CHAPTER 1

Approaches for updating clinician payments and incentivizing participation in alternative payment models

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Chapter summary

Every year, the Commission assesses the adequacy of fee-for-service (FFS) payments made under the Medicare physician fee schedule (PFS) and recommends an appropriate update to those payments in our annual March report to the Congress. As part of that process, the Commission measures beneficiaries' access to clinician care. For many years, the Commission has found that this access has been as good as, or better than, that of privately insured individuals; the share of clinicians who accept new Medicare patients has been comparable with the share who accept new privately insured patients; and the volume of and spending on fee schedule services per beneficiary has consistently grown.

Nevertheless, the Commission is concerned about whether payment updates under current law will remain adequate in the future. Payment rates are set to be flat in 2025, and, starting in 2026, payment rates will increase by 0.75 percent per year for qualifying clinicians participating in advanced alternative payment models (A–APMs) and by 0.25 percent for all other clinicians. Meanwhile, clinicians' input costs, as measured by the Medicare Economic Index (MEI), are expected to increase by an average of 2.3 percent per year from 2025 through 2033—exceeding the growth in PFS payment rates by more than has been the case over the past two decades. This larger gap could create incentives for clinicians to

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reduce the number of Medicare beneficiaries they treat or stop participating in Medicare entirely.

In addition, the Commission has long been concerned about the growing differential between FFS payment rates when a service is billed in a freestanding clinician office versus a hospital outpatient department (HOPD). Medicare payments are generally higher when the same service is billed in an HOPD rather than a freestanding clinician office. Research suggests that this site-of-service payment imbalance has contributed to vertical consolidation, though the effect may be modest and vary by clinician specialty or type of service, and other factors may also encourage vertical consolidation. Still, site-of-service payment differentials distort competition and, if allowed to worsen, could increase vertical consolidation—not because such a model is the most efficient way to deliver high-quality care, but because it generates higher revenues—at the expense of Medicare beneficiaries and taxpayers. Increased vertical consolidation could also result in providers negotiating higher payment rates from commercial payers, which would lead to higher premiums for privately insured enrollees.

The Commission is also concerned about the upcoming sunsetting of participation bonuses for clinicians in A–APMs after 2026. To date, the A–APM participation bonus (currently set at 5 percent of a clinician's Medicare payments for fee schedule services) has always been larger than the highest adjustment available through the Merit-based Incentive Payment System (MIPS) (which has reached up to 2.34 percent)—helping to incentivize clinicians' participation in A–APMs. After 2026, A–APM participation bonuses will be eliminated in favor of the differential payment updates for clinicians depending on whether or not they are in an A–APM, described above. But in the initial years of differential updates, the higher updates for qualifying clinicians in A–APMs will produce a relatively weak incentive to participate in A–APMs. In 2027, for example, A–APM clinicians' payment rates will be only 1 percentage point higher than those of other clinicians. MIPS may therefore become the more attractive option for top-performing clinicians in coming years, depending on CMS's implementation decisions. (MIPS adjustments can reach up to 9 percent under current law.) Waning interest in A–APMs could result in missed opportunities to achieve better-quality care more efficiently.

Given these concerns, the Commission is considering alternatives to current-law updates, such as replacing them with updates based on some measure of inflation and temporarily extending the current A–APM participation bonus.

Alternative approaches to updating PFS payment rates

Basing updates on a portion of inflation would improve stability in clinician payments relative to changes in input costs. However, pushing payment updates closer to the full rate of inflation would result in a substantial increase in Medicare spending on fee schedule services relative to current law in future years, and the Commission has found that full inflation updates have not been necessary in the past to ensure that beneficiaries maintain access to care that is comparable with that of privately insured individuals. Therefore, the Commission has considered two different approaches to update fee schedule rates based on a portion of changes in input cost inflation.

One approach would be to update the practice expense portion of fee schedule payment rates by the hospital market basket, adjusted for productivity. This approach would attempt to address current differences in updates between the PFS and the hospital outpatient prospective payment system (OPPS): PFS payment rates are updated by statutorily specified percentages that are not linked to cost growth, while OPPS rates are updated by the hospital market basket (a measure of growth in hospital input costs). This approach defers consideration of automatic annual updates to the work component of fee schedule payments, but periodic updates to the work component of payments could still occur (and would be addressed by the Commission's annual assessment of payment adequacy).

Under this approach, services for which practice expenses represent a large share of the total payment would see larger updates compared with services for which practice expenses represent a small share of the total payment. As a result, certain specialists (e.g., radiation oncologists, vascular surgeons, interventional radiologists, and dermatologists) would receive larger updates than primary care providers, behavioral health clinicians, and certain other types of specialists (e.g., hospitalists, emergency medicine physicians, and hospice and palliative care physicians). To limit the degree to which this approach would exacerbate inaccuracies in the relative values of different services' payment rates, it would be important to pair this update approach with efforts to revalue fee schedule services—for instance, through improvements to the processes and data used to assign relative values to codes and by converting overvalued 10- and 90-day global surgical codes to 0-day codes.

Another approach would update total fee schedule payment rates (including payments for both practice expense and clinician work) by the MEI (which includes a productivity adjustment) minus 1 percentage point. This approach

could also include an update floor equal to half of MEI to avoid updates that are very low or negative. This approach would reflect the fact that PFS updates have averaged around MEI minus 1 percentage point for the previous two decades. During this period, Medicare beneficiaries have had access to care that is comparable with that of privately insured people, and similar shares of clinicians have accepted new Medicare patients and new privately insured patients. The approach would update payment rates for all codes by the same factor in a given year, so the percentage updates would be the same across different services and specialties. To improve payment accuracy for services with high practice expenses and to limit incentives for vertical consolidation, this approach could be paired with efforts to rebase the MEI using more recent data, change the treatment of practice expenses under the fee schedule for services performed in facilities, or other reforms.

The first approach would require substantial operational changes in the way payment rates are set and updated over time. It would also tend to result in smaller payment rate increases for primary care and behavioral health clinicians compared with increases for many specialists, which could exacerbate beneficiaries' existing problems accessing primary care providers and behavioral health clinicians. The second approach would be simpler to implement, would not lead to different rate increases among clinicians in different specialties, and would reduce or eliminate the need for policymakers to revisit fee schedule update policy in the future to provide separate increases to the work portion of fee schedule payments. The Commission finds the features of the second approach more desirable and will continue to develop this option in the future.

Both approaches would do more than current law to slow the growth in payment rate differentials between different sites of service. But the fact that large differentials would remain under both approaches highlights the importance of implementing site-neutral payments regardless of the approach chosen to update PFS rates.

Maintaining incentives to participate in A–APMs

Under current law, clinicians in A–APMs receive a participation bonus worth 5 percent of their Medicare payments for fee schedule services from 2019 through 2024, a bonus worth 3.5 percent of these payments in 2025, and a bonus worth 1.88 percent of these payments in 2026. The Commission has discussed extending the bonus as one way to incentivize clinicians to participate in A–APMs rather than the MIPS program, which we have previously

recommended repealing. If MIPS is not repealed, extending the A–APM participation bonus for a few more years could help maintain clinician participation in A–APMs in the late 2020s, given uncertainty about the attractiveness of MIPS to top-performing clinicians in the coming years. Once the future direction of MIPS becomes clearer, a reassessment of the need for the A–APM participation bonus could be undertaken.

A key question is the optimal size for an extended bonus. Ideally, the A–APM participation bonus in addition to payments received directly through an A–APM (e.g., shared savings payments) would exceed the top MIPS adjustment. But this could result in the A–APM participation bonus reaching as high as 9 percent, which could be costly for the Medicare program and the taxpayers who support it (and be potentially untenable if access to A–APMs continues to be more limited for certain clinicians). A smaller bonus could be considered but might fail to ensure that A–APM participation is more attractive than MIPS.

The Commission has also discussed restructuring the A–APM participation bonus to be based on a percentage of a clinician's Medicare payments for fee schedule services for FFS Medicare beneficiaries in A–APMs (instead of on a percentage of a clinician's payments for all FFS Medicare beneficiaries, including beneficiaries not in A–APMs). In combination with this change, policymakers could eliminate the requirement that a certain share of a clinician's payments or patients be in an A–APM to qualify for the bonus. Restructuring the bonus in this way would allow bonus payments for clinicians who participate in A–APMs but currently fail to qualify for the bonus (e.g., clinicians in episode-based payment models for whom the discrete procedures or conditions targeted by the model make up only a small share of the care a clinician provides). ■

Introduction

Every year, the Commission assesses the adequacy of fee-for-service (FFS) payments made under the Medicare physician fee schedule (PFS) and releases the findings in our annual March report to the Congress. As part of that process, the Commission measures beneficiaries' access to care. For many years, the Commission has found that beneficiaries' access to care has been as good as, or better than, that of privately insured individuals; the share of clinicians who accept new Medicare patients has been comparable with the share who accept new privately insured patients; and the volume of and spending on fee schedule services per beneficiary has consistently grown.

Nevertheless, the Commission is concerned about whether payment updates under current law will remain adequate in the future. Payment rates are set to be flat in 2025, and, starting in 2026, payment rates will increase by 0.75 percent per year for qualifying clinicians participating in advanced alternative payment models (A–APMs) and by 0.25 percent for all other clinicians. Meanwhile, clinicians' input costs, as measured by the Medicare Economic Index (MEI), are expected to increase by an average of 2.3 percent per year from 2025 through 2033—exceeding the growth in PFS payment rates by a greater amount than has been the case over the past two decades.[1] This larger gap could create incentives for clinicians to reduce the number of Medicare beneficiaries they treat or stop participating in Medicare entirely. Concerns about low updates in current law relative to higher inflation that began during the pandemic led the Commission to recommend in 2023 and 2024 that clinician payment rates be increased by half of the MEI, which measures changes to input costs for clinician practices (Medicare Payment Advisory Commission 2024, Medicare Payment Advisory Commission 2023b).

In addition, the Commission is concerned about the growing differential between payment rates when a service is billed in a freestanding clinician office vs. a hospital outpatient department (HOPD). This differential likely encourages more services to be billed in the higher-paid HOPD setting and could spur additional vertical consolidation in the health care industry. The Commission is also concerned about the upcoming sunsetting of participation bonuses for clinicians in A–APMs after 2026. Without these bonuses, top-performing clinicians may exit A–APMs. Waning interest in A–APMs could result in missed opportunities to achieve better-quality care more efficiently.

In this chapter, we describe the history of fee schedule updates to provide context for the current issues policymakers face and summarize findings on FFS Medicare beneficiaries' access to care in recent years. We then review some key concerns about current-law updates to the fee schedule. Finally, we discuss policy approaches intended to address those concerns.

The evolution of Medicare's payments for clinician services

Since the Medicare program first came into existence in the mid-1960s, policymakers have wrestled with how to set payment rates for services commonly furnished by physicians and other clinicians and how to update those rates over time. The methods Medicare has used to determine and update payment rates for clinician services have evolved markedly. In the early years of the program, Medicare's payment rates for clinician services largely reflected the amounts charged by clinicians themselves. Today, there is a complex system in place that aims to set payments according to the relative value of the clinician's time, nonclinician labor, and other costs needed to furnish roughly 8,000 items and services paid for under Medicare's physician fee schedule.

While CMS determines relative payment rates for clinician services through the PFS, for several decades the Congress has specified the methods and policies used to update those rates on a year-to-year basis. Since 1992, the Congress has enacted three overarching approaches to updating payment rates for clinician services: the volume performance standard, the sustainable growth rate, and updates specified by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA).

Setting payment rates

Since the Medicare program was established, the program has used two approaches for setting

payment rates for clinician services. The program initially adopted a method of paying for physician services that based payments on charges submitted by physicians. However, this method of payment was inherently inflationary. In 1987, the Congress enacted legislation requiring the development of a fee schedule in which payment rates for clinician services would be empirically based on the resources needed to furnish each service rather than on what physicians charged for those services.

Customary, prevailing, and reasonable charges

When the Medicare program was first established in 1965, the program adopted a method of paying for physician services that many Blue Shield plans used at the time. Like these private sector plans, Medicare based payments for clinician services on customary, prevailing, and reasonable (CPR) charges submitted by physicians. Specifically, Medicare's payment for a given service was equal to the lesser of three amounts: (1) the actual, submitted charge; (2) the physician's customary charge (i.e., the median of the charges submitted by the physician for the same service in the preceding year); or (3) the prevailing charge, which equaled the 75th percentile of the distribution of the customary charges of all physicians in the physician's area for the same service.

According to a report released by one of the Commission's predecessor commissions, the Physician Payment Review Commission (PPRC), payments for physician services were determined by the CPR method, at least in part, because there was a great deal of existing variation in payment levels for those services. The variation in charges was thought to reflect meaningful differences in patient preferences and how the market priced physician services based on supply and demand. Policymakers feared that if payment rates in Medicare were set below market rates, Medicare beneficiaries might not have access to care comparable with that of nonbeneficiaries (Physician Payment Review Commission 1987).

Problems with the CPR payment system quickly became apparent, however. Unlike commercial payers, the Medicare program paid whatever prices physicians charged, and Medicare beneficiaries generally would not move to another insurer or drop coverage if costs grew too high. In the years that followed, physicians sharply increased what they charged for services, as well as the volume of services furnished to Medicare beneficiaries (Physician Payment Review Commission 1987). As charges and payment rates steadily increased, so too did costs for taxpayers funding the program and for beneficiaries through higher cost sharing.

As a result, criticism of CPR payment was widespread among policymakers, researchers, and other stakeholders. The ability of physicians to essentially set their own payment rates was not only inflationary, it also had the effect of causing even greater variation in health care prices across providers, specialties, and geographic regions (Newhouse 2007). A PPRC report summarized the flaws of CPR payment as follows:

- It encouraged growth in the amount that physicians charged for their services.
- It provided incentives for physicians to increase the volume of services they delivered.
- It influenced physician decisions about where to practice medicine and what to specialize in.
- It was administratively complex and difficult for both physicians and beneficiaries to understand (Physician Payment Review Commission 1987).

The Congress had tried to prevent these problems with a series of refinements to the CPR system. In 1972, annual increases in prevailing charges were limited to the MEI. Actions were also taken to give Part B carriers (contractors that processed claims on Medicare's behalf) the power to review claims and restrict the use of unnecessary or low-value care, although these limitations were not widely enforced by Medicare or its carriers. In the mid-1980s, the Congress enacted several laws aimed at determining the "inherent reasonableness" of prices for physician services. These measures directed CMS's predecessor, the Heath Care Financing Administration (HCFA), to identify allowable charges that were unreasonably high or low, modify payments to correct for inappropriate specialty or geographic differences, and adjust payments to reduce imbalances in the ratios of charges to resource costs for certain procedures. When these efforts to slow spending and volume largely failed, the Congress temporarily halted updates to reasonable charges and limited payments for specific services.[2]

Despite these efforts to restrain growth in physician spending, Part B expenditures (which include PFS

spending) grew at a rate that exceeded spending growth in Medicare as a whole. Between 1975 and 1982, Part B spending increased by an average of 18 percent per year (Physician Payment Review Commission 1987). A study by the Urban Institute found that price inflation was responsible for 40 percent of Part B spending growth, while volume increases were responsible for 33 percent (Juba and Sulvetta 1986). By the late 1980s, PPRC was one of many observers calling for a complete overhaul of the way Medicare paid for physician services: "Despite these measures to slow increasing expenditures, there is a growing dissatisfaction with the CPR method of payment and a realization that these efforts are only a stop-gap restraint on a fundamentally flawed payment system" (Physician Payment Review Commission 1987).

The Medicare PFS's Resource-Based Relative Value Scale

To address problems with the CPR approach, the Congress enacted legislation that fundamentally changed the way Medicare determined payment rates for physician services. The Omnibus Balanced Budget Act of 1987 required HCFA to develop a fee schedule in which payment rates for physician services would be empirically based on the resources needed to furnish each service rather than on what physicians charged for those services. The work to develop the fee schedule was carried out under a cooperative agreement with the Harvard School of Public Health and led to the creation of the Resource-Based Relative Value Scale (RBRVS).

The RBRVS approach aims to assign each physician-furnished service a value that is relative to the value of every other physician service; the value of each service is measured in relative value units (RVUs). A necessary precondition of an effective RBRVS system is that each service being valued must be clearly defined and consistent throughout the health care system. The process of defining and identifying services was started in the mid-1960s through development of the Current Procedural Terminology (CPT®) system by the American Medical Association. Eventually, HCFA began using CPT codes as part of the Healthcare Common Procedure Coding System (HCPCS). For the most part, the HCPCS codes used by clinicians to bill for services represent narrow and discrete services such as an office visit or a colonoscopy, although some codes represent bundles of services such as the surgical procedure to replace a knee joint plus preoperative visits on the day prior and postoperative visits in the following 90 days.[3]

The number of RVUs assigned to each HCPCS code is based on an assessment of the various resources a typical practice requires when furnishing that service. Each service's total RVUs are derived from three components that are each assigned their own relative values: clinician work, practice expense, and professional liability insurance. The RVUs for clinician work reflect the relative levels of time, effort, skill, and stress associated with providing each service. The RVUs for practice expense are based on the cost of renting office space, buying supplies and equipment, and hiring nonpractitioner clinical and administrative staff. The professional liability insurance RVUs are based on the premiums clinicians pay for professional liability insurance (PLI), also known as medical malpractice insurance.

The relative values for each of these three types of RVUs are supposed to be based on empirical data about relevant input costs. The American Medical Association/Specialty Society Relative Value Scale Update Committee (RUC), which is a 32-member committee representing physicians from various specialties whose work is coordinated by the American Medical Association (AMA), makes recommendations to CMS about RVUs for most billing codes in the fee schedule. The RUC primarily develops its recommendations based on data collected through surveys of physicians sponsored by physician specialty societies. Based on its assessment of the survey data, the RUC regularly makes recommendations to CMS about relative values for new services or updates to existing services. In addition to recommendations from the RUC, CMS also gathers data about costs from other surveys and data sources. While CMS makes the final determination of the RVUs used to determine payment rates under the PFS, the agency accepts the majority of the RUC's recommendations (American Medical Association 2023b).

Under RBRVS, the Medicare-allowed payment amount is determined by adjusting each of the three RVU values to reflect local input prices (subject to certain restrictions, such as floors on certain payment adjustments), adding the geographically adjusted RVUs

for the three components together, and multiplying the total RVUs by a conversion factor, which is a fixed dollar amount.

For most fee schedule services, there are generally two total RVUs: one for services furnished in nonfacility settings (e.g., freestanding clinician offices) and one for services furnished in facilities (e.g., hospitals, skilled nursing facilities). Practice expense RVUs are generally lower when services are furnished at a facility setting rather than a nonfacility setting because facilities receive separate payments to cover their practice expenses through other payment systems (e.g., the hospital OPPS) and clinicians are assumed to use fewer of their own resources when services are furnished in a facility setting. RVUs for work and PLI are usually the same regardless of whether the service is furnished in a freestanding clinician office or a facility.

Updating payment rates each year

Once Medicare moved away from the CPR method of paying clinicians, a mechanism for updating payment rates each year was needed to ensure that payment rates were adequate to support beneficiary access to high-quality care. Three approaches to updating payment rates for clinician services have been used: the volume performance standard, the sustainable growth rate, and the updates specified by MACRA. Under all three of these approaches, payment rates are updated each year by updating the fee schedule's conversion factor: Increasing the conversion factor by 1 percent, for example, results in a 1 percent increase to payment rates. Each year, the update to the conversion factor reflects two factors: (1) a percentage specified in law (either through a formula or a fixed percentage, described below), and (2) a percentage arrived at by CMS to ensure that any changes it makes to the set of codes available in the fee schedule and their relative values do not, in and of themselves, increase or decrease total PFS spending by more than $20 million (referred to as CMS's budget-neutrality adjustment).

The Volume Performance Standard

Starting in 1992, the RBRVS was coupled with a new method for annually updating Medicare's conversion factor for physician services: the Volume Performance Standard (VPS). The VPS approach aimed to accomplish two main goals: (1) link updates in payment rates to growth in input costs and (2) restrain the growth of spending caused by increases in the volume and intensity of physician services delivered.

As established by the Congress in the Omnibus Budget Reconciliation Act of 1989, the VPS used two conversion factors to update rates for PFS services: one for surgical services and one for nonsurgical services. A third conversion factor was added later for primary care services. The VPS used the MEI as the default growth rate for annual updates of the conversion factors. The system also required HCFA to calculate a spending target growth rate against which the actual growth of aggregate physician spending would be compared. The VPS's spending target growth rate was the product of the following four components:

- the change in Medicare payment rates for physician services,
- the change in the number of beneficiaries enrolled in Part B FFS Medicare,
- the five-year average growth in the volume and intensity of physician services, and
- estimated changes in spending due to new laws and regulations.

The resulting growth rate was then reduced by a performance standard factor of 2 percentage points (which subsequent legislation later increased to 4 percentage points) to reduce the rate of spending growth and because historical trends were viewed as including a certain amount of inefficient and inappropriate care. Thus, if in a given year payment rates had been updated by 3 percent, enrollment had grown by 1 percent, volume and intensity had grown by 7 percent, there were no changes in law and regulation, and the 4 percent performance standard was in effect, the spending target growth rate for the year would be 7.3 percent ((1.03 × 1.01 × 1.07 × 1.0) − 0.04 = 1.073).

Each year, the Secretary of Health and Human Services and the PPRC were required to make recommendations for the coming year's update, based on their assessment of the above factors as well as considerations about inflation, changes in technology, and beneficiary access to care. If the Congress failed to pass legislation adopting either of those recommendations or to enact another update, the law specified that the conversion factors would be updated

by the MEI minus the difference between the VPS spending target growth rate and actual spending.[4] For example, if the VPS target growth rate was 7 percent and spending grew by 8 percent, the formula would call for that year's update to be the MEI minus 1 percentage point (i.e., the percentage difference between target growth and actual spending growth).

As time went on, clinicians and policymakers grew increasingly dissatisfied with the way the VPS operated. Since VPS's spending targets were based in part on actual growth in the volume and intensity of physician services minus the performance standard factor, the formula created continuous pressure to reduce volume and intensity. However, since the targets were determined at the national level, individual clinicians had very weak incentives to reduce their own volume and intensity. In addition, the spending targets for each of the three types of services were volatile and diverged over time, such that the conversion factor for surgical services was 9 percent higher than that for primary care services and 14 percent higher than the nonsurgical conversion factor (American Medical Association 2023c). And although annual growth in per beneficiary spending had gone down following the implementation of the VPS (from 7 percent annually from 1985 through 1991 to 4.4 percent from 1992 through 1997), many policymakers felt the system had failed to adequately control growth in the volume and intensity of physician services (Government Accountability Office 2004). In 1996, the PPRC called for a series of reforms to the VPS, including using growth in gross domestic product plus 1 percentage point or 2 percentage points as an allowance for volume and intensity growth, replacing one-year spending targets with cumulative targets, and reducing the volatility of annual updates by taking steps to smooth year-to-year changes (Physician Payment Review Commission 1996).

The sustainable growth rate

In 1997, the Congress replaced the VPS with the sustainable growth rate (SGR) method of annually updating RBRVS-based payment rates in the PFS. In many ways, the SGR can be seen as a refinement of the VPS formula rather than a fundamental change in approach.

The SGR set an annual spending target that allowed annual fee schedule spending to grow at a rate consistent with the product of four components:

- the change in practice costs (i.e., the MEI);
- the change in the number of beneficiaries enrolled in Part B FFS Medicare;
- the change in national per capita gross domestic product (GDP) over a 10-year period; and
- changes in spending due to new laws and regulations.

The spending target formula for the SGR was similar to the one used for the VPS, with the major difference being that the SGR's formula allowed growth for volume and intensity and was based on real GDP, rather than historical volume and intensity growth minus a performance standard. Using GDP in the SGR formula was meant to tie allowed growth in volume and intensity to an exogenous measure of economic growth rather than an endogenous measure of volume and intensity growth among physician services—thus preventing circularity.

