institute	MAC	Medicare Administrative Contractor
HCPCS	Healthcare Common Procedure Coding System	MACRA	Medicare Access and CHIP Reauthorization Act of 2015
HEDIS[®]	Healthcare Effectiveness Data and Information Set [®]	MA-PD	Medicare Advantage–Prescription Drug [plan]
HHA	home health agency	MA-QBP	Medicare Advantage quality bonus program
HHS	Department of Health and Human Services	MA-VIP	Medicare Advantage value incentive program
HI	Hospital Insurance (Medicare Part A)	MCC	major complication or comorbidity
HIDE SNP	highly integrated dual-eligible special needs plan	MDC	major diagnosis category
HIV	human immunodeficiency virus	MDS	Minimum Data Set
HMO	health maintenance organization	MedPAC	Medicare Payment Advisory Commission
HOPD	hospital outpatient department	MedPAR	Medicare Provider Analysis and Review
HOS	Health Outcomes Survey	MEI	Medicare Economic Index
HPSA	health professional shortage area	MIPPA	Medicare Improvements for Patients and Providers Act of 2008
HPSP	Health Professions Scholarship Program	MIPS	Merit-based Incentive Payment System
HRSA	Health Resources and Services Administration	MLR	medical loss ratio
HSP	hospice	MLTSS	managed long-term services and supports
HVIP	hospital value incentive program	MMA	Medicare Prescription Drug, Improvement, and Modernization Act of 2003
HWH	hospital within hospital	MMP	Medicare–Medicaid Plan
ICU	intensive care unit	MMSEA	Medicare, Medicaid, and SCHIP Extension Act of 2007
ID	identification	MOC	model of care
IEP	Initial Enrollment Period	MOEG	Medicare Part C and Part D Oversight and Enforcement Group
IHS	Indian Health Service	MPPR	multiple procedure payment reduction
IME	indirect medical education	MRI	magnetic resonance imaging
IMPACT	Improving Medicare Post-Acute Care Transformation Act of 2014	MS	multiple sclerosis
IOM	Institute of Medicine	MSA	metropolitan statistical area
I-PAC	institutional post-acute care	MSA	medical savings account
IPERA	Improper Payments Elimination and Recovery Act of 2010	MS-DRG	Medicare severity–diagnosis related group
IPI	international pricing index	MSHO	Minnesota Senior Health Options
IPIA	Improper Payments Information Act of 2002	MS-LTC-DRG	Medicare severity long-term care diagnosis related group
IPP	international pricing index	MSP	Medicare Secondary Payer
IPPS	inpatient prospective payment system	MSSP	Medicare Shared Savings Program
IQWiG	Institute for Quality and Efficiency in Health Care	MV	mechanical ventilation
IRF	inpatient rehabilitation facility	N/A	not applicable
IRF-PAI	Inpatient Rehabilitation Facility–Patient Assessment Instrument	N/A	not available
IRMAA	Income-Related Monthly Adjustment Amount		
I-SNP	institutional special needs plan		

NCQA	National Committee for Quality Assurance	PPA	potentially preventable admission
NHAMCS	National Hospital Ambulatory Medical Care Survey	PPACA	Patient Protection and Affordable Care Act of 2010
NHSC	National Health Service Corps	PPO	preferred provider organization
NHSN	National Healthcare Safety Network	PPS	prospective payment system
NIH	National Institutes of Health	PPV	potentially preventable emergency department visit
NM	nurse midwife	PQI	Prevention Quality Indicator
NP	nurse practitioner	PQRS	Physician Quality Reporting System
NPI	national provider identifier	PRO	patient-reported outcome
NPPES	National Plan and Provider Enumeration System	PSLF	Public Service Loan Forgiveness
NQF	National Quality Forum	QBP	quality bonus program
NTA	nontherapy ancillary	QC	quarter of coverage
NYU	New York University	QI	qualifying individual
OASDI	Old-Age, Survivors, and Disability Insurance	QIO	quality improvement organization
OASIS	Outcome and Assessment Information Set	QMB	qualified Medicare beneficiary
OBRA	Omnibus Budget Reconciliation Act	QRP	Quality Reporting Program
OEP	Open Enrollment Period	R&D	research and development
OIG	Office of Inspector General	RA	rheumatoid arthritis
OOP	out-of-pocket	RAC	recovery audit contractor
OP	outpatient	RADV	risk adjustment data validation
OPPS	outpatient prospective payment system	RAPS	Risk Adjustment Processing System
OR	operating room	RFV	reason for visiting
PA	physician assistant	RN	registered nurse
PAC	post-acute care	RRB	Railroad Retirement Board
PACE	Program of All-Inclusive Care for the Elderly	RUC	Relative Value Scale Update Committee
PAC-PRD	Post-Acute Care Payment Reform Demonstration	RVU	relative value unit
PAI	patient assessment instrument	S2S LRP	Students to Service Loan Repayment Program
PAP	patient assistance program	SAF	standard analytic file
PBAC	Pharmaceutical Benefits Advisory Committee	SEP	Special Enrollment Period
PBD	provider-based department	SF-12	12-item Short Form Health Survey
PBM	pharmacy benefit manager	SF-36	36-item Short Form Health Survey
PBS	Pharmaceutical Benefits Scheme	SGR	sustainable growth rate
PC	primary care	SHIP	State Health Insurance Assistance Program
PCIP	Primary Care Incentive Payment [program]	SLMB	specified low-income Medicare beneficiary
PCL	Primary Care Loan	SMI	Supplementary Medical Insurance
PCR	payment-to-cost ratio	SNF	skilled nursing facility
PDP	prescription drug plan	SNP	special needs plan
PE	practice expense	SOI	severity of illness
PECOS	Provider Enrollment, Chain, and Ownership System	SSA	Social Security Administration
PFFS	private fee-for-service	SSO	short-stay outlier
PFS	physician fee schedule	SUD	substance use disorder
PLI	professional liability insurance	TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
POS	point of sale	TIN	taxpayer identification number