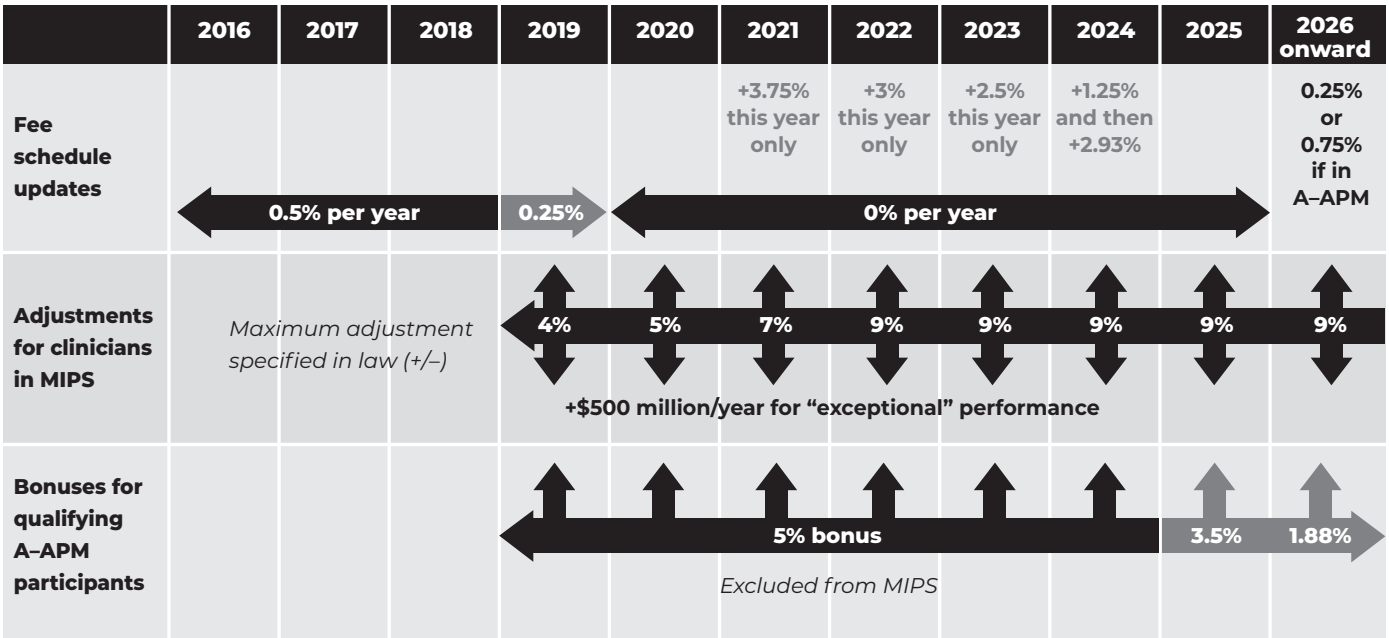
Another important difference between the two methods was that the SGR's spending targets were cumulative over time, while the VPS's spending targets were not. To determine fee schedule updates under the SGR, CMS was required to annually compare actual cumulative Medicare spending (starting in April 1996) on fee schedule services with the target spending amount over the same period. If cumulative expenditures equaled the cumulative targets, the SGR formula set physician fee updates equal to the MEI. However, if cumulative expenditures exceeded cumulative targets, the update for the subsequent year would be reduced, with the goal of bringing cumulative spending back in line with the target. Likewise, if cumulative expenditures were less than the cumulative target amount, the subsequent year's update would be higher than the MEI.

The SGR formula contained two guardrails against excessively large increases or decreases in updates. Regardless of how much the spending target exceeded actual spending or vice versa, the update in a given year could not be less than the MEI minus 7 percentage points or more than the MEI plus 3 percentage points.

In the first years of the SGR system, actual expenditures did not exceed spending targets because volume did not grow faster than GDP. Therefore, updates to the PFS in the early years of the SGR system

FIGURE 1–1

Statutorily specified updates to PFS payment rates, payment adjustments, and bonuses under MACRA and subsequent legislation



Note: PFS (physician fee schedule), MACRA (Medicare Access and CHIP Reauthorization Act of 2015), A–APM (advanced alternative payment model), MIPS (Merit-based Incentive Payment System). Changes to MACRA's original provisions are shown in gray. In 2024, rates were updated by 1.25 percent through March 8, 2024, and then are updated by 2.93 percent from March 9, 2024, through December 31, 2024. MIPS adjustments to payment rates can be positive, neutral, or negative. The highest MIPS adjustment actually paid out so far has been lower than the maximum possible under law (+1.9 percent in 2019, +1.7 percent in 2020, +1.8 percent in 2021, +1.9 percent in 2022, and +2.3 percent in 2023). The A–APM participation bonus is not available after 2026. MIPS adjustments and the A–APM participation bonus apply for only one year at a time and are not built into subsequent years' payment rates. Since the fee schedule updates for 2021 through 2024 shown in gray apply for one year only and in most years decline in size from one year to the next, they have generally had the effect of slowly lowering the fee schedule's conversion factor. The conversion factor needed to be lowered to offset a large increase to the payment rates for a widely used set of billing codes for office/outpatient evaluation and management visits, which took effect in 2021.

Source: MedPAC analysis of MACRA and subsequent legislation.

were at or above the MEI. However, beginning in 2001, actual cumulative expenditures exceeded allowed targets, and the discrepancy continued to grow each year, resulting in a series of prescribed multiyear cuts under the formula in order to recoup the difference.

The SGR's prescribed cuts were implemented in 2002; after that, the Congress passed a series of bills to override the SGR-specified fee schedule reductions. The primary rationale for overriding cuts called for by the SGR formula was a fear that allowing the scheduled reductions to take effect would cause physicians to reduce services provided to Medicare beneficiaries and perhaps stop participating in the program (Boards of Trustees 2014, Medicare Payment Advisory Commission 2011b). Because many commercial insurers peg their physician payment rates to Medicare's, allowing the cuts to take place could have ripple effects in the larger health care system (Medicare Payment Advisory Commission 2011b).

Initially, when the Congress enacted short-term overrides of cuts called for by the SGR, the size of the following year's rate cut was not affected because annual reductions could be no larger than the MEI minus 7 percentage points (with the MEI at about 2 percent, the effective limit on a one-year reduction was around –5 percent). Although these legislative

overrides had the effect of avoiding a near-term reduction in rates, they had the longer-term effect of pushing the required reduction several years into the future in order to achieve the required spending reduction while staying within the formula's annual rate-reduction guardrails. Starting in 2007, the Congress began overriding annual cuts and adding the amount of the next year's required cut to the following year's cut, effectively eliminating the limitation on how much rates could be reduced in a given year. This approach avoided pushing the next year's reduction far into the future, but after using this approach to override cuts several times, the first-year reduction in payment rates grew to more than 20 percent (Boards of Trustees 2015).

In a 2011 report to the Congress, the Commission identified a series of flaws with the SGR approach. As with the VPS, the SGR's primary flaw was that the formula imposed incentives to reduce volume and intensity growth at the national level; individual practitioners had almost no incentive to practice efficiently or look for ways to reduce the volume or intensity of services they delivered when treating Medicare beneficiaries (Medicare Payment Advisory Commission 2011b). Because the SGR formula applied payment adjustments on an across-the-board basis, the approach neither rewarded individual clinicians who restrained unnecessary volume growth nor penalized clinicians who contributed most to inappropriate volume increases. Arguably, the "tragedy of the commons" problem was even greater with the SGR approach than that of the VPS because it did not differentiate among types of care and used just one conversion factor.[5]

The underlying SGR formula itself, coupled with legislative action to override prescribed annual cuts with a series of deeper and longer reductions, led many to conclude that the required updates were unrealistic and untenable. These issues, in turn, threatened to destabilize other parts of the health care system since rates paid by many private payers are directly linked to Medicare's fee schedule rates and because Medicare Advantage benchmarks include fee schedule spending (Medicare Payment Advisory Commission 2011b).

The Commission recommended that the Congress repeal the SGR system and replace it with a 10-year path of statutory fee schedule updates. The recommended path would have frozen payment rates for primary care for 10 years and imposed annual reductions of 5.9 percent for three years for all other services, followed by a freeze (Medicare Payment Advisory Commission 2011a).

Medicare Access and CHIP Reauthorization Act of 2015 framework: Low updates coupled with value-based incentives

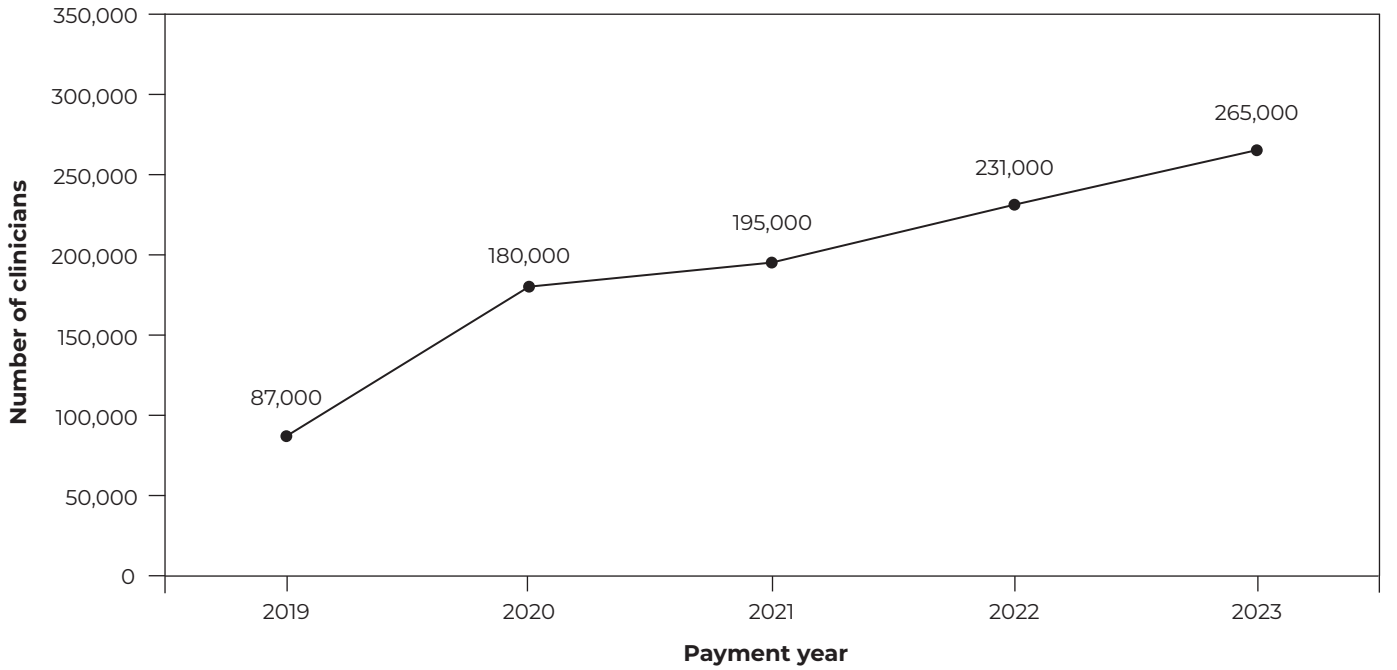
MACRA replaced the SGR formula and established a schedule of fixed annual updates to the PFS's payment rates coupled with incentives to perform well on quality measures or participate in A–APMs. A–APMs are payment models that (1) require clinicians to bear more than nominal financial risk,[6,7] (2) tie payment to quality measures that are comparable with those used in the Merit-based Incentive Payment System (MIPS), and (3) require clinicians to use electronic health record technology certified by the federal government (42 CFR 414.1415). The FFS Medicare A–APM with the largest number of participating clinicians is the Medicare Shared Savings Program for accountable care organizations (ACOs);[8] other FFS Medicare A–APMs are smaller models being tested by CMS's Innovation Center on a temporary basis (often only in certain geographic areas). Other payers can operate their own A–APMs, but relatively few have registered their payment models as A–APMs with CMS (Centers for Medicare & Medicaid Services 2023c).

Under MACRA's original framework, payment rates were to be updated by 0.5 percent annually from July 2015 through 2019, by 0 percent from 2020 to 2025, and by 0.75 percent for qualifying clinicians in A–APMs and 0.25 percent for all other clinicians starting in 2026. These fixed updates were coupled with (1) an annual 5 percent bonus for clinicians who participate in A–APMs, available from 2019 through 2024, and (2) an annual performance-based payment adjustment (which can be negative, neutral, or positive) for non-A–APM clinicians under MIPS, which is a program that does not expire (Figure 1-1).[9,10,11] From 2019 through 2024, Medicare is allowed to pay out $500 million more in positive MIPS adjustments each year than it collects through negative adjustments; starting in 2025, MIPS adjustments must be budget neutral.

Subsequent legislation has amended MACRA's fixed updates, providing a 0.25 percent update in 2019 instead of 0.5 percent, and made temporary increases

FIGURE 1–2

The number of clinicians who qualify for the A–APM participation bonus each year has been modest but increasing



Note: A–APM (advanced alternative payment model). Numbers have been rounded to the nearest thousand. Figure shows the number of clinicians who qualified for the A–APM participation bonus in a given year (based on their A–APM participation two years prior), which may be higher than the number who actually received the bonus (e.g., due to retirements).

Source: MedPAC analysis of CMS data identifying the national provider identifiers of clinicians who qualified for the A–APM participation bonus linked to 100 percent of physician fee schedule claims.

to the fee schedule's payment rates in 2021 through 2024. These temporary increases differ from traditional updates in that they each apply for one year only and are not built into subsequent years' base payment rates. The Congress provided these temporary increases to partially offset a 10.2 percent budget-neutrality reduction to the fee schedule's conversion factor that was scheduled to take effect in 2021. The conversion factor reduction was required to offset the cost of increasing payment rates for widely used evaluation and management (E&M) visits and adding a new E&M add-on payment (the implementation of which was later delayed until 2024).[12] As a result, all other things being equal, total Medicare payments to clinicians who primarily deliver E&M services are expected to have increased while payments to other clinicians are expected to have declined. Subsequent legislation also extended the availability of the A–APM participation bonus to 2025 (at a reduced value of 3.5 percent of a clinician's Medicare payments for fee schedule services) and 2026 (at 1.88 percent of these payments).

The prevalence and size of MACRA's A–APM participation bonus The number of clinicians who qualify for the A–APM participation bonus has been increasing steadily since it first became available in 2019 (Figure 1-2), but the number nevertheless remains a minority of clinicians: About one in five clinicians who billed FFS Medicare received the bonus in 2023.

Another 62,000 clinicians participated in A–APMs in the 2023 payment year but did not qualify for the A–APM participation bonus due to an insufficient share of their payments or patients being in A–APMs

(Centers for Medicare & Medicaid Services 2023a, Centers for Medicare & Medicaid Services 2023h). (To qualify for the A–APM participation bonus, at least 50 percent of a clinician's FFS Medicare or multipayer payments must be associated with an A–APM or at least 35 percent of a clinician's FFS Medicare or multipayer patients must be participating in an A–APM at present (42 CFR 414.1430).) A–APM participants who failed to qualify for the participation bonus in the 2023 payment year were disproportionately in episode-based payment models (Centers for Medicare & Medicaid Services 2023a). Clinicians in these models could have a hard time meeting the participation thresholds if the particular types of clinical episodes targeted by these models (e.g., hip replacements) made up only a small share of the types of care they provided.

We estimate that another 107,000 clinicians were in alternative payment models that did not meet MACRA's three criteria to be considered an A–APM (e.g., they did not require clinicians to take on a sufficient degree of financial risk) (Centers for Medicare & Medicaid Services 2023a, Centers for Medicare & Medicaid Services 2023h).

Primary care physicians make up a disproportionately large share of A–APM bonus recipients, though they still constitute only a minority of bonus recipients. In the 2023 payment year, primary care physicians made up a quarter of the clinicians who qualified for a bonus, despite constituting only an eighth of clinicians who bill FFS Medicare. Primary care physicians' increased likelihood of receiving the bonus is likely because some of the larger A–APMs available to clinicians in the 2021 performance year were geared toward primary care providers and would have applied to large shares of their FFS Medicare patients (i.e., the Medicare Shared Savings Program, the Comprehensive Primary Care Plus Model, and the Primary Care First Model). Higher shares of oncologists and nephrologists also qualified for the bonus compared with other specialists in 2023, likely due to the availability of A–APMs tailored to these particular specialties (the Oncology Care Model and the Comprehensive ESRD Care Model) (Centers for Medicare & Medicaid Services 2022a).

Figure 1-3 (p. 18) shows the shares of clinicians of different specialties and types who qualified for the A–APM participation bonus, among those clinicians who billed FFS Medicare. For example, 34 percent of family physicians and 13 percent of ophthalmologists who billed FFS Medicare qualified for the A–APM participation bonus in the 2023 payment year.

The size of the A–APM participation bonus varies based on a clinician's annual FFS Medicare payments for fee schedule services.[13] By our estimates, the median size of the A–APM participation bonus in 2023 (when it was set to be worth 5 percent of a clinician's fee schedule services) was $1,287 (not shown) per clinician, but bonus amounts varied widely (Figure 1-4, p. 19). Among the 10 percent of clinicians who received the smallest bonuses, the median bonus was $31; among the 10 percent of clinicians who received the largest bonuses, the median bonus was $9,833. (We note that under "incident to" billing, physicians can bill for services furnished by advanced practice registered nurses (APRNs) such as nurse practitioners as well as physician assistants (PAs) and other types of clinicians with whom they work. Thus larger bonuses may reflect services provided by multiple clinicians.)

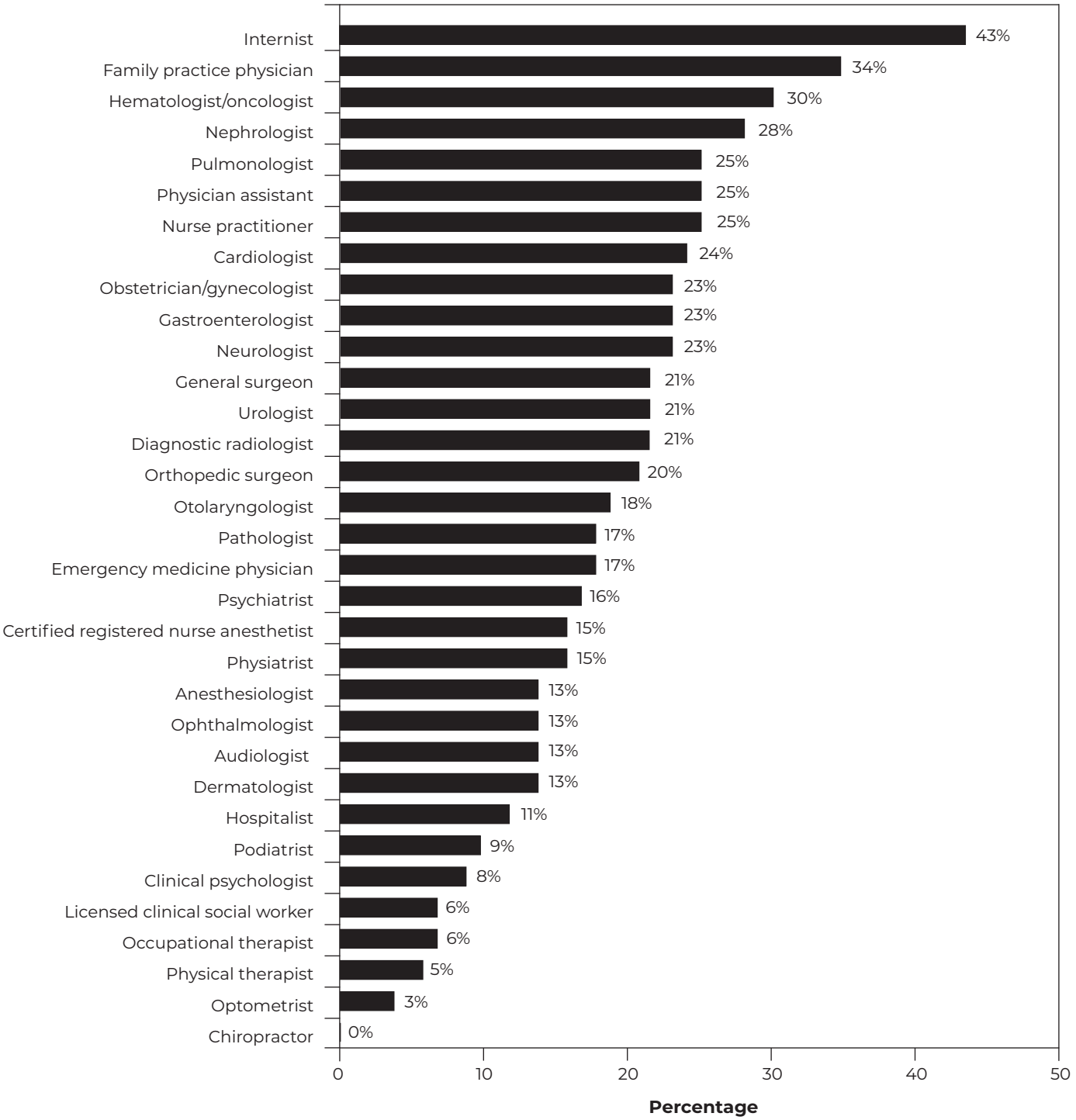
Specialists received larger A–APM participation bonuses than primary care physicians, APRNs and PAs, and other clinicians in 2023 (Figure 1-5, p. 20) because specialists tend to generate more annual Medicare payments than other types of clinicians. Among all clinicians who received the bonus, the median bonus was $2,416 for specialists, $1,712 for primary care physicians, $529 for APRNs and PAs, and $548 for other types of clinicians (not shown).

Historically, beneficiaries' access to clinician care has been comparable with that of privately insured individuals

Every year, the Commission assesses the adequacy of payments made under Medicare's PFS and releases the findings in our annual March report to the Congress. As part of that process, the Commission measures beneficiaries' access to care. For many years, the Commission has found that beneficiaries' access to care has been as good as, or better than, that of privately insured individuals; the share of clinicians who accept new Medicare patients has been comparable with the share who accept new privately insured patients; and

FIGURE 1–3

The shares of clinicians of different types and specialties who qualified for the A–APM participation bonus in 2023

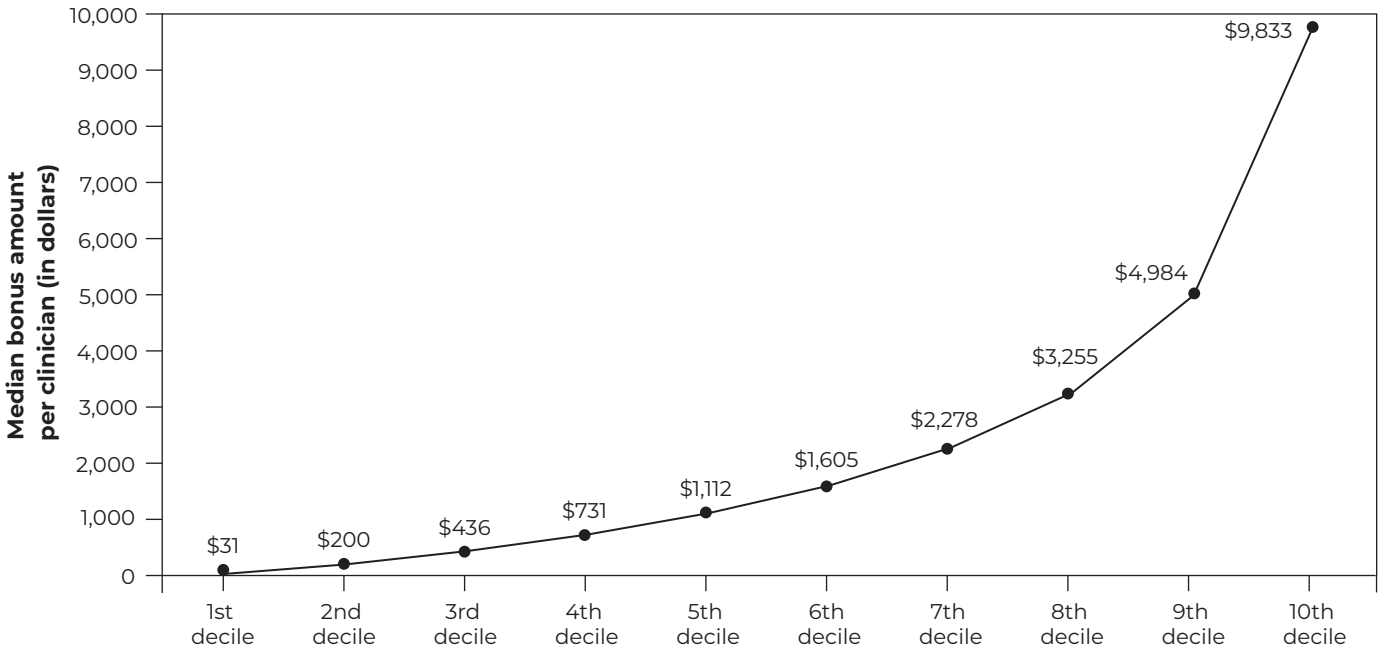


Note: A–APM (advanced alternative payment model). Figure reflects the share of clinicians who billed fee-for-service (FFS) Medicare who qualified for the bonus. Graph shows only the most common clinician types and specialties (that have at least 8,000 clinicians who billed FFS Medicare in 2021). "Hospitalist" includes physicians with specialties of internal medicine, family practice, geriatric medicine, or pediatric medicine whose claims data indicate that they primarily practice in the inpatient hospital setting. Numbers have been rounded to the nearest percentage point.

Source: MedPAC analysis of CMS data identifying the national provider identifiers of clinicians who qualified for the A–APM participation bonus in 2023 based on their 2021 A–APM participation, linked to 100 percent of Medicare physician fee schedule claims data for 2021.

FIGURE 1–4

The size of A–APM participation bonuses varied widely, 2023



Note: A–APM (advanced alternative payment model). Figure shows our estimate of the median bonus amount at different deciles in the 2023 payment year. Bonuses were calculated based on A–APM participation from two years prior (2021) and Medicare payments from one year prior (2022). Bonuses totaled $607 million in our analysis, which is lower than the $644 million that CMS reported paying out in 2023 (Centers for Medicare & Medicaid Services 2023b). Our estimates are slight underestimates of bonus sizes primarily because, when calculating bonuses, we did not include supplemental service payments that clinicians receive through A–APMs (e.g., capitated care management fees).

Source: MedPAC analysis of CMS data identifying the national provider identifiers of clinicians who qualified for the A–APM participation bonus in 2023 (based on 2021 A–APM participation) linked to 100 percent of Medicare physician fee schedule claims for 2022.

the volume of and spending on fee schedule services per beneficiary has grown. Longer-term measures of access to care, such as applications to medical school and clinician incomes, have also remained positive.

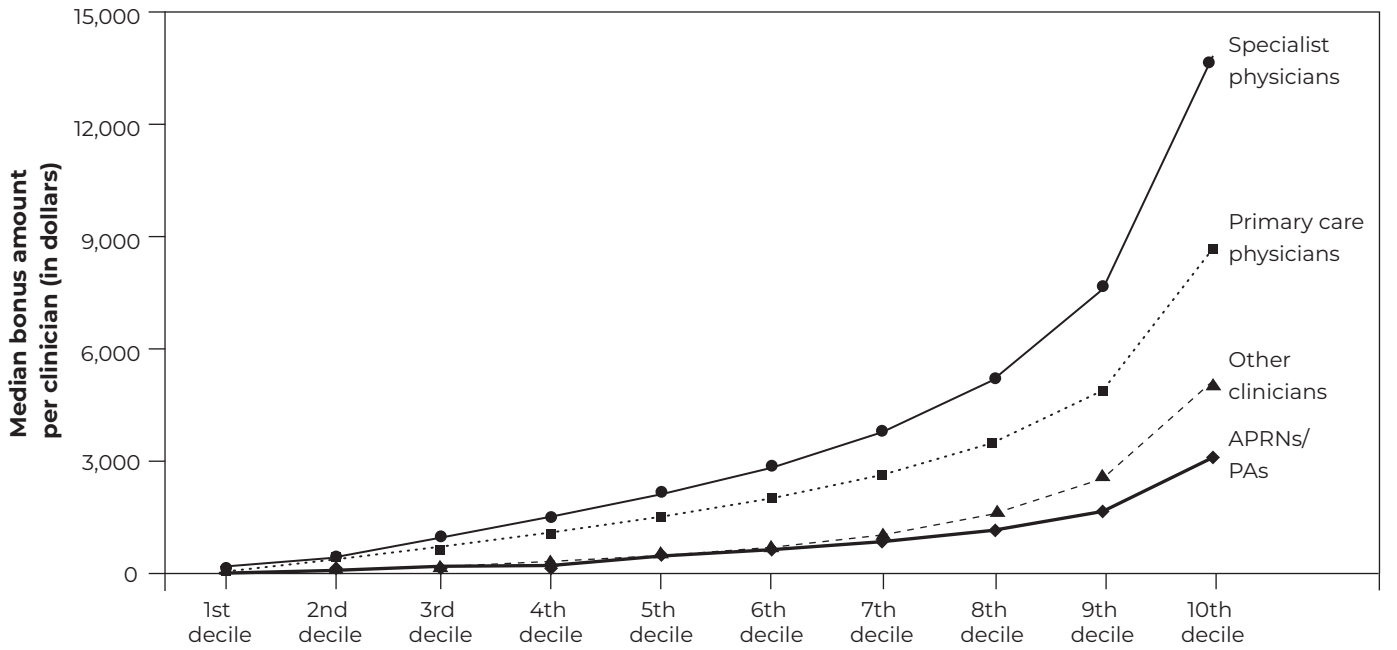
Survey data suggest beneficiaries' access to care is comparable with that of the privately insured

The Commission sponsors an annual survey of Medicare beneficiaries ages 65 and over and privately insured individuals ages 50 to 64. The goal of surveying these two groups is to identify whether any problems accessing care observed among the Medicare population are confined to that population (which could suggest issues with Medicare's payment rates) or are also experienced by other patients (which could suggest larger issues in the health care sector). Over nearly two decades, our survey has generally found that Medicare beneficiaries' access to care is comparable with, or better than, that of privately insured people.

The Commission also considers data from other surveys, which also tend to conclude that Medicare beneficiaries have good access to care. For example:

- CMS's 2021 Medicare Current Beneficiary Survey found that a relatively small share of beneficiaries (6 percent) reported experiencing trouble getting health care in the past year (Medicare Payment Advisory Commission 2024).

FIGURE 1–5 **The size of A–APM participation bonuses varied by clinician specialty and type, 2023**



Note: A–APM (advanced alternative payment model), APRN (advanced practice registered nurse), PA (physician assistant). Figure shows our estimate of the median bonus amount at different deciles for different types and specialties of clinicians in the 2023 payment year. Bonuses were calculated based on A–APM participation from two years prior (2021) and Medicare payments from one year prior (2022). "Other clinicians" are dentists, dieticians, audiologists, podiatrists, psychologists, licensed clinical social workers, speech language pathologists, occupational therapists, physical therapists, anesthesiology assistants, optometrists, and chiropractors. Bonuses totaled $607 million in our analysis, which is lower than the $644 million that CMS reported paying out in 2023 (Centers for Medicare & Medicaid Services 2023b). Our estimates are slight underestimates of bonus sizes primarily because, when calculating bonuses, we did not include supplemental service payments clinicians receive through A–APMs (e.g., capitated care management fees).

Source: MedPAC analysis of CMS data identifying the national provider identifiers of clinicians who qualified for the A–APM participation bonus in 2023 (based on 2021 A–APM participation) linked to 100 percent of Medicare physician fee schedule claims for 2022.

- The Medical Expenditure Panel Survey has found that around age 65, when most people gain eligibility for Medicare, there is a reduction in reports of being unable to get necessary care and being unable to get needed care because of cost (Jacobs 2021).
- The National Health Interview Survey has found that delaying or forgoing needed care due to cost was more common among adults under the age of 65 than adults over the age of 65 (National Center for Health Statistics 2021).
- The Behavioral Risk Factor Surveillance System survey has found that, compared with people with employer-sponsored or individually purchased health insurance, Medicare beneficiaries are more likely to have a personal physician, less likely to have medical debt, and more likely to be very satisfied with their care (Wray et al. 2021).

Clinicians accept Medicare at similar rates as commercial insurance

The Commission has found a substantial and growing difference between Medicare and commercial payment rates for clinician services. However, we have not found evidence that this payment differential impacts clinicians' willingness to accept new Medicare patients.

Using 2022 data from preferred provider organization (PPO) health plans that are part of a large national

insurer, the Commission found that PPO payment rates for clinician services averaged 136 percent of Medicare's payment rates (Medicare Payment Advisory Commission 2024). Other researchers have found similar ratios of Medicare and commercial payment rates for clinician services (Congressional Budget Office 2022). Further, over the last decade, the Commission has found that the difference between commercial and Medicare payment rates has widened. We found that, from 2011 to 2022, commercial PPO payment rates for clinician services increased from 122 percent of Medicare's payment rates to 136 percent of Medicare's rates (Medicare Payment Advisory Commission 2024).

Yet the share of clinicians who accept Medicare is comparable with the share who accept private health insurance. From 2014 to 2019, the share of nonpediatric office–based physicians who accepted Medicare was only 0 percentage points to 2 percentage points lower than the share who accepted private health insurance, according to the Centers for Disease Control and Prevention's National Electronic Health Records Survey (Ochieng et al. 2022). More recently, the 2021 National Ambulatory Medical Care Survey found that among the 94 percent of nonpediatric office–based physicians who reported accepting new patients, 89 percent said they accepted new Medicare patients and 88 percent said they accepted new privately insured patients (Schappert and Santo 2023).

A 2022 AMA survey of clinicians in a wider range of clinical settings found that among nonpediatric physicians accepting new patients, 96 percent accepted new Medicare patients and 98 percent accepted new commercial insurance patients (American Medical Association 2023d). The AMA survey found that acceptance of Medicare varied by clinical setting and medical specialty. Among those accepting new patients, larger shares of physicians in hospital-owned practices accepted Medicare (98.6 percent) compared with physicians in private practice (94.1 percent), although both shares were high. And among those accepting new patients, larger shares of specialists accepted Medicare (e.g., 99.6 percent of internal medicine subspecialists, 99.4 percent of general surgeons, 98.7 percent of radiologists) compared with family medicine physicians (94.0 percent)—but again, all rates were high. (One specialty with notably low acceptance of Medicare was psychiatry: Among those taking new patients, only 80.7 percent of psychiatrists accepted new Medicare patients.)

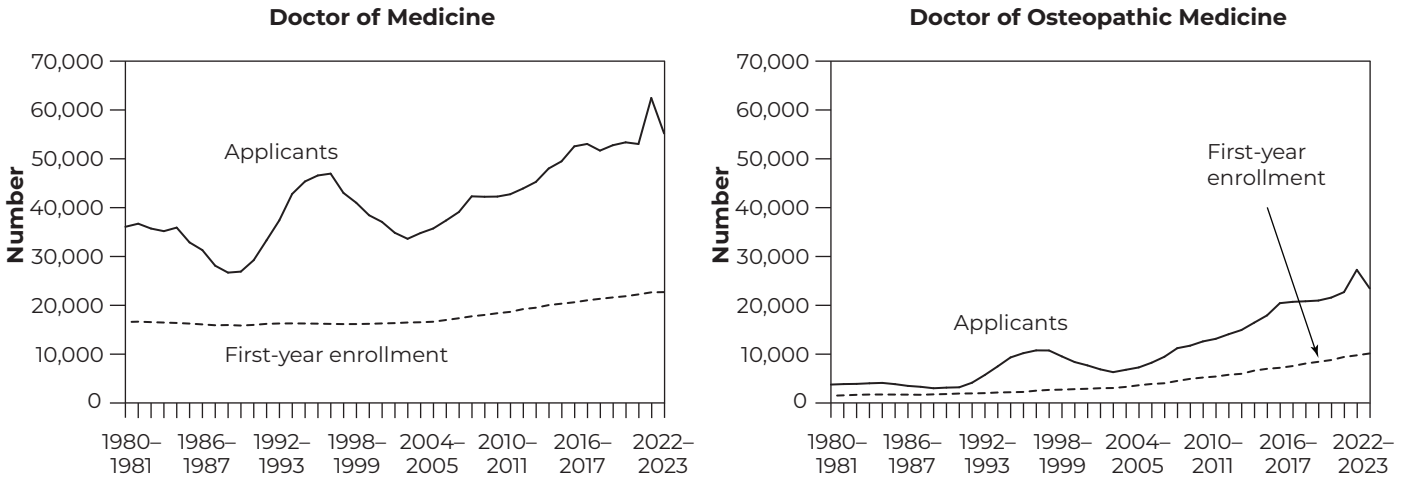
Clinicians may choose to accept Medicare, despite payment rates that are lower than commercial rates, for several reasons. For example, a large and increasing share of clinicians' patients are enrolled in Medicare, and Medicare beneficiaries are high utilizers of services. If clinicians opted to accept only commercially insured patients, they might be unable to fill their panel of patients and would therefore lose revenue due to having fewer patients. According to the National Health Expenditure Accounts, from 2000 to 2022, the share of national spending on physician services accounted for by Medicare increased from 23 percent to 35 percent (Centers for Medicare & Medicaid Services 2022d). In addition, physicians who are employed by hospitals or health plans may be required to accept Medicare as a condition of employment, and some hospitals may require physicians to participate in Medicare to receive admitting and clinical privileges. The administrative simplicity of billing FFS Medicare may also help offset the program's lower payment rates. Commercial insurers often impose burdensome requirements on clinicians that take time to complete, such as frequently requiring clinicians to appeal denied claims and complete prior authorizations (American Medical Association 2023a). In contrast, FFS Medicare generally requires no prior authorization for services and is known as a prompt payer since it is required by law to pay "clean" claims within 30 days and must pay providers interest on any late payments (42 USC 1395u (c)).

Volume and intensity of services delivered per beneficiary has increased

Since 2000, the volume and intensity of clinician services furnished to beneficiaries—and the resulting payments that clinicians have received—have increased substantially. For example, from 2000 to 2017, the cumulative per beneficiary growth in volume and intensity of imaging services was 75 percent (Medicare Payment Advisory Commission 2019). The increase in volume and intensity of major procedures and E&M services over the period was somewhat lower but still considerable (47 percent and 45 percent, respectively). With the exception of a dip in utilization during the coronavirus pandemic, the volume of care that beneficiaries receive has continued to increase in more

FIGURE 1–6

The numbers of medical school applicants and first-year enrollment have increased over the last two decades



Source: Association of American Medical Colleges and American Association of Colleges of Osteopathic Medicine.

recent years (Medicare Payment Advisory Commission 2024). Growth in volume and intensity suggests that beneficiaries have been able to continue accessing care.

Longer-term measures of access to care have remained positive

In the long term, access to health care also depends on the supply of clinicians. While less directly related to PFS payment rates than our short-term measures of access, we review evidence on three measures of clinician supply—physician incomes, the number of applicants to medical school, and the number of clinicians who billed the fee schedule.

Physicians' incomes are an important long-term indicator because declining incomes (either nominally or in real, inflation-adjusted terms) could dissuade some college students from entering the medical profession. Also, since the Commission lacks data that would allow us to calculate clinicians' all-payer profit margins from delivering services, we use clinician compensation data as a rough proxy for profitability. Similarly, a decrease in the number of medical school applicants or the number of clinicians billing the fee schedule could signal a declining interest in entering the medical field or treating Medicare beneficiaries, respectively.

Overall, our long-term measures of access to care are positive: Physician incomes have kept pace with (or exceeded) inflation, the number of applicants to medical schools has grown, and the number of clinicians billing the fee schedule has increased substantially. These data suggest that two decades of fee schedule updates below MEI growth have not hurt the long-term supply of clinicians.

- ***Physicians' and other clinicians' incomes have kept pace with or increased faster than inflation.*** One study that determined physicians' incomes using federal tax data found that, from 2005 to 2017, real physician incomes (after factoring in inflation, as measured by the Consumer Price Index for All Urban Consumers (CPI–U)) grew by about 1 percent per year (Gottlieb et al. 2023). More recent survey data suggest that physician incomes continue to keep pace with the CPI–U. However, the effects of recent inflation were substantial, with physician incomes growing more slowly (or declining) early in the

recent coronavirus pandemic and increasing more quickly in 2022 relative to growth in costs (Kelly 2022, Medicare Payment Advisory Commission 2024). The incomes of nurse practitioners and physician assistants also continue to grow at rates at or above inflation. For example, from 2013 to 2022, the average total income for PAs who worked in primary care increased from about $88,000 to $111,000, an average annual increase of 2.7 percent (National Commission on Certification of Physician Assistants 2022, National Commission on Certification of Physician Assistants 2014). This growth was similar to the average annual CPI–U growth over the same time. Similarly, one study found that NPs' incomes grew 5.5 percent faster than the CPI–U from 2010 to 2017 (Auerbach et al. 2020).

- ***The number of applicants to medical schools has increased.*** Physicians in the U.S. hold either a doctor of medicine (MD) or doctor of osteopathic medicine (DO) degree. Over more than two decades of fee schedule updates below MEI growth, the number of applicants and first-year enrollees at both MD-granting and DO-granting educational institutions has increased. For example, from the 2000–2001 academic year to the 2022–2023 academic year, the number of applicants to MD-granting institutions rose from 37,088 to 55,188, an increase of 49 percent, and the number of applicants to DO-granting institutions climbed from 7,708 to 23,488, an increase of 205 percent (American Association of Colleges of Osteopathic Medicine 2023, Association of American Medical Colleges 2022) (Figure 1-6). At other times (including times when Medicare's physician payment rate updates were higher), the numbers of applicants were flat or declined (e.g., during the 1980s). While a review of the causes of these trends is beyond the scope of this chapter, these data suggest that issues other than fee schedule updates (e.g., restrictions on the number of graduate medical education slots that Medicare pays for, resulting from a previous concern about the potential oversupply of physicians in the 1980s) have had more influence on medical school applicants and enrollees, and the level of fee schedule updates over the last two decades has not attenuated college students' interest in becoming physicians.[14]
- ***The number of clinicians billing the PFS has increased.*** The number of clinicians billing the fee schedule has increased substantially over time, and the number of clinicians who opt out of Medicare remains very low (Ochieng and Clerveau 2023).[15] From 2009 to 2021, patterns in the increasing number of clinicians who billed the fee schedule varied by clinician type. Over that period, the number of APRNs and PAs who billed the fee schedule increased by nearly 9 percent per year while the number of physicians billing the fee schedule grew by just over 1 percent per year (Medicare Payment Advisory Commission 2023b, Medicare Payment Advisory Commission 2013).[16]

Concerns about the adequacy of future payments to clinicians

The Commission's past assessments have generally indicated that Medicare beneficiaries have relatively good access to care. However, we are concerned about whether beneficiaries will maintain adequate access to care in the future since growth in clinicians' costs is expected to exceed growth in FFS Medicare payment rates by a greater amount than over the past two decades. This larger gap could create incentives for clinicians to reduce the number of Medicare beneficiaries they treat or stop participating in Medicare entirely. In addition, the growing differential between payment rates for clinician services billed in freestanding clinician offices versus HOPDs could further encourage services to be billed in the higher-paid HOPD setting and spur additional vertical consolidation in the health care industry. At the same time, the sunsetting of the A–APM participation bonus, as specified in current law, could result in top-performing clinicians exiting A–APMs if MIPS becomes a more generous program in coming years.

The impact of inflation on the future adequacy of PFS payment rates

MACRA has achieved one of its policy goals of stabilizing updates to fee schedule payment rates; since MACRA was enacted, rates have been higher and more predictable than what would have occurred under the SGR. But recent increases in the costs of running clinician practices and projections indicating higher inflation over the next several years compared with

the prepandemic period have led to concerns about the adequacy of current-law updates to fee schedule payment rates scheduled under MACRA. While MACRA was supported by physician groups like the AMA and was initially seen as an acceptable way of avoiding deep rate cuts called for by the previous SGR formula, stakeholders and others have increasingly called into question the law's framework of fixed updates (Boards of Trustees 2023, McAneny 2016, O'Reilly 2023).

The MEI measures annual changes in input costs for clinician services

The MEI was originally used in the 1970s in Medicare's charge-based payment system for clinician services to limit year-to-year payment increases. While Medicare no longer uses the MEI to increase (or limit) PFS payment rates, CMS still maintains the index for various purposes.

The MEI measures the weighted average price change for various inputs involved in furnishing clinician services. Specifically, the MEI is a fixed-weight input price index comprised of two broad categories—clinician compensation and practice expenses. According to data used to calculate the MEI, on average, clinician compensation accounts for 47.5 percent of the cost of furnishing clinician services and includes wages and benefits of physicians and other clinicians who bill the PFS directly (e.g., NPs and PAs). Practice expenses account for the remaining 52.5 percent (Table 1-1). CMS determines the distribution of expenses largely based on the U.S. Census Bureau's Service Annual Survey (SAS), supplemented by several other data sources. The SAS provides annual nationwide estimates of revenue, expenses, and other measures for most traditional service industries (Census Bureau 2021).

The distribution of expenses is directly related to payments under the physician fee schedule. In the past, when CMS rebased the MEI (i.e., updated the base year data to establish the distribution of expenses), the agency rescaled the RVUs under the fee schedule to match the distribution of expenses under the MEI. In other words, in aggregate, 47.5 percent of the RVUs under the fee schedule should be associated with clinicians' work because the MEI suggests that 47.5 percent of the expenses associated with furnishing clinician services are associated with the costs of clinician compensation. But in 2022, CMS revised and rebased the MEI using 2017 data but did not rescale the RVUs under the fee schedule. So, the distribution of RVUs under the fee schedule is currently based on data reflecting physicians' practice costs in 2006. The MEI based on 2006 data attributes 50.9 percent of the cost of furnishing clinician services to clinician compensation.

Once CMS establishes the distribution of expenses, the next step is to determine how the prices in each of the categories of expenses grow over time. To do so, CMS relies on a sample of commercial professional liability insurance carriers and three data sources from the U.S. Bureau of Labor Statistics to measure changes in the input costs of maintaining a physician office:

- the Employment Cost Index (ECI), which measures the change in the hourly labor cost to employers over time;
- the Producer Price Index (PPI), which measures the average change over time in the selling prices received by domestic producers for their output; and
- the Consumer Price Index (CPI), which measures the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

The decision about which price proxy to use is limited by available data and involves trade-offs. For example, in 2012, when considering the price proxy for clinician compensation, the Medicare Economic Index Technical Advisory Panel, established by the Secretary for Health and Human Services, sought an index that reflected a highly skilled occupational mix that was not heavily influenced by trends in actual physician wages that could create endogeneity or circularity concerns. The panel considered a broad index that included all private industry workers, for which the share of total employees who were physicians was only 0.6 percent. The panel also considered a slightly narrower index comprised of professional workers, for which the share of total employees who were physicians was slightly higher at 4.0 percent. The panel recommended the slightly narrower index because it better reflected a more highly skilled mix of occupations and was still only minimally influenced by the actual wages of physicians (Berndt 2012).

The price proxies used in the MEI are similar to what CMS uses for other market baskets. For example, for

TABLE 1–1 **Medicare Economic Index expense categories and price proxies (based on 2017 data)**

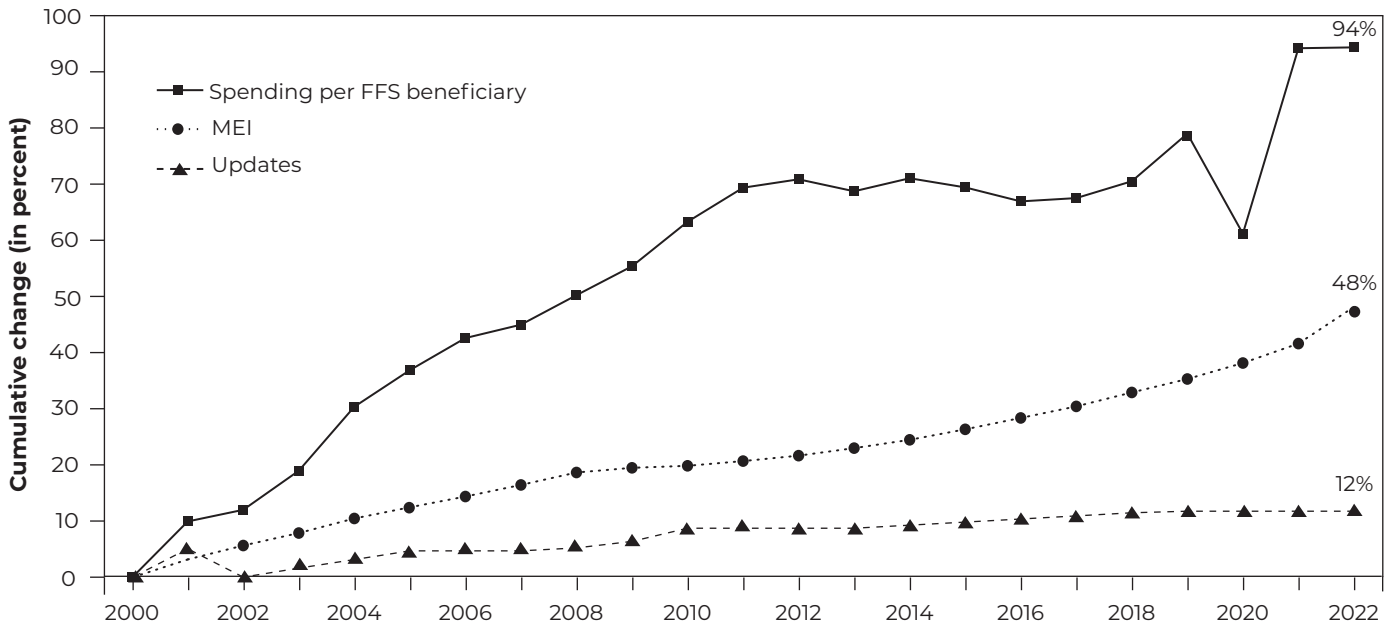
Expense category (weight)	Price proxy	Total expense weight
Clinician compensation		
Wages and salaries (39.4%)	ECI for wages and salaries for professional and related occupations	**47.5%**
Benefits (8.1%)	ECI for benefits for professional and related occupations	
Practice expense		
Nonphysician compensation (25.5%)		**52.5%**
Nonphysician wages (21.1%)		
Nonhealth, nonphysician wages (10.9%)		
Professional and related (1.3%)	ECI for wages and salaries for professional and related occupations	
Management (2.1%)	ECI for wages and salaries for management, business, and financial	
Clerical (6.8%)	ECI for wages and salaries for office and administrative support	
Services (0.7%)	ECI for wages and salaries for service occupations	
Health-related, nonphysician wages (10.3%)	ECI for wages and salaries for hospital workers	
Nonphysician benefits (4.3%)	Composite ECI for nonphysician employee benefits	
Other practice expense (27.0%)		
Utilities (0.4%)	CPI for fuel and utilities	
All other products (2.0%)	PPI—final demand—finished goods less foods and energy	
Telephone (0.5%)	CPI for telephone services	
All other professional services (13.4%)		
Professional, scientific, and technical services (6.1%)	ECI for total compensation for professional, scientific, and technical services	
Administrative and waste services (2.3%)	ECI for total compensation for administrative, support, waste management, and remediation services	
All other services (5.0%)	ECI for compensation for service occupations	
Capital (7.5%)		
Fixed capital (e.g., rent and depreciation) (5.3%)	PPI for lessors of nonresidential buildings	
Movable capital (e.g., equipment) (2.1%)	PPI for machinery and equipment	
Professional liability insurance (1.3%)	Data collected by CMS from a sample of commercial insurance carriers	
Medical supplies (2.0%)	50/50 blend of the PPI for surgical appliances and the CPI for medical equipment and supplies	

Note: ECI (Employment Cost Index), CPI (Consumer Price Index), PPI (Producer Price Index). Information is from the Medicare Economic Index based on 2017 data. "Clinician compensation" includes physicians, nurse practitioners, physician assistants, and other practitioners who can bill the fee schedule independently. Subcategories might not sum to total categories because of rounding.