TKI tyrosine kinase inhibitor
UCC urgent care center
URI upper respiratory infection
UTI urinary tract infection

USUHS Uniformed Services University of the Health Sciences
VBP value-based purchasing
VHA Veterans Health Administration
WAC wholesale acquisition cost

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Kathy Buto, M.P.A., is an independent consultant and an expert in U.S. and international health policy. She serves on the Healthcare Leadership Council of the Healthcare Financial Management Association and as a venture adviser to Incube Labs LLC. She also serves on the board of the Arlington Free Clinic and as a member of Women of Impact, a women's health care leadership group. Her previous positions include vice president of global health policy at Johnson & Johnson, senior health adviser at the Congressional Budget Office, deputy director of the Center for Health Plans and Providers at the Health Care Financing Administration (now the Centers for Medicare & Medicaid Services), and deputy executive secretary for health at the Department of Health and Human Services. Ms. Buto received her master's in public administration from Harvard University.

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Francis J. Crosson, M.D., spent 35 years as a physician and physician executive at Kaiser Permanente. In 1997, he founded and then for 10 years led the Permanente Federation LLC, the national umbrella organization for the physician half of Kaiser Permanente. Later he served as senior fellow at the Kaiser Permanente Institute for Health Policy and director of public policy for The Permanente

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Brian DeBusk, Ph.D., is chief executive officer of DeRoyal Industries in Powell, TN, which operates in the surgical, orthopedic, wound care, and health care information technology markets. He also serves as vice chairman of Lincoln Memorial University in rural Tennessee, which includes graduate medical education programs for physicians, physician assistants, nurse practitioners, and nurses. Dr. DeBusk's prior employment includes General Electric, Inobis, and Pace Energy Systems. He has served on the faculty of both the University of Tennessee and Lincoln Memorial University, teaching classes in information technology and business strategy. Dr. DeBusk holds a Ph.D. in electrical engineering from Vanderbilt University and a master of business administration from Emory University.

Karen DeSalvo, M.D., M.P.H., M.Sc., is a professor of medicine and population health at the Dell Medical School at the University of Texas at Austin, where she provides leadership on efforts addressing the social determinants of health, including innovative projects on community health, technology, and medical care. Before joining the University of Texas, Dr. DeSalvo was dually appointed as the acting assistant secretary for health and the national coordinator for health information technology at the Department of Health and Human Services. Dr. DeSalvo received her medical and public health degrees from Tulane University School of Medicine, where she also completed her residency and fellowship in internal medicine. She has a master's degree in clinical epidemiology from the Harvard School of Public Health.

Marjorie Ginsburg, B.S.N., M.P.H., is the founding executive director of the Center for Healthcare Decisions Inc., which she ran from 1994 through mid-2016. In that role, she was responsible for the design, implementation, and evaluation of projects and programs that fostered civic engagement around health policy issues that affected

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David Grabowski, Ph.D., is a professor in the Department of Health Care Policy at Harvard Medical School in Boston, MA. His research primarily focuses on the economics of aging, with an emphasis on post-acute and long-term care financing, organization, and delivery of services. Dr. Grabowski served as a member of two CMS technical expert panels that focused on the home health prospective payment system and the quality measures used in the home health value-based purchasing model. He serves on the editorial board of several journals, including the *American Journal of Health Economics* and *Medical Care Research & Review*. Dr. Grabowski received his Ph.D. in public policy from the Irving B. Harris School of Public Policy at the University of Chicago.