Source: MedPAC summary of CMS regulations.

FIGURE 1–7

Physician fee schedule spending per FFS beneficiary grew substantially faster than the MEI or fee schedule payment updates, 2000–2022



Note: FFS (fee-for-service), MEI (Medicare Economic Index). The MEI measures the change in clinician input prices. MEI data are from the new version of the MEI (based on data from 2017) and include an adjustment for productivity growth. Spending per FFS beneficiary is based on incurred spending under the physician fee schedule. The graph shows increases to payment rates in nominal terms. Fee schedule updates do not include Merit-based Incentive Payment System adjustments, advanced alternative payment model participation bonuses, and payment increases of 3.75 percent in 2021 and 3.0 percent in 2022 because they are one-time payments not built into subsequent years' payment rates.

Source: MedPAC analysis of Medicare regulations and Trustees' reports.

the hospital market basket, CMS also uses data from the ECI, PPI, and CPI. However, the expense categories have different weights (e.g., the category of wages and salaries for hospital workers has a greater weight in the hospital inpatient market basket than in the MEI) and some categories do not overlap (e.g., the hospital market basket includes categories for blood products, pharmaceutical products, and food, whereas the MEI does not). Similar to other market baskets used by Medicare, the MEI is also reduced by the 10-year moving average of private nonfarm business (economy-wide) total factor productivity.

MEI growth has outpaced statutory fee schedule updates

MEI growth has consistently exceeded fee schedule payment rate updates. For the two decades from 2001 to 2020, MEI growth exceeded fee schedule updates by an average of just over 1 percentage point per year (1.6 percent annually vs. 0.6 percent).[17]

From 2000 to 2022, the cumulative increase in fee schedule updates totaled 12 percent compared with MEI growth of 48 percent (Figure 1-7). The growing gap between statutory fee schedule updates and MEI growth means that Medicare payments per service (unadjusted for increases in intensity) have declined substantially in inflation-adjusted terms over time.

But growth in Medicare spending per beneficiary on clinician services has significantly outpaced growth in the MEI, suggesting continued growth in clinicians' Medicare revenues above the level of inflation. As seen in Figure 1-7, Medicare's PFS payments per FFS beneficiary have grown twice as fast as MEI growth

over the last two decades. Specifically, from 2000 to 2022, Medicare fee schedule spending per FFS beneficiary grew by 94 percent compared with MEI growth of 48 percent. These data indicate that, even after adjusting for inflation, each Medicare beneficiary generated more revenue for clinicians in 2022 than they did in 2000. Because increases in volume and intensity generally increase costs (e.g., furnishing an additional service may require clinicians to purchase additional supplies, and a more intense service may require more clinician time), the growth in fee schedule spending per FFS beneficiary should not be interpreted as profit growth. Nonetheless, the substantial growth in fee schedule spending per FFS beneficiary suggests that simply comparing changes in fee schedule updates with MEI growth is insufficient to capture changes over time in clinicians' ability to provide services to Medicare beneficiaries.

Multiple factors drove the large increase in spending over this time. Two of the largest factors are increases in the number of services received per beneficiary and the increase in intensity of those services. As each beneficiary receives more services (e.g., more procedures) or more intense services (e.g., higher-level office visits), Medicare's payments to clinicians increase accordingly.

MEI growth is projected to exceed fee schedule updates by more in the future than it has in the past

MEI growth was relatively low for two decades preceding the coronavirus pandemic, averaging 1.6 percent per year from 2001 to 2020. Beginning in 2021, MEI growth accelerated, reaching an annual rate of 4.6 percent in 2022. CMS expects MEI growth to slow in the coming years. Despite this moderation, MEI growth is still projected to remain somewhat above the levels experienced during much of the past two decades, averaging 2.3 percent per year from 2025 through 2033.

In comparison, over the same period, fee schedule payment rates are set to increase by 0 percent in 2025 and then by 0.75 percent per year for qualifying clinicians in A–APMs and 0.25 percent per year for clinicians not in A–APMs. As a result, the average difference between projected MEI growth and fee schedule updates from 2025 to 2033 is expected to be 1.7 percent annually for clinicians in A–APMs and 2.1 percent for clinicians not in A–APMs. Thus, MEI growth is projected to exceed fee schedule updates by more than it has over the last two decades.

Growing payment differentials for services billed in HOPDs versus freestanding clinician offices

Medicare commonly pays more for the same service when billed in HOPDs versus freestanding clinician offices. Research suggests that these site-of-service payment differentials have contributed to vertical consolidation, though the effect may be modest and varies by clinician specialty or type of service, and other factors may also encourage vertical consolidation. Still, site-of-service payment differentials distort competition and, if allowed to worsen, could cause further vertical consolidation, not because such a model is the most efficient way to deliver high-quality care but because it generates higher revenues—at the expense of Medicare beneficiaries and taxpayers. Increased vertical consolidation could also result in providers negotiating higher payment rates from commercial payers, which would lead to higher premiums for privately insured enrollees.

Medicare generally pays more for the same service when billed in an HOPD versus a freestanding clinician office

When a clinician bills a fee schedule service in a nonfacility setting (e.g., a freestanding clinician office), Medicare typically makes one payment through the physician fee schedule. This payment is designed to reflect the cost of the clinician's work, practice expenses (e.g., staff, supplies, and rent), and professional liability insurance. When a clinician bills the same service in an HOPD, the Medicare program usually makes two payments—one under the PFS and a second under the OPPS. In this case, the fee schedule payment generally covers the same costs associated with the clinician's work and professional liability insurance, but typically a smaller amount of practice expenses. The OPPS payment is intended to cover the costs that the hospital incurs as a result of the service being performed at the facility (i.e., a portion of the practice expense). The combination of these two payments is typically higher than the single fee schedule payment Medicare makes when the service is performed in a nonfacility setting. For example, in

TABLE 1–2

Medicare generally paid more for services when billed in a hospital outpatient department rather than a nonfacility setting, 2023

	Office visit, 30–39 minutes	CT scan, abdomen and pelvis (with contrast)	IMRT treatment delivery	Vascular procedure
Service billed in a nonfacility setting (e.g., a clinician office)				
Physician fee schedule payment	$128.43	$322.61	$364.97	$1,230.78
Physician work	65.06	61.67	0.00	163.68
Nonfacility PE	58.62	256.86	363.61	1,043.73
Professional liability insurance	4.74	4.07	1.36	23.38
Total payment	**128.43**	**322.61**	**364.97**	**1,230.78**
Service billed in an HOPD				
Physician fee schedule payment	$97.60	$87.43	$0.00	$236.53
Physician work	65.06	61.67	0.00	163.68
Facility PE	27.79	22.37	0.00	49.48
Professional liability insurance	4.74	3.39	0.00	23.38
Hospital OPPS payment	120.86	368.43	572.47	5,215.40
Total payment	**218.46**	**455.86**	**572.47**	**5,451.93**
Percentage by which total payments are higher when billed in an HOPD versus a nonfacility setting	70%	41%	57%	343%

Note: CT (computed tomography), IMRT (intensity-modulated radiation therapy), PE (practice expense), HOPD (hospital outpatient department), OPPS (outpatient prospective payment system). Healthcare Common Procedure Coding System codes used in this table include 99214 (office visit), 74177 (CT scan), G6015 (IMRT), and 36902 (vascular procedure). All services in this example are assumed to have been performed in an on-campus HOPD or, for services other than HCPCS code 99214, an excepted off-campus HOPD. Payment rates do not account for greater packaging under the OPPS. Components may not sum to totals due to rounding.

Source: MedPAC analysis of CMS's RVU file and OPPS addenda.

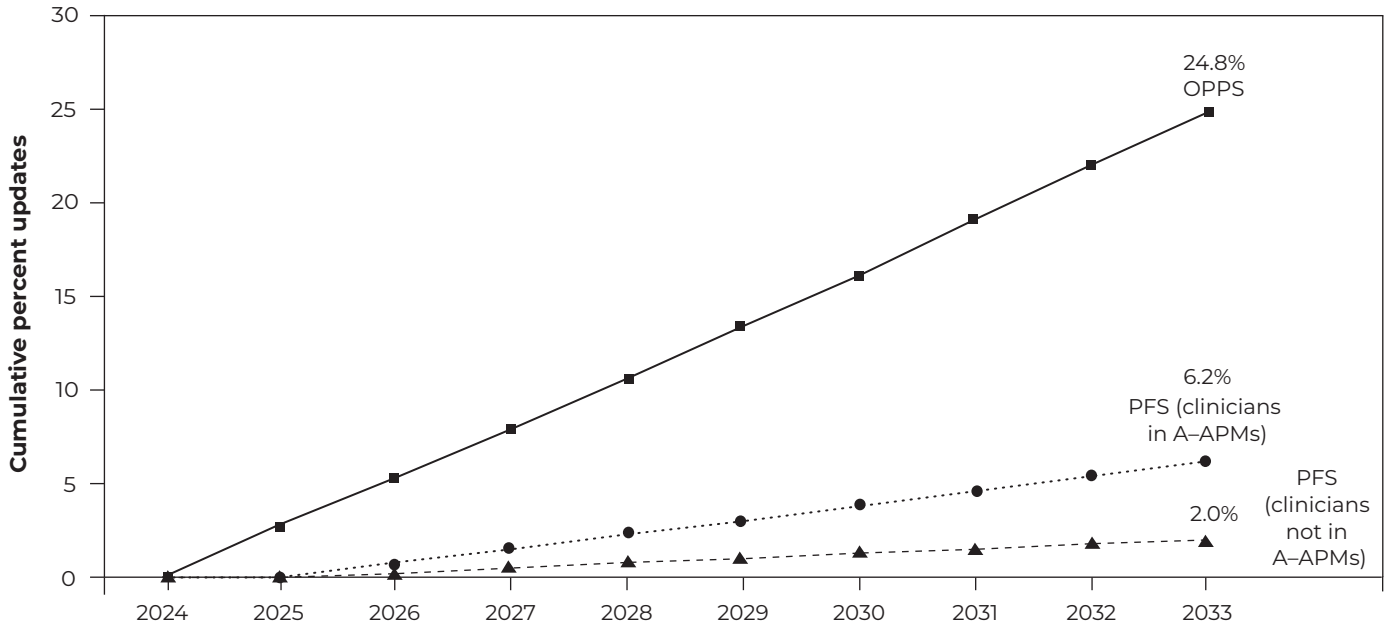
2023, for an office visit lasting 30–39 minutes or with a moderate level of medical decision-making (HCPCS code 99214), Medicare's total payment was $128 when billed in a freestanding clinician office but $218 when billed in an HOPD (combining the fee schedule payment of $98 and the OPPS payment of $121) (Table 1-2).

For other types of services, such as certain radiation therapy services, tests (e.g., skin, audiology, cardiology), and chemotherapy or intravenous injection services, Medicare makes a fee schedule payment only when the service is billed in a nonfacility setting. When such services are billed in the HOPD, they generate only an OPPS payment and no payment under the physician fee schedule.[18] Nevertheless, Medicare's total payment for these services is often higher when billed in an HOPD compared with a nonfacility setting. For example, in 2023, Medicare's total payment for one type of radiation therapy service (HCPCS code G6015) was $365 when billed in a nonfacility setting and $572 when performed in an HOPD (Table 1-2).

As Table 1-2 illustrates, the size of site-of-service payment differentials varies, but Medicare generally pays more when services are billed in the HOPD. Another issue highlighted by Table 1-2 is that payment differentials are driven by differences in payments for practice expenses rather than work or professional

FIGURE 1–8

Updates to hospital outpatient prospective payment system rates are projected to substantially exceed physician fee schedule updates



Note: PFS (physician fee schedule), A–APM (advanced alternative payment model), OPPS (outpatient prospective payment system). Update projections exclude adjustments that are made to the PFS and/or the OPPS conversion factors, such as budget-neutrality adjustments.

Source: MedPAC calculations based on Medicare Access and CHIP Reauthorization Act of 2015 and Office of the Actuary projections of hospital market basket and productivity.

liability insurance.[19] For example, for a CT scan of the abdomen and pelvis with contrast in 2023, Medicare paid the same amount for clinicians' work ($62) regardless of where the scan was billed, but the practice expense payment was much lower when billed in a nonfacility setting ($257) compared with an HOPD ($391).

All else equal, these payment differentials are set to widen over time because current law will require CMS to increase OPPS payment rates by the hospital market basket (minus an adjustment for productivity growth) and to increase fee schedule rates by much lower factors. From 2025 to 2033, the hospital market basket (adjusted for productivity growth) is projected to increase by an average of 2.5 percent per year compared with fee schedule rates that are set to increase by 0 percent in 2025 and then 0.25 percent or 0.75 percent per year thereafter. Over that period, fee schedule rates are projected to experience cumulative growth of 2.0 percent for clinicians not in A–APMs and 6.2 percent for clinicians in A–APMs, while OPPS rates are projected to grow by 24.8 percent (Figure 1-8).

Medicare site-of-service payment differentials likely contribute to growing vertical consolidation, but other factors may also be important

Direct hospital employment of clinicians or hospital ownership of clinician practices is referred to as "vertical consolidation." Vertical consolidation among clinicians and hospitals has increased substantially over the last decade. According to an AMA survey, from 2012 to 2022, the share of physicians who were either directly employed by a hospital or part of a practice with hospital ownership increased from about 29 percent to 41 percent (Kane 2023).

The Commission is concerned that ongoing site-of-service payment differentials distort competition and encourage vertical consolidation. The result is that markets may gravitate toward a particular care delivery model (in this case, a vertically consolidated one) not because that model is the most efficient way to deliver high-quality care but because it generates higher Medicare payments.

While vertical consolidation may have benefits, it also can have several negative effects on beneficiaries and taxpayers. Vertical consolidation leads to services that could be billed in freestanding clinician offices being billed in HOPDs. Shifting from billing as a freestanding clinician office to an HOPD increases spending for the Medicare program and beneficiaries, and research has generally found that it does not result in improvements in quality (Post et al. 2018, Short and Ho 2019). In addition, increased vertical consolidation can create negative spillover effects in the commercial insurance market (e.g., clinicians in vertically consolidated practices can negotiate higher payment rates from commercial payers, which leads to higher premiums for privately insured enrollees) (Neprash et al. 2015).

In 2010, CMS began using new data to calculate practice expense RVUs. Using the new data resulted in substantial payment increases for some services but reductions for others, which led to payment increases or decreases for different specialties. For example, CMS estimated that payments to family medicine physicians would increase by 5 percent but decrease by 14 percent for radiologists after the payment changes were fully phased in (Centers for Medicare & Medicaid Services 2009). Because these payment changes applied to the fee schedule and not to OPPS payments, site-of-service payment differentials increased for services with reduced fee schedule payment rates.

Multiple studies used the payment changes in the fee schedule as an opportunity to study the effect of payment differentials on vertical consolidation. One study focused on three cardiac imaging services—myocardial perfusion imaging, echocardiograms, and electrocardiograms—that experienced large payment rate reductions as a result of the rebalancing of practice expense RVUs in 2010. That study found that the share of such imaging services billed in HOPDs for a sample of Medicare beneficiaries and commercially insured patients increased after fee schedule payments were reduced for these services (Song et al. 2015). A descriptive study that looked at advanced imaging services—magnetic resonance imaging, computed tomography, and nuclear medicine—also noted a shift toward the HOPD over a similar period (Steinwald et al. 2021).[20]

Another study that primarily relied on a sample of physicians from private claims data found that Medicare's 2010 practice expense changes (and the resulting changes in payment rates) accounted for a 0.9 percentage point increase in vertical consolidation from 2009 to 2013, or about 20 percent of the increase in vertical consolidation over that period in the geographic areas covered by their sample (Dranove and Ody 2019). (Within the researchers' sample—which consisted of urban areas in states that cover about 8 percent of the U.S. population—vertical consolidation of physicians increased from about 9 percent in 2009 to nearly 14 percent in 2013.) The study also found that the 2010 changes led the share of Medicare services performed in a facility to increase by 0.88 percentage points from 2009 to 2013. The authors explored why the share of services performed in facilities increased—assessing whether it was due to services shifting from nonfacilities to facilities, a reduction in nonfacility volume (without an offsetting increase elsewhere), or other factors. The study concluded that under 20 percent of the increase in the Medicare facility share was driven by services shifting from nonfacility to facility settings (Dranove and Ody 2019).

Another study used a national sample of Medicare data to calculate payment differences when services were billed in freestanding clinician offices versus HOPDs over a longer period (2010 to 2016) and then examined whether those payment differentials were associated with vertical consolidation. The study found that payment differentials were large and growing (Post et al. 2021). However, the large payment differentials documented in this study were only modestly positively related to vertical consolidation between hospitals and physicians. Using models that estimated the association of payment differentials and vertical consolidation within physician specialties, the study found that an increase in payment differentials from the 25th percentile to the 75th percentile was associated with a 0.20 percentage point increase in the probability of vertical consolidation (Post et al.

2021). (In the study's sample, vertical consolidation increased from about 23 percent of physicians in 2010 to 27 percent of physicians in 2016.) Additionally, the authors' unadjusted cross-sectional analysis found little evidence that higher payment differentials were correlated with differences in vertical consolidation across specialties, suggesting that other factors might be just as or more important in driving consolidation. They found that some of the specialties with the highest differentials—urologists, gastroenterologists, and surgical specialties—had the lowest levels of vertical consolidation, while other specialties with lower differentials—such as diagnostic radiology and oncology—were more likely to be vertically consolidated (Post et al. 2021).

Further research also suggests that factors beyond Medicare payment differentials are important in terms of encouraging vertical consolidation. Some other factors that researchers and other stakeholders have cited include:

- a desire among physicians to enhance their negotiating leverage with private payers (Kane 2023);
- increasing horizontal hospital consolidation (Post et al. 2021);
- a desire by hospitals to ensure a steady stream of referrals (Medicare Payment Advisory Commission 2020);
- increasing prevalence of accountable care organizations (Kanter et al. 2019);
- a desire among physicians to get help complying with payers' regulatory and administrative requirements (Kane 2023); and
- gaining access to 340B drug discounts (Desai and McWilliams 2018).

Regardless of the extent to which payment differentials across settings lead to vertical consolidation among physicians and hospitals, the Commission has long advocated for site-neutral payments (see text box on addressing payment differentials, p. 32).

Clinicians' incentives to participate in A–APMs could diminish in the near future

The Commission is concerned that current law will provide an insufficient incentive for clinicians to choose A–APMs over MIPS in the late 2020s, which could cause many clinicians to exit A–APMs. The Commission maintains that A–APMs hold great promise and strongly favors A–APMs over MIPS, which is a pay-for-performance program that we have recommended repealing (Medicare Payment Advisory Commission 2022b, Medicare Payment Advisory Commission 2021b, Medicare Payment Advisory Commission 2018).

Although most A–APMs implemented to date have not generated net savings for Medicare, they often lead to changes in the mix and/or quantity of services delivered by clinicians and generate gross savings before model payments are taken into account (Congressional Budget Office 2023, Medicare Payment Advisory Commission 2021b). Many A–APMs have yielded sufficiently promising results or sufficiently actionable lessons learned that they have been refined and relaunched as successor models. In the absence of A–APMs, FFS payment approaches would likely have fewer incentives to promote efficiency.

In contrast, we have numerous concerns about the MIPS program, including the fact that it does not meaningfully differentiate among clinicians' quality of care since clinicians report on different sets of measures. MIPS is burdensome due to complex reporting requirements and its payment adjustments have the potential to become large and arbitrary in the future, which could create financial uncertainty for clinicians (Medicare Payment Advisory Commission 2018).

When the clinicians in a practice or other provider organization assess whether to participate in an A–APM each year, there are a number of costs and benefits they must weigh. In addition to MACRA's A–APM participation bonus, clinicians must also estimate the size and likelihood of receiving a positive or negative MIPS adjustment, which could apply to them if (1) they choose not to participate in an A–APM or (2) an insufficient share of their payments or patients are in A–APMs (since the A–APM participation bonus is only available to clinicians with at least a certain share of payments or patients in A–APMs).[21] To date, the A–APM participation bonuses available to clinicians have always been larger than the highest MIPS adjustments—clearly incentivizing participation in A–APMs over participation in MIPS. From 2019 to 2024, A–APM bonuses have been worth 5 percent of a

Addressing payment differentials using site-neutral policies

The Commission has maintained that Medicare should base payment rates on the resources needed to treat patients in the most efficient setting. If the same service can be safely and appropriately provided in different settings, a prudent purchaser should not pay more for that service in one setting than in another. Paying more than is necessary for services increases financial burdens on beneficiaries (in the form of higher premiums and cost-sharing obligations) and taxpayers (in the form of higher Medicare spending). The Commission has published multiple reports analyzing and recommending site-neutral payment rates (Medicare Payment Advisory Commission 2023a, Medicare Payment Advisory Commission 2022b, Medicare Payment Advisory Commission 2012). (For more information on the Commission's most recent site-neutral recommendations, see the June 2023 report to the Congress.)

The Congress adopted site-neutral payment for some services in the Bipartisan Budget Act (BBA) of 2015. Section 603 of the BBA of 2015 established site-neutral payments for services performed at off-campus hospital outpatient departments (HOPDs) by reducing outpatient prospective payment system (OPPS) payment rates for services such that, in the aggregate, Medicare's total payment rate from the fee schedule and OPPS (when a service is performed in the HOPD) is equal to Medicare's payment rate from the fee schedule (when the service is performed in a nonfacility setting). However, this provision applied only to new HOPDs, meaning that all current HOPDs were grandfathered (or "excepted") and continue to receive higher payment rates. Further, this provision does not lower payment rates for services performed at on-campus HOPDs.[22]

CMS has also taken regulatory action to reduce payment differentials across sites of service. In 2019, CMS reduced OPPS payment rates (in a non-budget-neutral manner) to equalize Medicare's total payment rates across settings for evaluation and management (E&M) office visits for all off-campus HOPDs (regardless of whether they were excepted under the BBA of 2015).

Despite progress made toward implementing site-neutral payments, Medicare still commonly pays more for services performed in HOPDs than in nonfacility settings. For example, CMS's site-neutral policy for E&M office visits applies only to off-campus HOPDs. In 2021, about 65 percent of all E&M office visits performed in HOPDs were performed in on-campus HOPDs, meaning Medicare still pays more for these services than if they were furnished in a nonfacility setting. In addition, for all other services, excepted off-campus HOPDs (and all on-campus HOPDs) continue to receive higher payments. ■

clinician's annual Medicare payments for fee schedule services; meanwhile, the largest MIPS adjustment has been 2.34 percent of a clinician's Medicare payments for fee schedule services (Centers for Medicare & Medicaid Services 2023h, Centers for Medicare & Medicaid Services 2022e, Centers for Medicare & Medicaid Services 2020a, Centers for Medicare & Medicaid Services 2020b, Centers for Medicare & Medicaid Services 2018). MIPS is made even less attractive by the fact that the top adjustment is received by only a small minority of MIPS clinicians, since MIPS adjustments vary in size based on a clinician's score on MIPS performance measures.

When weighing whether to participate in an A–APM, clinicians must also estimate the size and likelihood of receiving additional payments and/or penalties in whatever A–APM they are contemplating participating in (e.g., shared savings or shared losses in an ACO

model). Estimates of the size and likelihood of receiving these payments and penalties are in turn influenced by a clinician's expected performance on the measures used in the A–APMs available to them.

Clinicians must also consider the costs they will incur to participate in an A–APM and/or MIPS—in the form of staff time spent learning what performance measures they will be judged on and complying with reporting requirements, clinician time spent delivering the new patient services that are paid for or incentivized, investments in infrastructure such as new software, and other costs (e.g., fees paid to outside companies that can help clinicians optimize their performance in an A–APM).

Under current law, the costs and benefits that clinicians weigh when deciding whether to participate in an A–APM versus MIPS will soon change.

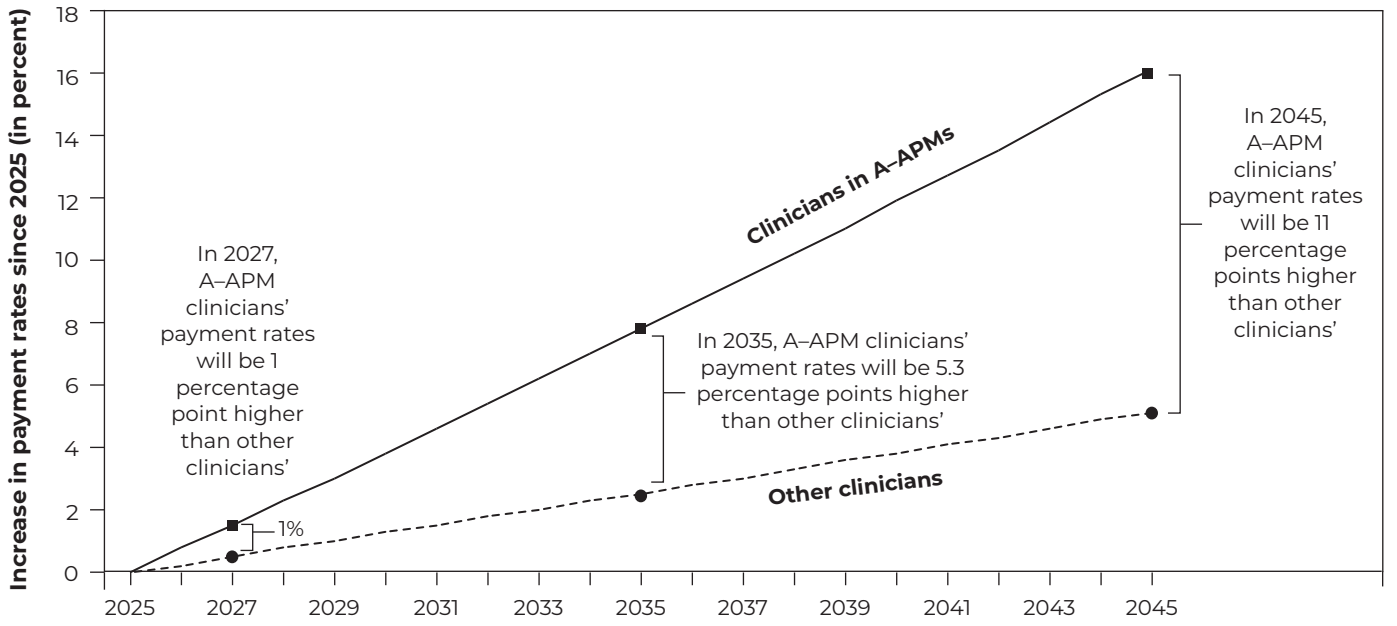
Some changes could result in A–APMs becoming the more attractive option for clinicians, even with the expiration of the A–APM participation bonus after 2026. Starting in the 2025 payment year, current law requires MIPS to change from being a program that pays out $500 million more in positive adjustments than it collects in negative adjustments each year (which has buoyed the size of positive MIPS adjustments) to a budget-neutral program. All else being equal, this change will result in the top MIPS adjustment declining by multiple percentage points. For example, if MIPS were a budget-neutral program in the 2023 payment year, the top MIPS adjustment would have been 0.07 percent instead of 2.34 percent (Centers for Medicare & Medicaid Services 2023h). This change alone could vastly decrease the appeal of MIPS, since participating in MIPS could become less lucrative for top-performing clinicians than participating in an A–APM in coming years (since clinicians typically qualify for additional payments through an A–APM). For example, among Medicare Shared Savings Program ACOs that earned shared savings payments in 2022, the median shared savings payment per clinician was $7,239 in 2022; no ACOs owed shared losses that year (Centers for Medicare & Medicaid Services 2022c).[23] And supplemental payments available to clinicians in the multipayer Comprehensive Primary Care Plus (CPC+) A–APM were worth $44,000 or $64,000 for the median clinician in 2020, depending on the model track (Swankoski et al. 2022).[24]

Yet other changes could result in MIPS becoming the more attractive option. MIPS adjustments can theoretically reach as high as 9 percent under current law, depending on CMS's implementation decisions—such as the selection of the performance threshold that determines whether a MIPS score yields a negative, neutral, or positive MIPS adjustment. So far, this score has been set at relatively low levels, which results in relatively few clinicians receiving negative MIPS adjustments and minimizes how large positive MIPS adjustments can reach.[25] Recently, CMS proposed increasing the MIPS performance threshold from 75 points to 82 points out of 100 for the 2026 payment year, which would have increased the maximum positive MIPS adjustment to 8.82 percent and would have resulted in 46 percent of MIPS clinicians earning a negative adjustment that year, according to CMS projections. After overwhelming opposition to this proposal, CMS ultimately finalized a policy that maintained the current performance threshold at 75 points, which it projects will result in a maximum MIPS adjustment of just 2.99 percent (and cause only 22 percent of MIPS clinicians to receive a negative adjustment in 2026). However, CMS has stated that it intends to revisit its MIPS performance threshold in the future (Centers for Medicare & Medicaid Services 2023f).

Another coming change is the shift in how A–APM participation is incentivized in the next few years—which could initially incentivize participation in MIPS over A–APMs and then incentivize A–APMs over MIPS. As noted earlier, the A–APM participation bonus will not be available after 2026; instead, starting in 2026, clinicians' payment rates will be updated at different rates depending on A–APM participation (Figure 1-9, p. 34). In the early years of this policy, differential updates will produce a relatively weak incentive to participate in A–APMs: In 2027, A–APM clinicians' payment rates will be only 1 percentage point higher than those of other clinicians. Top-performing clinicians might then prefer MIPS over A–APMs if MIPS adjustments rise closer to their maximum allowable amount. By the mid-2030s, differential updates will produce an incentive to participate in A–APMs that is comparable in size to the A–APM participation bonus available today: By 2035, A–APM clinicians' rates will be 5.3 percentage points higher than those of other clinicians. But differential updates will continue to grow

FIGURE 1–9

Under current law, the difference between payment rates for clinicians in A–APMs and other clinicians will be small in the 2020s but large by the 2040s



Note: A–APM (advanced alternative payment model). Figure does not show adjustments to payment rates prompted by budget-neutrality requirements, which take into account additions, deletions, or modifications of fee schedule billing codes and can result in payment updates that are larger or smaller than specified in statute. Graph also does not show (1) annual MIPS adjustments, which can increase or decrease payments to individual clinicians based on performance measures, or (2) annual A–APM participation bonuses available from 2019 through 2026 because these adjustments are one-time only and not built into subsequent years' payment rates. Graph also does not show the effects of the expiration of the 2 percent sequester that applies to payment rates through September 2032.

Source: MedPAC analysis of Medicare Access and CHIP Reauthorization Act of 2015 and subsequent laws.

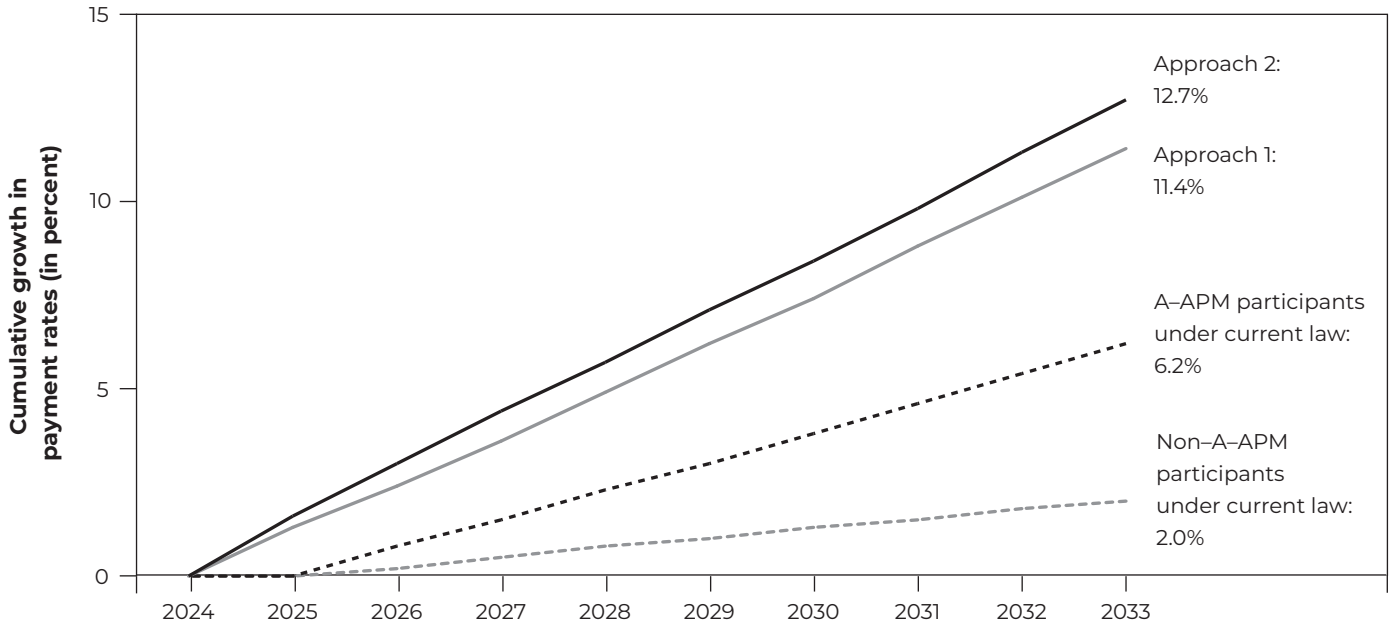
and will produce a strong incentive to participate in A–APMs by the 2040s: In 2045, A–APM clinicians' rates will be 11 percentage points higher than those of other clinicians. An incentive this large could be untenable if many clinicians continue to have limited access to A–APMs due to their geographic location, medical specialty, or other circumstances.

Alternative approaches to updating clinician payment rates

In this section, we present two policy approaches for updating PFS payment rates based on a measure of inflation. Approach 1 would update the practice expense portion of fee schedule payment rates by the hospital market basket, adjusted for productivity. Approach 2, which is the Commission's preference, would update total fee schedule payment rates by the MEI (which includes a productivity adjustment) minus 1 percentage point. Approach 2 also features a minimum update equal to half of MEI, to avoid updates that are very low or negative. As discussed below, Approach 2 deliberately would not increase fee schedule payments by the full MEI because evidence over a 20-year period has shown that updates of this magnitude have not been needed to maintain clinicians' willingness to participate in Medicare and provide care to Medicare patients. Indeed, the fact that beneficiary access-to-care measures have remained relatively positive even as fee schedule payment rates have increased more slowly than MEI

FIGURE 1–10

Cumulative growth in fee schedule payment rates under current law and alternative approaches, 2024–2033



Note: A–APM (advanced alternative payment model). Approach 1 would increase the practice expense portion of payment rates by the hospital market basket minus productivity. Approach 2 would increase total payment rates by the Medicare Economic Index minus 1 percentage point. Cumulative growth for Approach 1 is a weighted average and assumes that the service mix and relative value units for each service remain constant. Graph does not show the effects of the expiration of the 2 percent sequester that applies to payment rates through September 2032.

Source: MedPAC calculations based on Office of the Actuary projections of hospital market basket, productivity, and MEI.

growth suggests that policymakers should be skeptical of claims that full-inflation updates are necessary to ensure beneficiary access to care. Instead of hindering access, historical payment rate updates appear to have served to slow spending growth related to increased volume and intensity.

Figure 1-10 shows our estimates of cumulative growth in payment rates from 2024 to 2033 under current law and the two update approaches we contemplate. As a point of reference, the bottom two lines in the figure show cumulative growth under current law; these lines show that by 2033, payment rates will be 6.2 percent higher for clinicians in A–APMs and 2.0 percent higher for clinicians not in A–APMs. Under Approach 1 (which would update PE RVUs by the hospital market basket minus productivity and is shown in Figure 1-10), payment rates would increase by a weighted average of 11.4 percent by 2033, although the effects would vary by type of service. Under Approach 2 (which would update all RVUs by MEI minus 1 percentage point), payments would increase by 12.7 percent, which would be evenly distributed across services. As indicated in Figure 1-10, both of these approaches would result in a substantial increase in Medicare spending on PFS services in future years relative to current law.

Unlike current-law updates, neither of these approaches would provide higher updates for clinicians in A–APMs. Instead, to continue providing incentives for clinicians to participate in A–APMs, the A–APM participation bonus would likely need to be extended, as discussed later in the chapter.

TABLE 1–3 **Illustrative example of how conversion factors would be calculated under Approach 1**

PE conversion factor		Work/PLI conversion factor	
Start with a given year's PE conversion factor	$35.50	Start with a given year's work/PLI conversion factor	$35.50
Update this conversion factor by the next year's projected hospital market basket update minus productivity	**+2.5%**	**This conversion factor not updated**	**+0%**
Arrive at PE conversion factor for next year	$36.39	Arrive at work/PLI conversion factor for next year	$35.50

Note: PE (practice expense), PLI (professional liability insurance).

Source: MedPAC calculations based on hypothetical example of Approach 1.

Approach 1: Update practice expenses by the hospital market basket

The first update approach under consideration would update the practice expense (PE) portion of fee schedule payment rates by the hospital market basket index minus productivity. This approach would necessitate the creation of two conversion factors. The first conversion factor would apply to the PE portion of each service. The second conversion factor would apply to the work and professional liability insurance (PLI) portion of each service. In our modeling, the work and PLI conversion factor would not be updated annually, but additional policies could be included to automatically update this conversion factor at a different rate than PE, or the Congress could enact one-time updates to this other conversion factor.

Table 1-3 illustrates how Approach 1 would work in practice. In this illustrative example, both the PE and work/PLI conversion factors are $35.50 in the starting year. The hospital market basket minus productivity for the upcoming year is forecast to be 2.5 percent. In this hypothetical scenario, the PE conversion factor increases by 2.5 percent to reflect the hospital market basket, resulting in a PE conversion factor of $36.39 in the following year (higher than the prior year). Meanwhile, the work/PLI conversion factor is not updated to reflect changes in inflation, so the work/PLI conversion factor would remain at $35.50.[26]

This approach would result in payment rates for different services increasing by different percentages, depending on what share of the service's total payment is for practice expenses. To help understand which types of services would see relatively large increases to their payment rates, we show the share of fee schedule spending associated with practice expense RVUs by type of service and site of service (Table 1-4, pp. 38–39). On the lower end, for behavioral health evaluation and management services (e.g., psychotherapy services), only 25 percent of allowed charges were associated with practice expenses; these services would therefore see relatively small increases in payment rates. On the higher end, for major vascular procedures, 93 percent of allowed charges were associated with practice expenses; these services would see relatively large increases in payment rates.

While there is substantial variation, relatively little fee schedule spending is associated with services with very high shares of practice expenses. For example, in 2022, only 13 percent of fee schedule spending in nonfacility settings was associated with services for which practice expenses represented 80 percent or more of the allowed charges (data not shown).

Rationale for Approach 1

A motivation behind Approach 1 is to address disparities in updates between the PFS and the OPPS.

Fee schedule payments are updated by statutorily specified rates that are not linked to input cost growth, while OPPS rates are updated by the hospital market basket (a measure of growth in hospital input costs). When a service is billed in an HOPD, Medicare payments are usually much higher than when the same service is billed in a freestanding clinician office. These higher payments tend to increase program costs and beneficiary cost sharing.

Updating the PE portion of fee schedule payments by the same index used to update OPPS payments would ensure that payments for PE costs in the office setting are not falling relative to what is paid in the HOPD. The aggregate difference in Medicare payments for services billed in freestanding clinician offices and HOPDs would continue to grow because the work and PLI components of fee schedule payments would not increase, but alignment between how PE payments are updated in freestanding clinician offices and HOPDs could reduce the incentive for clinicians to consolidate with hospitals.

At a broader level, unlike other Medicare payment systems, the PFS differentiates between the costs of practice expenses, clinician work, and professional liability insurance. The different components measure different types of costs, and the inflationary factors that affect each of these costs may be different. The MEI reflects a weighted growth rate for all three fee schedule components, but conceptually, there is no reason why PE, work, and PLI need to be updated by the same growth rate. Instead, each cost component could be updated (or not updated) separately to achieve specific policy objectives. This approach would contrast with current and past ones, which have updated all three components by a uniform percentage.

Practice expenses have experienced increases that are higher than current-law updates and are projected to continue doing so in the future. If practice expenses rise too high relative to payment rates, it may motivate clinicians to sell their practice to buyers such as a hospital system or to reduce access for Medicare beneficiaries. Thus, Approach 1 envisions updating Medicare fee schedule payment rates in a way that is intended to reflect increases to practice expenses.

The work component of fee schedule payments can be viewed as more difficult to quantify and measure than PE costs. Work RVUs are based on assessments of the time, technical skill, physical effort, judgment, and stress level involved in performing a given service. Although the RBRVS attempts to value the amount of work involved in delivering a service in an objective way, an alternative method for valuing the work component would be to determine the level of payment needed to secure clinician labor to perform the service. Evidence suggests that current payment rates are generally high enough to secure clinician labor to furnish fee schedule services. The number of people entering the medical profession continues to rise, and the Commission's annual assessment of payment adequacy indicates that beneficiaries have access to care that is comparable with that of privately insured individuals (Association of American Medical Colleges 2022, Medicare Payment Advisory Commission 2024). Given evidence that the current and future supply of clinicians does not appear to be negatively affected by rate increases that are less than inflation, Approach 1 is premised on the idea that increases in the work component of fee schedule payments are not currently needed to secure enough clinician labor to maintain beneficiary access, or that increasing payment for the work component could be addressed separately.

Impacts of Approach 1

By applying an inflation-based update to only one type of fee schedule RVUs, the effects of Approach 1 would vary across types of services and clinician specialties. Services for which a large share of the total RVUs are PE RVUs would see larger updates compared with services for which a small share of their total RVUs are PE RVUs.

As an example of how the effects of Approach 1 would differ across services, consider two HCPCS codes: 36465, a code used to bill for treatment of varicose veins, and 90837, a code used to bill for 60 minutes of individual psychotherapy. For the vein procedure, the PE component accounts for 93 percent of the total payment when furnished in a nonfacility setting (e.g., a freestanding clinician office), while PE accounts for 19 percent of the total payment when furnished in a facility setting (e.g., an HOPD) (Table 1-5, p. 40). For the psychotherapy service, the PE component accounts for 22 percent of the total nonfacility payment and 11 percent of the total payment when furnished in a facility.

TABLE 1–4

Physician fee schedule services vary in the share of allowed charges associated with practice expenses, 2022 *(cont. next page)*

Type of service	Nonfacility settings: Allowed charges (in millions of dollars)	Nonfacility settings: Share of allowed charges for practice expenses	Facility settings: Allowed charges (in millions of dollars)	Facility settings: Share of allowed charges for practice expenses
Total	**$55,740**	**56%**	**$31,671**	**29%**
Evaluation and management	29,644	45	17,683	27
Behavioral health services	1,429	25	382	13
Care management/coordination	725	46	42	29
Critical care services	1	38	1,318	22
Emergency department services	0	18	2,243	15
Home services	425	37	10	48
Hospital inpatient services	23	30	8,440	28
Nursing facility services	1,273	35	1,562	36
Observation care services	0	27	470	28
Office/outpatient services	23,742	46	3,177	29
Ophthalmological services	1,840	60	30	34
Imaging	5,435	77	3,196	25
CT scan	575	76	1,296	25
Imaging – miscellaneous	443	63	15	35
Magnetic resonance	717	76	385	26
Nuclear	336	85	142	24
Standard X-ray	1,542	77	710	26
Ultrasound	1,823	79	646	25
Major procedure	1,221	86	5,311	34
Breast	1	43	98	38
Cardiovascular	6	72	943	24
Digestive/gastrointestinal	1	39	564	31
Eye	6	53	288	50
Musculoskeletal	135	86	2,308	38
Other organ systems	5	52	668	33
Skin	179	55	160	41
Vascular	889	93	282	20
Other procedure	7,792	69	3,855	38
Breast	40	79	34	29
Cardiovascular	87	98	131	27
Digestive/gastrointestinal	120	74	877	33
Eye	823	60	992	51

TABLE 1–4

Physician fee schedule services vary in the share of allowed charges associated with practice expenses, 2022 *(cont.)*

	Nonfacility settings		Facility settings	
Type of service	**Allowed charges (in millions of dollars)**	**Share of allowed charges for practice expenses**	**Allowed charges (in millions of dollars)**	**Share of allowed charges for practice expenses**
Musculoskeletal	1,297	63	794	40
Other organ systems	908	75	458	29
Skin	4,000	69	384	37
Vascular	515	86	182	25
Test	3,007	73	981	29
Anatomic pathology	1,369	70	588	30
Cardiography	870	76	209	26
General laboratory	65	95	17	26
Neurologic	425	74	120	30
Pulmonary	113	80	15	23
Test, miscellaneous	157	70	21	31
Treatment	8,336	55	589	31
Chemotherapy	376	88	1	26
Dialysis	775	32	103	29
Injections/infusions (nononcologic)	298	73	0	55
PT, OT, SLP	4,760	49	4	46
Radiation oncology	1,223	86	438	33
Spinal manipulation	691	39	3	26
Treatment, miscellaneous	214	83	39	23

Note: PT (physical therapy), OT (occupational therapy), SLP (speech language pathology). Table excludes services with no relative value units (RVUs), such as anesthesia and carrier-priced codes. Type of service categories are based on restructured BETOS classification system. Some categories with low allowed charges are not shown but are included in the summary calculations. Components may not add to totals due to rounding.

Source: MedPAC analysis of 100 percent of physician fee schedule claims data and RVU files from CMS.

Under Approach 1, the high-PE service would receive a larger update than the low-PE service. If the hospital market basket for an upcoming year is projected to be 2.5 percent, the total nonfacility payment for the procedure to treat varicose veins would increase by 2.33 percent (93 percent × 2.5 percent), whereas the nonfacility payment for the psychotherapy service would increase by only 0.55 percent (22 percent × 2.5 percent). Similarly, in the facility setting, the total payment for the varicose veins procedure would increase by 0.48 percent (19 percent × 2.5 percent), whereas the payment for the psychotherapy would increase by only 0.28 percent (11 percent × 2.5 percent).

Since the size of updates would vary across services, Approach 1 would have different impacts on different clinicians, depending on what kinds of services they furnish and what settings they are furnished in. All else

TABLE 1–5 **Illustrative example of updates for a high-PE and a low-PE service under Approach 1**

HCPCS code and setting	Total RVUs	PE RVUs	PE as percent of total RVUs	Work & PLI RVUs	Work & PLI as percent of total RVUs	Weighted update (assuming 2.5% increase to PE RVUs)
36465 (treatment of varicose veins)						
Nonfacility	38.22	35.41	93%	2.81	7%	2.33%
Facility	3.49	0.68	19	2.81	81	0.48
90837 (60-minute psychotherapy session)						
Nonfacility	4.57	1.01	22	3.56	78	0.55
Facility	4.00	0.44	11	3.56	89	0.28

Note: PE (practice expense), HCPCS (Healthcare Common Procedure Coding System), RVU (relative value unit), PLI (professional liability insurance).

Source: MedPAC calculations of hypothetical update under Approach 1 using CMS 2024 physician fee schedule relative value file.

equal, Medicare fee schedule payments would increase more for clinicians who furnish services where PE RVUs represent a high percentage of total RVUs and for clinicians whose services are furnished in a nonfacility setting. Conversely, fee schedule payment rates would increase less for clinicians who furnish services where PE RVUs are a relatively small share of total RVUs. Clinicians who often furnish services in facility settings would also see relatively small increases in fee schedule rates because payments for most PE costs are included in the facility payments (e.g., through the OPPS).