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Jonathan Perlin, M.D., Ph.D., M.S.H.A., is the president of clinical services and chief medical officer of HCA Healthcare in Nashville, TN. In that role, he has leadership responsibility for clinical services and improving performance at HCA's hospitals and other sites of service. Before joining HCA, Dr. Perlin was Under Secretary for Health in the U.S. Department of Veterans Affairs. Dr. Perlin is a member of the National Academy of Medicine and has faculty appointments at Vanderbilt University and Virginia Commonwealth University. Dr. Perlin received his Ph.D. in pharmacology and his medical degree from the Medical College of Virginia at Virginia Commonwealth University, where he also completed his residency training in internal medicine.

Bruce Pyenson, F.S.A., M.A.A.A., is principal and consulting actuary at Milliman Inc. in New York, NY. His work has focused on diverse aspects of health care and insurance, including recent work related to alternative payment models for accountable care organizations, such as shared savings, as well as financial modeling of therapeutic interventions. He has co-authored publications on such topics as the cost-effectiveness of lung cancer screening, pandemic influenza, and site-of-service cost differences for chemotherapy. Mr. Pyenson is a fellow of the Society of Actuaries and a member of the American Academy of Actuaries. He is adjunct clinical associate professor of New York University's College of Global Public Health.

Jaewon Ryu, M.D., J.D., is the interim president and CEO for Geisinger, an integrated health care system headquartered in Danville, PA, that comprises hospitals, employed providers, a health plan, a medical school, and research and innovation centers. Before joining Geisinger, he served as president of integrated care delivery at Humana and previously held leadership roles at the University of Illinois Hospital & Health Sciences System and at Kaiser Permanente. Dr. Ryu received his undergraduate education at Yale University and his medical and law degrees from the University of Chicago, after which he completed his residency training in emergency medicine at Harbor-UCLA Medical Center.

Dana Gelb Safran, Sc.D., is head of measurement for Haven, the health care venture formed by Amazon, Berkshire Hathaway, and JPMorgan Chase (ABJ). In that role, she is part of the organization's core leadership team and is responsible for applying data, analytics, and measurement to optimize the venture's success. Dr. Safran was previously chief performance measurement and improvement officer at Blue Cross Blue Shield of Massachusetts (BCBSMA). As an architect of the BCBSMA Alternative Quality Contract and the leader responsible for its unique use of behavioral economics and payer-provider collaboration to reduce cost while improving quality, Dr. Safran is widely recognized as having contributed to the national push toward value-based payment. Before joining BCBSMA, she led a research institute at Tufts University School of Medicine dedicated to developing patient-reported measures of health and health care quality. She remains on the faculty at Tufts and serves on a number of state and national advisory bodies related to health care quality and affordability. She earned her master's and doctor of science degrees from the Harvard School of Public Health.

Warner Thomas, M.B.A., is president and CEO of the Ochsner Health System in New Orleans, LA. He oversees a network of 40 owned, managed, and affiliated hospitals and specialty hospitals, more than 100 health and urgent care centers, and more than 4,500 employed and affiliated physicians. Ochsner is the only Louisiana hospital recognized by *U.S. News & World Report* as a "Best Hospital" across three specialty categories caring for patients from all 50 states and more than 60 countries worldwide each year. The Ochsner Health System operates one of the largest accredited non-university-based graduate medical education programs in the United States. It is also one of the largest Medicare risk contractors in the region and offers an accountable care organization for Medicare. Mr. Thomas's prior positions include chief operating officer of Ochsner Health System, vice president of managed care and network development at the Southern New Hampshire Medical Center, and senior auditor and consultant at Ernst & Young. He received his master of business administration from Boston University Graduate School of Management.

Susan Thompson, M.S., B.S.N., is senior vice president of integration and optimization with UnityPoint Health, an integrated delivery system serving Iowa, central and western Illinois, and central Wisconsin. Ms. Thompson is also the chief executive officer of UnityPoint Health

Accountable Care LC, an Iowa limited liability company that brings together a diverse group of health care providers including hospitals, employed and independent physicians, and other providers, as well as other health initiatives. Previously, she was president and chief executive officer of UnityPoint Health–Fort Dodge, which serves a predominantly rural and aging population and includes a sole community hospital, a primary care and multispecialty physician group, management contracts with five critical access hospitals throughout the region, and a Pioneer Accountable Care Organization. She also served in successive clinical and management positions at Trinity Regional Medical Center, as intensive care staff nurse, director of quality systems, assistant director of patient-focused care, chief information officer, chief operating officer, and chief executive officer. Ms. Thompson obtained her B.S. in nursing and her M.S. in health services management from Clarkson College in Omaha, NE.

Pat Wang, J.D., is president and chief executive officer of Healthfirst in New York, NY. Healthfirst is a not-for-profit provider-sponsored health plan that serves Medicare enrollees, including those who are eligible for low-income subsidies and those who are dually eligible for Medicare and Medicaid. Healthfirst incorporates a value-based payment model that aligns incentives with hospital and physician partners. Ms. Wang previously served as senior vice president of finance and managed care for the Greater New York Hospital Association. She received her law degree cum laude from the New York University School of Law.

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