In Table 1-6 (pp. 42–43), we show the estimated impact of Approach 1 on fee schedule payments by clinician specialty. The average value of practice expenses (PE RVUs) as a share of total spending (total RVUs) is based on Medicare fee schedule claims data for 2022 and the RVUs in effect that year. The average cumulative update by 2033 reflects the impact for each specialty in 2033 if Approach 1 took effect in 2025. These percentages were generated by calculating the cumulative update for each service (using projections of the hospital market basket prepared by CMS's Office of the Actuary (OACT)) and weighting those updates for each specialty based on claims data from 2022. Our estimates assume that the billing patterns for each specialty do not change between 2022 and 2033 and that the RVUs for each service are constant over the period.

We estimate that by 2033, the average increase in payment rates for all specialties would be 11.4 percent under Approach 1. Independent diagnostic testing facilities derive the highest portion of total revenue from payments for PE (91 percent), and by 2033 we expect that updates under Approach 1 would increase weighted payment rates for those clinicians by 22.5 percent—more than any other specialty. On the other end of the spectrum, PE makes up the lowest share of payments for licensed clinical social workers (20 percent), and we estimate that weighted payment rates for those clinicians would increase by just 4.9 percent by 2033.

Clinicians in specialties that tend to perform office-based procedures, such as vascular surgery and dermatology, would realize larger-than-average cumulative updates (16.3 percent and 15.5 percent, respectively). We estimate that cumulative updates for primary care specialties, such as internal medicine and family practice, would tend to fall just below average (10.8 and 11.2 percent, respectively). Behavioral health specialties (e.g., clinical psychology), along with specialties that furnish a large portion of services in a facility setting (e.g., cardiac surgery), would receive

below-average cumulative updates (5.5 percent and 8.1 percent, respectively).

We note that Approach 1 would disproportionately increase payments for some services that already receive payments that are overvalued relative to other services in the fee schedule (see text box on work RVUs, pp. 44–46). To limit the degree to which Approach 1 exacerbates inaccuracies in the fee schedule, it would be important to pair this approach with efforts to revalue fee schedule services—such as through improvements to the processes and data used to assign relative values to codes and by converting overvalued 10- and 90-day global surgical codes to 0-day codes. Efforts to improve fee schedule valuations could also be paired with Approach 2 or pursued on their own. Improving valuations could change the distributional effects shown in Table 1-6 (pp. 42–43), although the exact effects would depend on how valuations change. Even with improvements in valuations, however, Approach 1 is still likely to result in significant differences in how fee schedule revenue increases are distributed among different specialties.

Another effect of Approach 1 is that it would equalize growth in payments for PE costs between the nonfacility and HOPD setting. Ideally, this change would reduce incentives for clinicians to sell their practices to hospitals or shift services to the more costly HOPD. However, aggregate differences in total payments between the nonfacility and HOPD settings would continue to grow, so additional policies would be needed to address those differences in order to achieve site-neutral payments.

Pros and cons of Approach 1

Approach 1 presents numerous pros and cons to consider.

Pros:

- Creating separate conversion factors for PE and work/PLI would allow policymakers to apply updates that more closely reflect inflationary factors for each type of cost or to achieve specific policy goals.
- Linking PE RVUs to a full measure of inflation would help ensure that payments for those costs keep pace with inflation. Doing so would be especially meaningful for clinicians who furnish high-PE services in a freestanding clinician office.
- By using the hospital market basket to increase payment for PE, Approach 1 equalizes growth in payments for PE costs between the nonfacility and HOPD settings. This change may reduce incentives for clinicians to sell their practices to hospitals or shift services to the HOPD.

Cons:

- Approach 1 would result in smaller payment rate increases for primary care and mental/behavioral health clinicians compared with increases for many specialists. This disparity could exacerbate beneficiaries' existing problems accessing primary care providers and mental/behavioral health clinicians.
- Because this approach increases payments for PE year by year, Approach 1 subverts the resource-based relative value scale concept on which the fee schedule is based and would likely necessitate substantial operational changes in the way RVUs are set and updated over time. The share of payments going toward work and PLI would shrink over time, and payments for each type of RVU would become increasingly disconnected from what the RUC and CMS have determined to be the relative resources needed for each service. This result could undermine the process for setting service-level RVUs and the process for ensuring that aggregate RVUs reflect the distribution of costs of providing care in freestanding clinician offices.
- By not increasing payments for work costs, Approach 1 alone would likely not be sustainable over time. Update policies may need to be revisited within a few years to account for work costs, or the Congress may feel the need to make one-time adjustments.
- Although payment rates for PE costs in the nonfacility setting would increase at the same rate as payments to facilities like HOPDs, the differences in aggregate payments between those settings would continue to grow. Therefore, this approach may have a limited impact on incentives for clinicians and hospitals to consolidate.

TABLE 1–6

Estimated cumulative updates under Approach 1, by clinician specialty *(cont. next page)*

Clinician specialty	Average value of practice expenses as a share of total spending	Average cumulative update by 2033
Independent diagnostic testing facility	91%	22.5%
Clinical laboratory	73	18.1
Allergy/immunology	68	16.8
Radiation oncology	68	16.8
Vascular surgery	66	16.3
Interventional radiology	64	15.9
Dermatology	62	15.5
Optometry	57	14.2
Otolaryngology	56	14.0
Podiatry	55	13.6
Ophthalmology	55	13.6
Rheumatology	53	13.0
Pain management	52	12.9
Hand surgery	52	12.8
Occupational therapy	51	12.7
Obstetrics/gynecology	51	12.6
Urology	50	12.4
Hematology/oncology	50	12.4
Cardiology	49	12.3
Medical oncology	49	12.1
Physical therapy	49	12.1
Sports medicine	48	12.0
Pathology	48	12.0
Plastic and reconstructive surgery	48	11.9
Interventional cardiology	47	11.6
Diagnostic radiology	47	11.6
Orthopedic surgery	46	11.4
General practice	46	11.3
Family practice	45	11.2
Neurology	44	11.0
Physician assistant	44	11.0
Endocrinology	44	10.8
Internal medicine	44	10.8
Physical medicine and rehabilitation	43	10.7
Colorectal surgery	42	10.5
Cardiac electrophysiology	42	10.4
Nurse practitioner	40	10.0
Geriatric medicine	40	9.9
Gynecologist/oncologist	40	9.8

TABLE 1–6

Estimated cumulative updates under Approach 1, by clinician specialty *(cont.)*

Clinician specialty	Average value of practice expenses as a share of total spending	Average cumulative update by 2033
General surgery	40	9.8
Gastroenterology	40	9.8
Chiropractic	38	9.5
Pulmonary disease	37	9.3
Surgical oncology	36	9.0
Neurosurgery	36	8.9
Nephrology	36	8.8
Certified clinical nurse specialist	36	8.8
Advanced heart failure and transplant cardiology	35	8.5
Psychiatry	34	8.5
Thoracic surgery	33	8.3
Cardiac surgery	33	8.1
Infectious disease	32	8.0
Hospice and palliative care	31	7.7
Critical care	29	7.1
Hospital medicine	29	7.1
Clinical psychology	22	5.5
Emergency medicine	20	4.9
Licensed clinical social worker	20	4.9
All specialties	**46**	**11.4**

Note: These estimates assume that the service mix and relative value units for each service remain constant over the period. While most laboratory services are paid under the clinical laboratory fee schedule, laboratory services that involve physician work are paid under the physician fee schedule. Table does not include the effects of the expiration of the 2 percent sequester that applies to payment rates through September 2032.

Source: MedPAC calculations based on 100 percent of 2022 fee-for-service claims data and the 2022 physician fee schedule relative value file from CMS, and Office of the Actuary projections of hospital market basket and productivity.

- This approach could incentivize clinicians to increase utilization of high-PE services, especially to the extent that such services have low marginal costs or are mispriced. (See text box for problems with the data and methodology used to set billing codes' PE RVU values, pp. 48–49.)

Approach 2: Update payment rates by the MEI minus 1 percentage point

Approach 2 would base updates on a portion of the inflation index that is used to measure cost growth in clinician offices—the MEI. An annual update of MEI minus 1 percentage point would be applied to a single conversion factor for all three RVU components, consistent with current practice. To prevent updates from being too low, and potentially negative in times of low inflation, this approach would include a "floor" for annual updates of no less than half of MEI.

For example, if the MEI in a given year is projected to grow by 4 percent, the update would be set at 3 percent (4 percent minus 1 percentage point). The update floor for this year would be 2 percent (half of 4 percent), so the actual update would be the higher of the two—3 percent.

Some billing codes' work relative value units are too high

Studies that compare the number of minutes that the fee schedule assumes are needed to deliver a service and the number of minutes actually spent delivering a service find mismatches that suggest that some billing codes are overvalued. In addition, researchers have found that the number of postoperative visits paid for through the fee schedule's 10- and 90-day global surgical codes do not match the number that are actually provided. As we describe below, CMS could improve the accuracy of billing codes' work relative value units (RVUs) in the near term by converting 10- and 90-day global surgical codes (which make up half the codes in the fee schedule) to 0-day global codes and paying for postoperative visits on a fee-for-service basis. We have also recommended improving the overall process and data used to set work RVUs, which would be a longer-term project. Because changes to the values of particular billing codes must be made on a budget-neutral basis, reducing the work RVUs for inflated billing codes would result in a net increase to payment rates for all other billing codes.

Work RVUs are set based on clinicians' estimates

Work RVUs are meant to pay for the labor of the practitioner (e.g., physician, nurse practitioner, physical therapist) who delivers a service. The amount of work RVUs assigned to a billing code is primarily based on values proposed to CMS by the American Medical Association (AMA)/Specialty Society Relative Value Scale Update Committee (the RUC); these values are based on clinicians' estimates of the amount of work (including the amount of time) involved in delivering a service (Government Accountability Office 2015, Laugesen 2016). (Although work RVUs are meant to capture time, mental effort and judgment, technical skill and physical effort, and stress, we have previously found that time explains most of the variation in work RVUs across billing codes (Medicare Payment Advisory Commission 2011b).)

Studies have found that many billing codes have inflated work RVUs

Studies have found substantial differences between the amount of time that clinicians estimate they will need to deliver a service ("fee schedule time") and the amount of time they actually spend delivering a service ("actual time worked") for some billing codes. One study compared fee schedule time with actual time worked (according to time-stamped electronic health record data and direct observation) and found that 42 out of 60 codes had fee schedule times that were at least 10 percent higher than the actual time worked; imaging and the interpretation of certain tests were especially overvalued, with fee schedule times that were sometimes multiple times higher than actual time worked (Zuckerman et al. 2016). Another 8 of the 60 codes had fee schedule times that were at least 10 percent lower than actual time worked; examples of these undervalued codes include procedures that involve the removal of the small intestine and part or all of the colon (Zuckerman et al. 2016). A second study surveyed physicians and found that for 20 out of 26 services, the amount of time assumed in the fee schedule was higher than the median amount of time clinicians reported spending to deliver these services; cardiologists and radiologists reported the largest mismatches (Merrell et al. 2014). And a third study found that according to time-based anesthesia claims for 1,349 types of procedures, clinicians took an average of 27 percent less time to deliver these procedures than billing codes assumed were needed (Crespin et al. 2022). Examples of overvalued services included procedures performed by gastroenterologists (e.g., colonoscopies) and ophthalmologists (e.g., cataract surgeries). Although all specialties studied spent less time delivering procedures than the fee schedule assumed on net, this generalization was not true for some particular procedures (e.g., total hip and knee arthroplasties, some procedures performed by cardiac and thoracic surgeons) (Crespin et al. 2022). Other studies have also found discrepancies between fee schedule

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Some billing codes' work relative value units are too high (cont.)

times and actual time worked (Cromwell et al. 2010, McCall et al. 2006, Urwin et al. 2019).

Studies have also found large differences between the number of postoperative visits that the fee schedule assumes clinicians will deliver after a surgical procedure and the number they actually deliver. This discrepancy is relevant because postoperative visits are paid for as part of "global" surgical codes, which are billed by the clinician who performs a procedure and meant to pay for the procedure plus all pre- and postoperative care during a specified period.[27] A landmark study by RAND found that, at most, only 17 percent of the postoperative visits assumed in 10-day global surgical codes were actually provided, and only 47 percent of postoperative visits assumed in 90-day global surgical codes were provided (Crespin et al. 2021).[28]

Strategies to improve the accuracy of work RVUs

To improve the accuracy of payment rates for surgical procedures, RAND researchers have suggested that the RUC use time data from anesthesia claims to revalue time assumptions (and payment rates) for procedures that involve the use of anesthesia (Crespin et al. 2022). CMS could also stop paying for postoperative visits that do not occur by converting 10- and 90-day global surgical codes to 0-day global codes—meaning the clinician who performed a surgical procedure would receive a lump-sum payment for all services provided on the day of a procedure (including pre- and postoperative visits provided that day) but all pre- and postoperative visits provided on other days would be billed on a fee-for-service basis (Medicare Payment Advisory Commission 2014).[29] We previously suggested that CMS could shift to 0-day global codes by backing out work RVUs for postoperative visits from global codes' total work RVU values, but the AMA has argued that this action would result in inappropriate work RVU values for some procedures, with nearly half of minor and major surgical procedures having work RVUs that reflect a low intensity (American Medical Association 2015). Given this concern, an alternative approach would be for CMS to ask the RUC to propose new values for 0-day global codes in tranches—for example, prioritizing those 10- and 90-day codes that generate the largest amount of spending and/or are billed most frequently. (About 300 global codes account for 94 percent of spending on 10-day global codes and 72 percent of spending on 90-day global codes (Crespin et al. 2021).)

Surgeons and other proceduralists have raised other concerns with converting 10- and 90-day global surgical codes to 0-day codes (American Academy of Facial Plastic and Reconstructive Surgery et al. 2022). One risk is that cost-conscious patients may not show up to postoperative visits if they have to pay a separate copay for such visits. (Currently, beneficiaries pay a single cost-sharing bill covering all of the care that is expected to be provided by the clinician who furnishes their procedure during a global period, so beneficiaries cannot currently lower their cost-sharing liability by skipping a postoperative visit offered by that clinician.) Proceduralists also contend that paying for postoperative visits on a fee-for-service basis would result in underpayment for these visits since billing codes for standard office visits do not include payment for cleaning wounds or changing bandages, nor do they reflect the specific professional liability insurance premiums of the types of clinicians who tend to provide particular procedures. They also note that shifting to 0-day global codes would be disruptive to Medicare's claims processing operations and require educating clinicians about the new codes.

These risks are likely outweighed by the benefits of converting 10- and 90-day global surgical codes to 0-day codes. An advantage of this policy for beneficiaries is that their cost-sharing liability would decrease in most cases because they would

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Some billing codes' work relative value units are too high (cont.)

pay for fewer postoperative visits than they are currently billed for under 10- and 90-day global surgical codes. Clinicians other than proceduralists would also benefit from this policy: If billing codes for procedures were revalued to no longer pay for postoperative visits that are not being provided, RAND has estimated that total fee schedule spending would decrease by 2.7 percent and the fee schedule's conversion factor would increase by an offsetting amount, since changes to the relative values of individual codes are required to be budget neutral (Mulcahy et al. 2019). As a result, the accuracy of the fee schedule would increase and the compensation gap between specialists and primary care providers would shrink.

More generally, CMS could improve the accuracy of the fee schedule by improving the processes and data used to set relative values for billing codes. The Commission has recommended that CMS establish a standing panel of experts to help the agency identify overvalued services and review the billing code values proposed by the RUC (Medicare Payment Advisory Commission 2006b). We have also recommended that CMS collect data from a cohort of efficient practices on clinician work time, service volume, and practice expenses and use those data to help establish more accurate values for overvalued services (Medicare Payment Advisory Commission 2011a). ■

In contrast, in a year in which the MEI is projected to grow by 1 percent, the MEI minus 1 percentage point calculation would result in an update of 0 percent, but the floor would set the actual update at 0.5 percent.

Rationale for Approach 2

Approach 2 presumes that both PE costs and work costs increase over time, so Medicare's payments for both types of costs should increase. The MEI is a measure specifically designed to track weighted input cost trends (including work and practice expenses) in physician offices, so it is a good indicator of how those costs are increasing. OACT projects that the MEI will increase by 2.2 percent to 2.6 percent annually for the next decade, with those costs roughly split between clinician work and practice expenses.

This approach also reflects the fact that PFS updates have averaged around MEI minus 1 percentage point for the past two decades. Despite updates that have been about 1 percentage point less than inflation, fee schedule payments per beneficiary have increased steadily over time (due to growth in the volume and intensity of services delivered to beneficiaries), clinician participation in the program has been comparable with clinicians' participation in private insurance, and the Commission has consistently found that beneficiary access to care has been comparable with that of privately insured people. Over the 20-year period, longer-term access measures were also relatively positive: Clinician incomes continued to grow slightly faster than inflation, the number of medical school applicants continued to grow (and outpaced the number of available slots), and the number of clinicians billing the PFS increased substantially. Approach 2's floor on updates would ensure that updates do not fall too far below historical trends during times of low inflation, which could endanger access and prompt the Congress to enact one-time updates. Although we have described an approach that would keep updates at 1 percentage point below MEI, substantial changes in inflation, changes in measures of beneficiary access to care, concerns about growth in program spending and beneficiary cost-sharing, or other factors could indicate a need for updates that are higher or lower.

Pros and cons of Approach 2

Approach 2 presents numerous pros and cons to consider.

Pros:

- This approach maintains the "relative value" concept of the PFS by applying a consistent update percentage to all three types of RVUs.

- Payment rate updates would be broadly and evenly distributed across services (and therefore clinician specialties). All billing codes would increase by the same percentage.
- This approach would not exacerbate differences in revenue across specialists and primary care physicians and mental health clinicians that may be contributing to a decline in the supply of primary care physicians and to beneficiaries' difficulties finding mental health clinicians willing to treat them.
- Policymakers would not need to revisit fee schedule update policy in the future to provide separate increases to the work portion of fee schedule payments.

Cons:

- Measures of clinician supply have generally been positive, suggesting that payments for clinician work are sufficient and broad-based updates for work may not be currently needed.
- The approach does slightly less than Approach 1 to reduce the growth in differences in payments across settings. These payment differences can result in incentives for vertical consolidation. Policymakers may still wish to consider site-neutral payments for certain services furnished in both HOPDs and other ambulatory settings.
- Additional policies may be needed to address low PE payments for certain services and to discourage vertical consolidation (see text box on improving the accuracy of PE payments, pp. 52–53).

Comparing the impacts of Approach 1 and Approach 2

Since the Commission is concerned about the relationship between updates and inflation, it is worth comparing how Approach 1 and Approach 2 would update rates under different inflation scenarios.

Figure 1-11 (p. 50) shows projected cumulative updates over the 2024 to 2033 period for both approaches, using three different assumptions about future inflation:

- baseline inflation (defined below);
- baseline inflation plus 1 percentage point (high inflation); and
- baseline inflation minus 1 percentage point (low inflation).

All three projections of Approach 1 use OACT's baseline forecasts of the hospital market basket (minus productivity), and projections of Approach 2 use OACT's forecasts of MEI (which includes a productivity adjustment). Over the 2025 to 2033 period, OACT's projections of the hospital market basket (minus all-factor productivity) range from 2.3 percent to 2.8 percent per year; its projection of MEI ranges from 2.2 percent to 2.6 percent. It is worth noting that under Approach 1, the impact of updates on payment rates for each service would vary depending on the portion of the payment that is for PE. The numbers presented in Figure 1-11 (p. 50) for Approach 1 are weighted averages and provide a sense of how aggregate payment rates would increase under different inflation scenarios.

Under baseline inflation projections, the impacts of Approach 1 and Approach 2 are similar. Payment rates under Approach 1 (which would update PE RVUs by the hospital market basket update) would be 11.4 percent higher in 2033 than they were in 2024, on average, while payment rates under Approach 2 (which would update all RVUs by a portion of MEI) would be 12.7 percent higher by 2033.

Impacts are also fairly similar under the low-inflation scenario: The average cumulative increase under Approach 1 would be 6.6 percent, and the cumulative increase under Approach 2 would be 6.2 percent. But looking at the high-inflation scenario, we see very different impacts: The cumulative increase in payment rates for Approach 1 would be 16.7 percent, while the average cumulative increase under Approach 2 would be 23.1 percent. This difference reflects the fact that during times of high inflation, Approach 2 increases aggregate payment rates by a larger portion of inflation than Approach 1.

Another goal that can be pursued through reformed fee schedule updates is to reduce the payment differential when the same services are billed in different settings. When services are furnished in an HOPD, total Medicare payments are typically higher than when they are billed in a freestanding clinician office. As discussed earlier, this site-of-service payment differential can

Practice expense relative value units use old data and flawed assumptions

There are a number of problems with the data and methodology used to set practice expense (PE) relative value units (RVUs) for billing codes in the fee schedule. In response to these concerns, CMS recently contracted with RAND to identify potential refinements (Burgette et al. 2021, Burgette et al. 2020, Burgette et al. 2018) and solicited input from the public on this matter. CMS has stated that it intends to move to a more standardized and routine approach for setting PE RVUs, but it has not yet finalized specific plans (Centers for Medicare & Medicaid Services 2023f).

Problems with the data and methods used to calculate PE RVUs

One problem with how PE RVUs are set is that none of the data sources used in this process are regularly updated. When CMS does update these data sources, it does so at infrequent, irregular, and uncoordinated intervals. Because these updates have been so infrequent, they have at times caused large shifts in billing codes' PE RVU values that CMS has opted to phase in over a four-year period.

Due to concerns about out-of-date data, the Commission has previously called on CMS to set a reasonable schedule for periodically updating the data it uses in its PE RVU–setting methodology; we have also recommended using objective data collected on a recurring basis from a cohort of efficient practices to determine the practice expenses used to provide different types of services (Medicare Payment Advisory Commission 2022a, Medicare Payment Advisory Commission 2021a, Medicare Payment Advisory Commission 2011a, Medicare Payment Advisory Commission 2011b, Medicare Payment Advisory Commission 2007, Medicare Payment Advisory Commission 2006a).[30] Researchers from RAND have also recommended collecting new data on a recurring basis (Burgette et al. 2021, Burgette et al. 2018).

There are also problems with the approach used to set indirect PE RVUs (which pay for overhead costs). (Indirect PE RVUs are set using a top-down method extrapolating from practice-level survey data for different physician specialties. This method is in contrast to direct PE RVUs, which are set using a more granular, specialty-blind, bottom-up method based on estimated amounts and prices of clinical support staff and equipment and supplies needed to deliver a service.) The current formula for calculating indirect PE RVUs rewards specialties with high overhead costs as part of their practice expenses (e.g., high rent) since the number of indirect PE RVUs allocated to a billing code is based in part on the overhead costs per hour reported by clinicians in different specialties. A specialty whose practitioners tend to locate in affluent areas where rent is high will be rewarded with higher indirect PE RVUs (Burgette et al. 2018). RAND has suggested

(*continued next page*)

incentivize clinicians to vertically consolidate with hospitals. We therefore look at the effect Approach 1 and Approach 2 would have on the site-of-service payment differential for a sample service (Figure 1-12, p. 51).

In this example, we examine payments for HCPCS code 17004 (removal of 15 or more skin lesions), which corresponds with ambulatory payment classification (APC) 5052 (Level II skin procedure) when furnished in an HOPD. HCPCS code 17004 is a high-PE service, with payment for PE accounting for about 70 percent of the total payment for the service when delivered in a freestanding clinician office. In 2024, when this service is furnished in a freestanding office, the payment is $165.[31] When furnished in an HOPD, total payment for the service is $404 ($97 under the PFS plus $307 under the OPPS (data not shown)).[32] Therefore, before

Practice expense relative value units use old data and flawed assumptions (cont.)

that this problem could be ameliorated if CMS grouped together similar specialties when producing the metric for indirect practice expenses per hour. Doing so would also allow a much smaller sample of clinicians to be surveyed when collecting data about practices' expenses (Burgette et al. 2018).

CMS's PE RVU formula also assumes that if two services both take 30 minutes to deliver but one involves more intense work and/or more direct expenses (which refer to clinical support staff and medical equipment and supplies), the more-intense service will also require more overhead costs. But the overhead costs for these two 30-minute services (e.g., office rent, receptionists' wages) are more likely to be the same. RAND has studied this issue and found that many types of indirect practice expenses have only weak positive (or even negative) correlations with direct practice expenses and work RVUs (Burgette et al. 2018). As a result, services with low work RVUs and low direct PE RVUs are allocated low indirect PE RVUs, which may affect certain clinicians' ability to pay their overhead costs (Burgette et al. 2018).

Other problems with how indirect PE RVUs are calculated likely result in services being allocated too many indirect PE RVUs when they are delivered in facilities. When a service is delivered in a facility, Medicare includes indirect PE RVUs that are meant to pay for overhead costs involved in maintaining a practice outside of that facility. This allocation is based on the assumption that clinicians who provide services in facilities also maintain an office in the community that sits idle while a clinician delivers a facility service. Yet RAND has found that many clinicians practice exclusively or nearly exclusively in a facility—which is true, for example, for majorities of clinicians specializing in emergency medicine, hospice and palliative care, diagnostic or interventional radiology, critical care, and infectious disease (Burgette et al. 2018). Even among clinicians who do maintain a separate office, it seems unlikely that their office space and administrative staff sit idle when a clinician delivers a service in a facility since other clinicians in the practice likely deliver services during this time that can subsidize the overhead costs (Burgette et al. 2021).

Another problem with indirect PE RVUs for services delivered in a facility is that hospital-owned practices have lower indirect practice expenses than independently owned practices (Burgette et al. 2018).[33] To improve the accuracy of PE RVUs, RAND researchers have suggested using different indirect PE RVU formulas for services delivered in facilities versus nonfacility settings (Burgette et al. 2021). ■

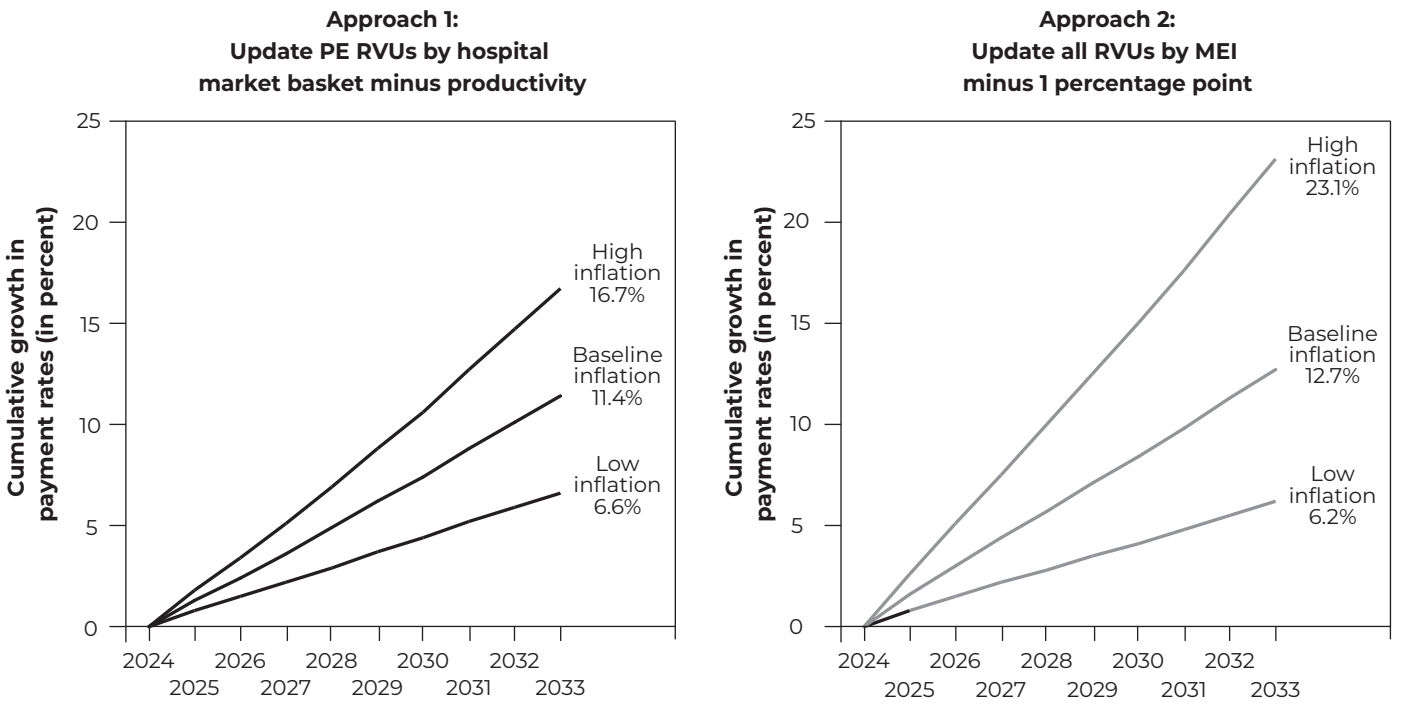
either of the two update approaches would take effect, the total payment for this procedure is $238 higher when furnished in an HOPD than when furnished in a freestanding office.

Figure 1-12 (p. 51) shows how Medicare payments are projected to grow over the next decade under the two update approaches contemplated here. The difference in payments between the freestanding office and HOPD continues to grow under both approaches: By 2033, we estimate that the site-of-service payment differential would be $298 under Approach 1, which is only $8 less than the $306 payment differential under Approach 2. This figure demonstrates that while Approach 1 is intended to slow the shift in services from the office setting to the HOPD setting by slowing growth in total payment differentials between those two settings, the size of payment differentials under Approach 1 and Approach 2 are projected to be very similar.

As a point of reference, if clinician payment rates were updated at the rates specified under current law, we project that the site-of-service payment differential would be $310 for a clinician in an A–APM and $313

FIGURE 1–11

Cumulative updates under Approach 1 and Approach 2 in different inflation scenarios, 2024–2033



Note: PE (practice expense), RVU (relative value unit), MEI (Medicare Economic Index). "High inflation" scenarios are based on baseline projections of hospital market basket and MEI plus 1 percentage point. "Low inflation" scenarios are based on baseline projections of hospital market basket and MEI minus 1 percentage point. Growth rates shown for Approach 1 are the weighted average change in payment rates for all services; growth in payment rates for particular services would vary. Graph does not show the effects of the expiration of the 2 percent sequester that applies to payment rates through September 2032.

Source: MedPAC calculations based on Office of the Actuary projections of hospital market basket and MEI.

for a clinician not in an A–APM (data not shown). Thus, compared to current law, both Approach 1 and Approach 2 would do more to limit the growth of the site-of-service payment differential. But the fact that large differentials would remain under both approaches highlights the importance of implementing site-neutral payments regardless of the approach chosen to update PFS rates.

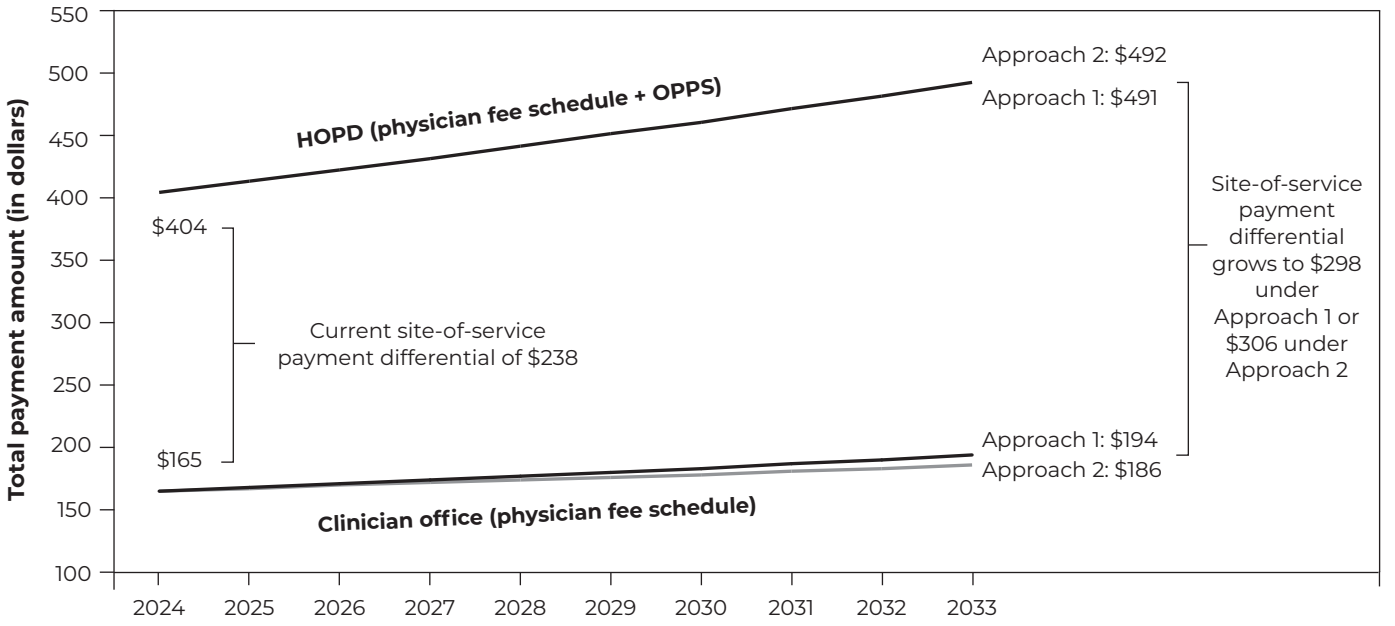
Approach 1 would require substantial operational changes in the way payment rates are set and updated over time. It would also tend to result in smaller payment rate increases for primary care and behavioral health clinicians compared with increases for many specialists, which could exacerbate beneficiaries' existing problems accessing primary care providers and behavioral health clinicians. Approach 2 would be simpler to implement, would not lead to different rate increases among clinicians in different specialties, and would reduce or eliminate the need for policymakers to revisit fee schedule update policy in the future to provide separate increases to the work portion of fee schedule payments. The Commission finds the features of Approach 2 more desirable and will continue to develop this option in the future.

Incentivizing participation in A–APMs

The two update approaches discussed above would replace the differential updates that are scheduled to

FIGURE 1–12

Comparison of total payments in freestanding clinician office and HOPD settings for an example high-PE service (removal of skin lesions)



Note: HOPD (hospital outpatient department), PE (practice expense), OPPS (outpatient prospective payment system). Assumes that physician fee schedule relative value units and OPPS payment weights are constant throughout the period. Graph does not show the effects of the expiration of the 2 percent sequester that applies to payment rates through September 2032. Components may not sum to totals due to rounding.

Source: CMS 2017–2024 payment files for OPPS and physician fee schedule. MedPAC calculations of future payment rates based on Office of the Actuary projections of hospital market basket, productivity, and Medicare Economic Index.

start in 2026 under current law since these differential updates may not be the optimal way to incentivize participation in A–APMs over MIPS. As we described earlier, these differential updates will produce a relatively weak incentive in the late 2020s (as shown earlier in Figure 1-9, p. 34) and will then produce a potentially untenably large incentive to participate in A–APMs in the 2040s (also shown in Figure 1-9). One way to ensure that clinicians do not have an incentive to prefer MIPS over A–APM participation would be to repeal MIPS, as the Commission has previously recommended (Medicare Payment Advisory Commission 2018). But if MIPS is retained, an alternative way to incentivize A–APM participation would be to temporarily extend the current A–APM participation bonus.

Extending the A–APM participation bonus for a few more years (e.g., two or three years—through 2028 or 2029) would help maintain clinician participation in A–APMs in the late 2020s, given uncertainty about the attractiveness of MIPS to top-performing clinicians in the coming years (since, as we describe earlier, there is uncertainty about the size of future payment adjustments under MIPS). Once the future direction of MIPS becomes clearer, a reassessment of the need for the A–APM participation bonus could be undertaken.

If the top MIPS adjustment falls to a relatively low level (e.g., 0.07 percent), it may not be necessary to continue to offer an A–APM participation bonus to maintain clinician interest in A–APMs because payments available through A–APMs (e.g., capitated payments per beneficiary, shared savings payments) may be

Improving accuracy of the fee schedule's practice expense payments

A key attribute of Approach 2 is that it would update each fee schedule service by an equal amount. This approach means that updates under the policy would not have differential effects across services or specialties, but it also would not directly address concerns about the accuracy of payments for practice expenses or differences in payment rates between the office and hospital outpatient department (HOPD) settings. One approach to address these concerns would be to couple Approach 2 with additional policies aimed at increasing the accuracy of the fee schedule's relative value units (RVUs) to increase payments for practice expenses and reducing practice expense (PE) payments when a service is furnished in an HOPD.

Rescale relative value units to reflect updated MEI data

CMS periodically rebases the Medicare Economic Index (MEI), which entails updating the base year data used to establish the distribution of costs associated with furnishing clinician services. For example, CMS rebased the MEI in 1998 (moving the base year from 1992 to 1996), 2004 (moving the base year from 1996 to 2000), and 2011 (moving the base year from 2000 to 2006). In 2022, CMS again rebased the MEI (moving the base year from 2006 to 2017), which resulted in an increase in the share of expenses attributed to PE and a decrease for work and professional liability insurance (PLI):

- PE increased from 44.8 percent to 51.1 percent.
- Work decreased from 50.9 percent to 47.5 percent.
- PLI decreased from 4.3 percent to 1.3 percent.

After CMS rebases the MEI, the agency usually rescales the RVUs under the fee schedule to match the distribution of expenses under the MEI. However, CMS has indefinitely delayed rescaling fee schedule RVUs to reflect the most recent rebasing (Centers for Medicare & Medicaid Services 2023f, Centers for Medicare & Medicaid Services 2022b). The agency delayed rescaling in light of the American Medical Association's current efforts to collect more up-to-date practice expense data and to promote stability and predictability within the fee schedule when data sources are updated.[34] As such, CMS is still using the old MEI shares, which are based on data from 2006, to scale the aggregate RVUs.

Rescaling the RVUs to reflect the updated MEI cost weights would incorporate more recent and likely more accurate data. The process would increase payments for PE–heavy services but reduce payments for PLI–heavy services and work–heavy

(*continued next page*)

larger than the modest MIPS adjustments available to clinicians.

But if the top MIPS adjustment rises to a relatively high level (e.g., 8.82 percent), it may be necessary to continue to offer an A–APM participation bonus or pursue other policies that encourage clinicians to participate in A–APMs, to prevent top-performing clinicians from exiting A–APMs. For example, the Congress could reduce the maximum possible MIPS adjustment in statute from 9 percent to some lower percentage.

Rationale

If top-performing clinicians opt not to participate in A–APMs and instead choose to participate in MIPS, the health care provider organizations that remain in A–APMs might have a harder time succeeding. This is because A–APMs usually measure clinicians' performance as a group, at the practice or ACO level—so the loss of top-performing clinicians from a practice or ACO could jeopardize that practice or ACO's ability to meet performance targets. If fewer provider organizations earn performance-based payments in

Improving accuracy of the fee schedule's practice expense payments (cont.)

services. CMS estimates that if this change were implemented, fee schedule spending on services furnished in the office setting would increase by 4 percentage points, while spending on services in facility settings would decrease by 3 percentage points (Centers for Medicare & Medicaid Services 2022b). The effects would also differ by specialty: total payments for physicians specializing in internal medicine would increase by 3 percentage points, vascular surgery would increase by 1 percentage point, psychology would decrease by 4 percentage points, and cardiac surgery would decrease by 8 percentage points. The Commission could act to improve payment accuracy and increase PE RVUs by recommending that CMS rescale RVUs to reflect the current MEI cost weights.

Increase payments for office-based services by reducing indirect practice expenses when certain services are furnished in a facility

As discussed in the text box on site-neutral payments (p. 32), when a service is performed in a facility setting such as an HOPD, the physician fee schedule payment often includes some payment for indirect practice expenses related to maintaining a freestanding office (e.g., rent, utilities, and administrative staff).

Including indirect practice expenses in the fee schedule payment when a service is performed at a hospital assumes that clinicians are maintaining freestanding offices that are independent of the hospital. However, studies have found that many clinicians are employed exclusively or nearly exclusively by hospitals (Burgette et al. 2021). In these cases, Medicare is paying the clinician for practice expenses that may not exist if the clinician is not financing or maintaining a separate freestanding office.

The Commission could explore a policy that would reduce or eliminate indirect practice expenses when a service is furnished in a facility setting. Any reduction in PE RVUs resulting from this policy would be redistributed on a budget-neutral basis under the fee schedule's existing budget-neutrality rules, which would have the effect of increasing payments for clinicians who practice in freestanding offices. ■

A–APMs, interest in A–APMs could then wane, resulting in missed opportunities to achieve better-quality care more efficiently. (We theorize that clinicians in A–APMs are able to earn relatively high MIPS adjustments because among clinicians in APMs who participated in MIPS in the 2023 payment year, their average MIPS score was 97.5 points out of 100, which is higher than the overall average among all clinicians of 89 points out of 100 (Centers for Medicare & Medicaid Services 2023a).)

What size bonus?

A key question for policymakers is the optimal size for an extended A–APM participation bonus. Financial incentives for joining and remaining in an A–APM will be strongest if the payments a clinician receives through their A–APM plus the extended A–APM participation bonus exceed the value of the MIPS adjustment they would otherwise receive. But it is difficult to estimate what size the A–APM participation bonus should be to attract clinicians into A–APMs because, in any given year, each clinician in the U.S. can receive:

- different-size MIPS adjustments (based on their score on MIPS performance measures and implementation decisions CMS makes each year that determine the size of the highest MIPS adjustment);

- different-size payments in A–APMs themselves (due to differences in the payment models and differences in clinicians' performance on the measures used to determine the size of performance bonuses in A–APMs); and
- different-size A–APM participation bonuses (since they are calculated as a share of the payments a clinician is paid by FFS Medicare).

The effectiveness of the A–APM participation bonus could be maximized if set equal to the top MIPS adjustment in a given year—but doing so could result in the bonus reaching as high as 9 percent, which could be costly for the Medicare program and the taxpayers who support it (and could be untenable if access to A–APMs continues to be more limited for certain clinicians). A smaller-sized bonus would be less costly to the Medicare program and less inequitable to clinicians who cannot participate in A–APMs, but it might not be big enough to incentivize clinician participation in A–APMs.

Pros and cons

A bonus extension presents pros and cons to consider.

Pros:

- Extending the A–APM participation bonus could maintain or increase the number of clinicians participating in A–APMs, including top-performing clinicians, which in turn could maximize the chances of A–APMs generating net savings for the Medicare program.

Cons:

- Extending the A–APM participation bonus might not maintain or increase the number of clinicians participating in A–APMs if the participation bonus plus payments available through A–APMs (e.g., shared savings payments) are lower than the highest MIPS adjustment available (which can reach as high as 9 percent under current law).
- Extending the participation bonus could be viewed as inequitable by clinicians who are unable to participate in A–APMs (due to limited availability of A–APMs in their geographic area, limited availability of A–APMs designed for their specialty, a clinician's inability to find a local ACO that wishes to partner with them, etc.).
- The current structure of the A–APM participation bonus gives clinicians an incentive to maximize the volume and intensity of services they deliver to FFS Medicare beneficiaries.
- Continuing to pay A–APM participation bonuses would make it difficult to determine if CMS's A–APMs are generating net savings for Medicare, since the participation bonuses essentially function as off-the-books A–APM payments that are not counted when evaluators assess whether an A–APM generated net savings for Medicare.
- Extending the A–APM participation bonus would increase Medicare spending relative to current law.

Restructure the bonus and eliminate participation thresholds

If the A–APM participation bonus is extended, the bonus could be restructured as a percentage of a clinician's Medicare payments for fee schedule services for FFS Medicare beneficiaries in A–APMs (instead of a percentage of a clinician's payments for all FFS Medicare beneficiaries, including beneficiaries not in A–APMs). This restructured bonus could be coupled with eliminating the requirement that a certain percentage of a clinician's payments or patients be in an A–APM to qualify for the bonus. (Currently, at least 50 percent of a clinician's FFS Medicare or multipayer payments must be associated with an A–APM or at least 35 percent of a clinician's FFS Medicare or multipayer patients must be participating in an A–APM (42 CFR 414.1430).)

Restructuring the bonus in this way would allow bonus payments for clinicians who currently participate in A–APMs but fail to qualify for the bonus. As noted earlier, 62,000 clinicians participated in A–APMs in the 2023 payment year but did not qualify for the A–APM participation bonus due to an insufficient share of their payments or patients being in A–APMs (Centers for Medicare & Medicaid Services 2023a, Centers for Medicare & Medicaid Services 2023h). Clinicians in episode-based payment models would likely benefit the most from dropping the current payment and patient participation thresholds since the average clinician in CMS's two flagship episode-based payment models has shares of payments and patients in A–APMs that are far below the minimum thresholds needed to qualify for the bonus (shown in Figure 1-13). Possibly the discrete

FIGURE 1–13

Shares of payments and patients in A–APMs for the average clinician participating in an A–APM

Figure 1-13a: Average participating clinician's share of payments in A–APMs

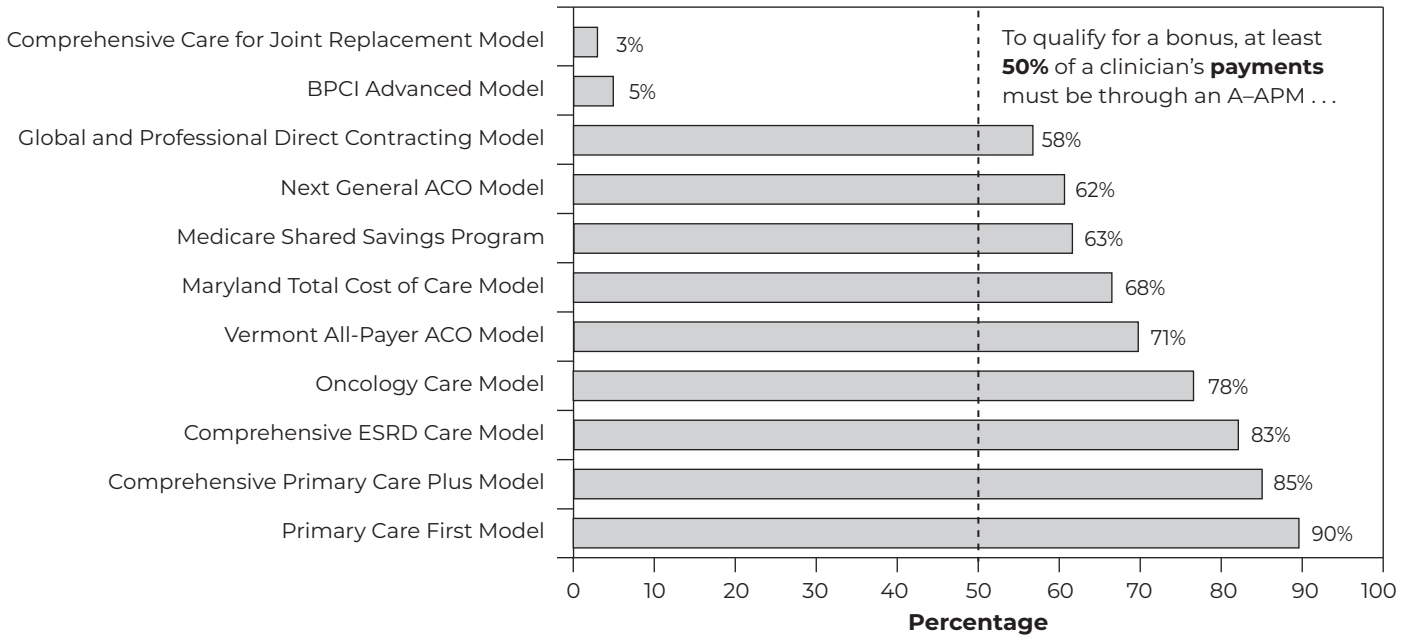
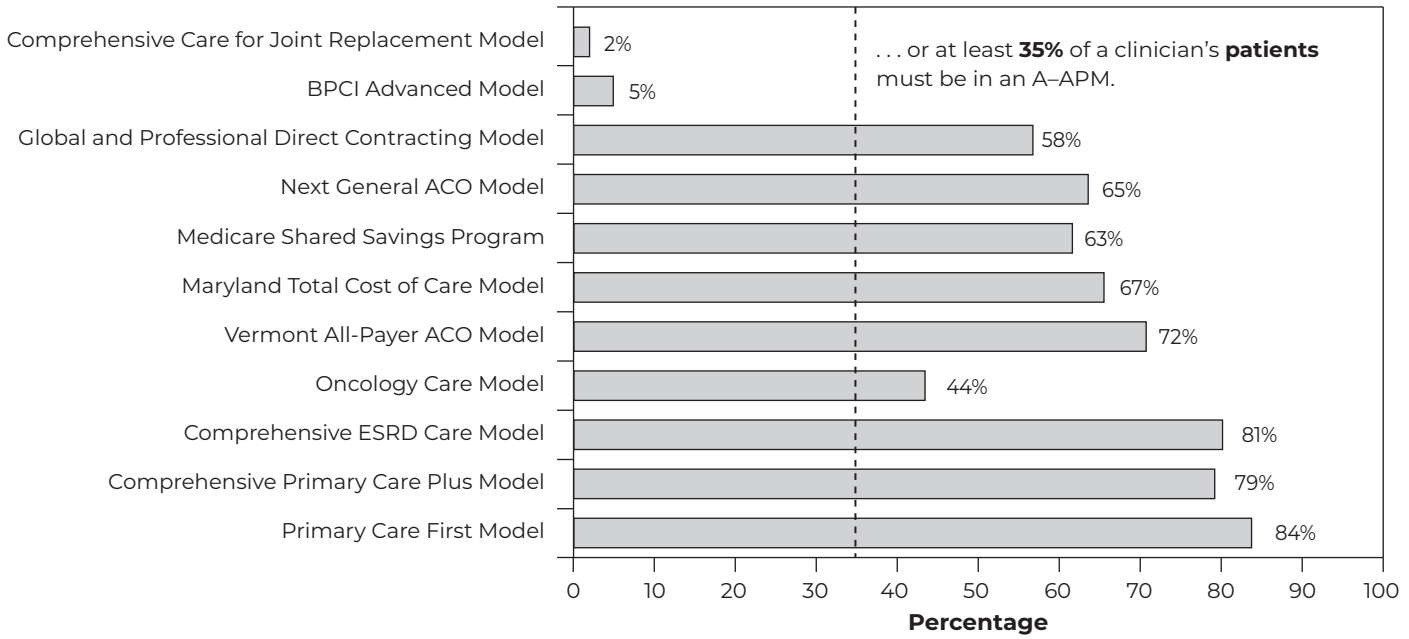


Figure 1-13b: Average participating clinician's share of patients in A–APMs



Note: A–APM (advanced alternative payment model), BPCI (Bundled Payments for Care Improvement), ACO (accountable care organization), ESRD (end-stage renal disease). Figures show data for the 2021 performance year, which corresponds to the 2023 bonus payment year.

Source: CMS's 2021 Quality Payment Program Experience Report, https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2433/2021%20QPP%20Experience%20Report.pdf.

procedures or conditions targeted by episode-based payment models (e.g., hip and knee replacements) make up only a small share of the types of care that a clinician provides.

Many clinicians in ACOs would also benefit if the bonus were restructured this way. Under current law, the share of payments that must be in an A–APM is set to increase from 50 percent to 75 percent in 2027, and CMS will have the freedom to raise the share of patients that must be in an A–APM (currently set at 35 percent) starting in 2027. If the payment threshold is increased from 50 percent to 75 percent, the average clinician in Medicare's ACO models would fail to meet the new, higher payment threshold, since less than 75 percent of the average clinician's payments are in A–APMs in each of CMS's ACO models (shown in Figure 1-13a, p. 55). Similarly, if the patient threshold were increased, some clinicians might no longer qualify to receive the bonus.

The pros and cons of restructuring the bonus and eliminating the payment and patient participation thresholds are as follows:

Pros:

- Eliminating the payment and patient participation thresholds would mean more clinicians in episode-based payment models would qualify for the A–APM participation bonus. It would also prevent many clinicians in ACOs from losing access to the bonus in coming years. In turn, these models' ability to attract top-performing clinicians and generate net savings for the Medicare program could increase.
- Clinicians would have an incentive to increase the number of their FFS Medicare patients in A–APMs.
- Clinicians could not leverage Medicare payments for non–A-APM beneficiaries to influence the size of their A-APM participation bonus.

Cons:

- Basing the bonus on a share of a clinician's payments would give clinicians an incentive to increase the amount of spending they generate per FFS Medicare beneficiary in an A–APM.
- Changing the basis for the calculation of the A–APM participation bonus would make it difficult for clinicians to compare their expected A–APM participation bonus with their expected MIPS adjustment. (Currently, both the bonus and MIPS adjustments are worth a percentage of a clinician's Medicare payments for fee schedule services for all of their FFS Medicare beneficiaries.)
- Increasing the number of clinicians who qualify for the bonus could increase Medicare spending relative to current law. ■

Endnotes

1 Throughout this chapter, we use publicly available MEI data from CMS (Centers for Medicare & Medicaid Services 2023e). For projections, we use MEI data as of the third quarter of 2023, which was the most recent data available at the time we conducted our analyses. Projected MEI growth rates are subject to change. MEI growth data included in this chapter reflect the growth that occurred or is projected to occur in a given calendar year.

2 The Congress eliminated the annual update to allowable charges that would have occurred in July 1984 and froze payment rates through May 1986 for physicians who agreed to take Medicare's allowed payment for all Medicare beneficiaries and through December 1986 for other physicians.

3 For simplicity, we refer to both Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes as HCPCS codes.

4 The comparison of the VPS growth rate with actual spending effectively had a two-year lag due to the time it took for claims to be submitted and processed.

5 The SGR had one conversion factor for all types of medical services, except for anesthesia. Anesthesia is priced using a time-based methodology that differs from other services and therefore has its own conversion factor; the anesthesia conversion factor was updated each year by the same rate called for by the SGR formula during this period.

6 For example, by requiring clinicians to pay shared losses to Medicare if their attributed beneficiaries' spending exceeds a spending target.

7 CMS has defined "more than nominal" as meaning that the total amount an APM entity (e.g., a practice, an ACO) potentially owes a payer or forgoes under a payment arrangement must be at least 8 percent of the revenue from the payer to all providers and other entities under the payment arrangement, or 3 percent of the expected expenditures for which an APM entity is responsible under the payment arrangement (42 CFR 414.1415 (c) and 42 CFR 414.1420 (d)). (Theoretically, Medicaid beneficiaries in a "medical home" payment model that meets criteria comparable to a medical home model that has been expanded by the CMS Innovation Center are considered to be in an A–APM even if such a model does not require more than nominal financial risk, but no such models currently exist.)

8 Only certain tracks of the Medicare Shared Savings Program qualify as an A–APM: Basic Level Track E and the Enhanced Track (Centers for Medicare & Medicaid Services 2023d).

9 In addition to the A–APM participation bonus and higher payment rate updates, clinicians in A–APMs are also eligible for other payments through A–APMs themselves, such as shared savings bonuses.

10 MIPS adjustments to PFS payment rates are based on a clinician's performance two years prior on measures of quality, cost, electronic health record use, and participation in quality improvement activities.

11 The A–APM participation bonus and MIPS adjustments to payment rates apply for one year only and are not built into clinicians' payment rates in subsequent years.

12 Whenever the payment rate for a particular billing code in the PFS is changed or services are added or dropped through administrative action, the changes are required by law to be budget neutral. Budget neutrality is typically achieved by increasing or decreasing the fee schedule's conversion factor.

13 The A–APM participation bonus is calculated as a share of Medicare payments for PFS services, Method II critical access hospital payments, and A–APM supplemental service payments. Payments that are excluded from this calculation are payments for services furnished in rural health clinics or federally qualified health centers; health professional shortage area bonuses; A–APM financial risk payments; A–APM cash flow mechanism payments; and beneficiaries' cost-sharing obligations (Centers for Medicare & Medicaid Services 2023g).

14 Our conclusion that interest in becoming a physician remained strong over the last two decades does not change after adjusting for total population change in the U.S. Combining the number of applicants to MD- and DO-granting institutions, the number of applicants per 100,000 population increased from 15.9 to 23.6 from the 2000–2001 academic year to the 2022–2023 academic year, an increase of 48 percent. Similarly, first-year enrollment at MD- and DO-granting institutions over the same period also increased by 44 percent per capita.

15 In addition, almost all clinicians who treat FFS Medicare beneficiaries accept the PFS's payment rates as payment in full, despite having the option to balance-bill beneficiaries for higher amounts as a "nonparticipating" provider (Medicare Payment Advisory Commission 2024).

16 There are four categories of APRNs: nurse practitioners, certified registered nurse anesthetists, clinical nurse specialists, and certified nurse midwives. Growth rates are calculated based on clinicians who billed services for more than 15 beneficiaries in a given year.

17 From 2021 to 2023, MEI growth exceeded statutory updates, but the Congress implemented one-time payment increases that reduced the gap between payment updates and MEI growth.

18 Physical, occupational, and speech–language pathology services also generate only one claim regardless of whether they are performed in a facility or nonfacility setting. However, unlike the other services mentioned, Medicare pays the fee schedule rate for physical, occupational, and speech–language pathology services in all settings, except for critical access hospitals.

19 There are some differences in payments across settings for professional liability insurance, but these differences are small.

20 The study also noted that, in addition to reductions due to the rebalancing of PE RVUs in 2010, the Congress and CMS implemented a series of targeted payment reductions for advanced imaging services in response to rapid growth in advanced imaging use in clinician offices in the 2000s (e.g., increasing the equipment utilization rate assumption) (Steinwald et al. 2021). Increasing the utilization rate assumption lowers the payment rate per service because CMS assumes the fixed price of an imaging machine can be spread out over a higher number of scans.

21 The A–APM participation bonus is paid to a clinician's tax identification number(s) (42 CFR 414.1450 (c)), which typically refers to the practice or provider organization that accepts payment on behalf of a clinician.

22 In general, a hospital campus is defined as the physical area immediately adjacent to the provider's main buildings; other areas and structures that are not strictly contiguous with the main buildings but are located within 250 yards of the main buildings; and any other areas determined by the CMS regional office, on an individual case basis, to be part of the provider's campus (42 CFR 413.65).

23 We calculated this dollar amount by dividing each ACO's shared savings payment by the total number of primary care physicians, specialists, nurse practitioners, physician assistants, and clinical nurse specialists in the ACO. In reality, ACOs may choose to distribute larger shared savings payments to clinicians serving as primary care providers, clinicians who perform better on internal performance measures, and/or clinicians who meet other ACO-specific criteria.

24 These amounts include payments from all payers participating in CPC+. Medicare paid for about 69 percent of these payments (Swankoski et al. 2022).

25 Current law allows CMS to specify the performance threshold as the mean or median MIPS score from any prior period. For the 2024 performance year / 2026 payment year, CMS has opted to use the mean MIPS score from the first year of MIPS (the 2017 performance year / 2019 payment year) (Centers for Medicare & Medicaid Services 2023f).

26 Payments for anesthesia services, which account for about 2.8 percent of total fee schedule payments, are time based and not priced using the traditional RVU approach. As such, anesthesia services have been excluded from our analysis of Approach 1. A method for updating payment rates for anesthesia services would need to be considered at some point.

27 There are three types of global surgical codes: "0-day global codes" pay for services provided on the day of a procedure; "10-day global codes" pay for services provided on the day of a procedure plus 10 days afterward; and "90-day global codes" pay for services provided on the day of a procedure plus 1 day prior and 90 days afterward.

28 We report results of a sensitivity analysis by RAND that was restricted to the subset of clinicians who billed for any postoperative visits during 90-day global periods. We report these results, rather than RAND's main results, because some specialty societies contend that the reason some clinicians did not bill for any postoperative visits was that their billing system did not allow them to submit the 99024 no-pay billing code that was used by RAND to identify postoperative visits (American Academy of Facial Plastic and Reconstructive Surgery et al. 2022). However, we caution that it is also possible that some clinicians did not report any postoperative visits because they did not provide any. The results we report should therefore be interpreted as conservative and possibly overrepresenting how many postoperative visits were provided.

29 In 2014, CMS announced that it planned to convert 10-day global surgical codes to 0-day global codes in 2017 and to convert 90-day global surgical codes to 0-day global codes in 2018 (Centers for Medicare & Medicaid Services 2014). The Congress subsequently blocked this policy in MACRA and directed CMS to collect empirical data quantifying the number of postoperative visits being provided during global periods.

30 For example, PE data could be used from surveyed clinicians whose reported costs are at the 25th percentile of all respondents' costs.

31 Amounts have been rounded to the nearest dollar.

32 The total OPPS payment rate for APC 5052 is $380, but that amount includes ancillary services that have been packaged in the payment amount that are not included in PFS payments for HCPCS 17004. To compare payments for HCPCS 17004 and APC 5052, we have removed payments for ancillary services, which we estimate to be about 20 percent of the OPPS payment rate for APC 5052.

33 For example, hospital-owned practices pay less per physician for building and occupancy costs, furniture and equipment costs, and information technology costs, which may reflect health systems' ability to negotiate lower prices on goods and services that they bulk-purchase compared with what single practices pay for smaller quantities of these items (Burgette et al. 2018).

34 In addition to rebasing the MEI, CMS substantially revised the data used to establish the distribution.

References

American Academy of Facial Plastic and Reconstructive Surgery, American Academy of Ophthalmology, American Academy of Otolaryngology-Head and Neck Surgery, et al. 2022. Comment letter to CMS on the proposed rule entitled: Medicare Program; CY 2023 payment policies under the physician payment schedule and other changes to Part B payment policies—global surgical packages. September 6. https://www.breastsurgeons.org/docs/advocacy/2022_09_06_Surgical_Coalition_Global_Codes_Comments.pdf.

American Association of Colleges of Osteopathic Medicine. 2023. *Applicants, enrollment and graduates 1977-78–2023-24*. Chevy Chase, MD: AACOM. October 3. https://www.aacom.org/searches/reports/report/applicants-enrollment-and-graduates-1977-78---2023-24.

American Medical Association. 2023a. 2022 AMA prior authorization (PA) physician survey. https://www.ama-assn.org/system/files/prior-authorization-survey.pdf.

American Medical Association. 2023b. *AMA/Specialty Society RVS Update Committee: An overview of the RUC process*. Chicago, IL: AMA. https://www.ama-assn.org/system/files/ruc-update-booklet.pdf.

American Medical Association. 2023c. History of Medicare conversion factor under the SGR. Chicago, IL: AMA. https://www.ama-assn.org/system/files/history-of-medicare-conversion-factor-under-the-sgr.pdf.

American Medical Association. 2023d. *Slide presentation to MedPAC conveying selected results from the 2022 AMA Physician Practice Benchmark Survey*. September 20.

American Medical Association. 2015. Letter to Sean Cavanaugh re: response to the Centers for Medicare and Medicaid Services (CMS) concerning the transition from surgical global periods to 000-day global period. March 3. https://www.ama-assn.org/system/files/2019-12/ruc-recommendation-for-surgical-global-unbundling-policy.pdf.

Association of American Medical Colleges. 2022. *2022 facts: Applicants and matriculants data*. October 31. Washington, DC: AAMC. https://www.aamc.org/data-reports/students-residents/data/2022-facts-applicants-and-matriculants-data.

Auerbach, D. I., P. I. Buerhaus, and D. O. Staiger. 2020. Implications of the rapid growth of the nurse practitioner workforce in the U.S. *Health Affairs* 39, no. 2 (February): 273-279.

Berndt, E. 2012. Memo to Kathleen Sebelius regarding final report from the Medicare Economic Technical Advisory Panel. Cambridge, MA: Massachusetts Institute of Technology. https://www.cms.gov/regulations-and-guidance/guidance/faca/downloads/mei-review-report-to-hhs.pdf.

Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2023. *2023 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Washington, DC: Boards of Trustees. https://www.cms.gov/oact/tr/2023.

Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2015. *2015 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Washington, DC: Boards of Trustees.

Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2014. *2014 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Washington, DC: Boards of Trustees.

Burgette, L., C. C. Cohen, J. O. Hero, et al. 2020. *Practice expense methodology and data collection research and analysis: Interim phase II report*. Santa Monica, CA: RAND.

Burgette, L., J. O. Hero, J. Liu, et al. 2021. *Practice expense data collection and methodology: Phase II final report*. Santa Monica, CA: RAND.

Burgette, L., J. L. Liu, B. Miller, et al. 2018. *Practice expense methodology and data collection research and analysis*. Santa Monica, CA: RAND.

Census Bureau. 2021. Service Annual Survey (SAS). https://www.census.gov/programs-surveys/sas.html.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023a. *2021 Quality Payment Program experience report*. Baltimore, MD: CMS. July 13. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2433/2021%20QPP%20Experience%20Report.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023b. Advanced alternative payment models (APMs) incentive payments for 2023. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2517/QPCount_IncentivePayments.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023c. *Alternative payment models in the Quality Payment Program as of December 2022*. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2180/2022%20and%202023%20Comprehensive%20List%20of%20APMs.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023d. *Alternative payment models in the Quality Payment Program as of December 2023*. Baltimore, MD: CMS. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2647/2023and2024CompListofAPMs.pdf?linkId=277175263.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023e. Market basket data. https://www.cms.gov/data-research/statistics-trends-and-reports/medicare-program-rates-statistics/market-basket-data.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023f. Medicare and Medicaid programs; CY 2024 payment policies under the physician fee schedule and other changes to Part B payment and coverage policies; Medicare Shared Savings Program requirements; Medicare Advantage; Medicare and Medicaid provider and supplier enrollment policies; and Basic Health Program. Final rule. *Federal Register* 88, no. 220 (November 16): 78818–80047.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023g. Payment Year 2023 alternative payment model (APM) incentive payment fact sheet. https://qpp.cms.gov/resources/document/c32a2f16-8439-42a8-84b0-849d1cd75c39.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2023h. Quality Payment Program (QPP) 2021: Participation results at-a-glance. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2432/2021%20QPP%20Participation%20Results%20Infographic.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2022a. Alternative payment models in the Quality Payment Program as of December 2021. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/1683/2021%20and%202022%20Comprehensive%20List%20of%20APMs.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2022b. Medicare and Medicaid programs; CY 2023 payment policies under the physician fee schedule and other changes to Part B payment and coverage policies; Medicare Shared Savings Program requirements; implementing requirements for manufacturers of certain single-dose container or single-use package drugs to provide refunds with respect to discarded amounts; and COVID-19 interim final rules. Final rule and interim final rules. *Federal Register* 87, no. 222 (November 18): 69404-70700.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2022c. *Medicare Shared Savings Program: Performance year financial and quality results*. Baltimore, MD: CMS. https://data.cms.gov/medicare-shared-savings-program/performance-year-financial-and-quality-results/data.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2022d. *National health expenditure data: Historical*. Baltimore, MD: CMS. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2022e. *Quality Payment Program participation in 2020: Results at-a-glance*. Baltimore, MD: CMS. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/1783/QPP%202020%20Participation%20Results%20Infographic.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2020a. 2018 Quality Payment Program performance year data: At a glance.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2020b. Quality Payment Program (QPP) participation in 2019: Results at-a-glance. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/1190/QPP%202019%20Participation%20Results%20Infographic.pdf.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2018. Quality Payment Program (QPP) year 1 performance results. CMS blog.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2014. Medicare program; revisions to payment policies under the physician fee schedule, clinical laboratory fee schedule, access to identifiable data for the Center for Medicare and Medicaid Innovation Models & other revisions to Part B for CY 2015. Final rule. *Federal Register* 79, no. 219 (November 13): 67547–68092.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2009. Medicare program; payment policies under the physician fee schedule and other revisions to Part B for CY 2010. Final rule. *Federal Register* 74, no. 226 (November 25): 61737–62188.

Congressional Budget Office. 2023. *Federal budgetary effects of the activities of the Center for Medicare & Medicaid Innovation*. Washington, DC: CBO. September. https://www.cbo.gov/system/files/2023-09/59274-CMMI.pdf.

Congressional Budget Office. 2022. *The prices that commercial health insurers and Medicare pay for hospitals' and physicians' services*. Washington, DC: CBO. https://www.cbo.gov/publication/57422.

Crespin, D. J., A. M. Kranz, T. Ruder, et al. 2021. *Claims-based reporting of post-operative visits for procedures with 10- or 90-day global periods: Updated results using calendar year 2019 data*. Santa Monica, CA: RAND Corporation. https://www.cms.gov/files/document/rand-cy-2019-claims-report-2021.pdf.

Crespin, D. J., T. Ruder, A. W. Mulcahy, et al. 2022. Variation in estimated surgical procedure times across patient characteristics and surgeon specialty. JAMA *Surgery* 157, no. 5 (May 1): e220099.

Cromwell, J., N. McCall, K. Dalton, et al. 2010. Missing productivity gains in the Medicare physician fee schedule: Where are they? *Medical Care Research and Review* 67, no. 6 (December): 676–693.

Desai, S., and J. M. McWilliams. 2018. Consequences of the 340B Drug Pricing Program. *New England Journal of Medicine* 378, no. 6 (February 8): 539–548.

Dranove, D., and C. Ody. 2019. Employed for higher pay? How Medicare payment rules affect hospital employment of physicians. *American Economic Journal: Economic Policy* 11, no. 4 (November): 249–271.

Gottlieb, J. D., M. Polyakova, K. Rinz, et al. 2023. *Who values human capitalists' human capital? The earnings and labor supply of U.S. physicians*. NBER working paper no. 31469. Cambridge, MA: National Bureau of Economic Research. July.

Government Accountability Office. 2015. *Medicare physician payment rates: Better data and greater transparency could improve accuracy*. GAO–15–434. Washington, DC: GAO.

Government Accountability Office. 2004. *Medicare physician payments: Concerns about spending target system prompt interest in considering reforms*. GAO–05–85. October. https://www.gao.gov/assets/gao-05-85.pdf.

Jacobs, P. D. 2021. The impact of Medicare on access to and affordability of health care. *Health Affairs* 40, no. 2 (February): 266–273.

Juba, D., and M. Sulvetta. 1986. *Trends in Medicare payment for physician services*. Washington, DC: The Urban Institute.

Kane, C. 2023. *Policy research perspectives: Recent changes in physician practice arrangements: Shifts away from private practice and towards larger practice size continue through 2022*. Chicago, IL: American Medical Association. https://www.ama-assn.org/system/files/2022-prp-practice-arrangement.pdf.

Kanter, G. P., D. Polsky, and R. M. Werner. 2019. Changes in physician consolidation with the spread of accountable care organizations. *Health Affairs* 38, no. 11 (November): 1936–1943.

Kelly, S. 2022. Physician pay is climbing after early-pandemic slump. *Healthcare Dive*, April 18. https://www.healthcaredive.com/news/physician-pay-is-climbing-after-early-pandemic-slump/622175/.

Laugesen, M. J. 2016. *Fixing medical prices: How physicians are paid*. Cambridge, MA: Harvard University Press.

McAneny, B. L. 2016. *Testimony of the American Medical Association before the U.S. House of Representatives Committee on Energy and Commerce Subcommittee on Health re: Medicare Access and CHIP Reauthorization Act of 2015: Examining physician efforts to prepare for Medicare payment reforms*. Committee on Energy and Commerce. April 19.

McCall, N., J. Cromwell, and P. Braun. 2006. Validation of physician survey estimates of surgical time using operating room logs. *Medical Care Research and Review* 63, no. 6 (December): 764–777.

Medicare Payment Advisory Commission. 2024. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2023a. *Report to the Congress: Medicare and the health care delivery system*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2023b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2022a. Comment letter on CMS's proposed rule entitled "Medicare and Medicaid Programs; CY 2023 payment policies under the physician fee schedule and other changes to Part B payment policies; Medicare Shared Savings Program requirements; Medicare and Medicaid provider enrollment policies, including for skilled nursing facilities; conditions of payment for suppliers of durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS); and implementing requirements for manufacturers of certain single-dose container or single-use package drugs to provide refunds with respect to discarded amounts." https://www.medpac.gov/wp-content/uploads/2022/09/09022022_Part_B_2023_CMS1770P_MedPAC_COMMENT_v2_SEC.pdf.

Medicare Payment Advisory Commission. 2022b. *Report to the Congress: Medicare and the health care delivery system*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2021a. MedPAC comment on CMS's proposed rule on CY 2022 revisions to payment policies under the physician fee schedule and other changes to Part B payment policies. September 9. https://www.medpac.gov/wp-content/uploads/2021/10/09092021_PartB_CMS1751_MedPAC_Comment_V2_SEC.pdf.

Medicare Payment Advisory Commission. 2021b. *Report to the Congress: Medicare and the health care delivery system.* Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2020. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2019. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2018. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2014. MedPAC comment letter on CMS's proposed rule entitled: "Medicare Program; Revisions to Payment Policies under the Physician Fee Schedule, Clinical Laboratory Fee Schedule, Access to Identifiable Data for the CMMI Models & Other Revisions to Part B for CY 2015," August 24. https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/comment-letters/08282014_comment_letter_2015_pt_b_rule_final.pdf.

Medicare Payment Advisory Commission. 2013. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2012. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2011a. Moving forward from the sustainable growth rate (SGR) system. Letter to the Congress. October 14.

Medicare Payment Advisory Commission. 2011b. *Report to the Congress: Medicare and the health care delivery system.* Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2007. *Report to the Congress: Promoting greater efficiency in Medicare*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2006a. *Report to the Congress: Increasing the value of Medicare*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2006b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Merrell, K., C. Schur, T. Oberlander, et al. 2014. *Analysis of physician time use patterns under the Medicare fee schedule*. Report prepared for the Assistant Secretary for Planning and Evaluation. Washington, DC: Social & Scientific Systems/The Urban Institute.

Mulcahy, A., H. H. Liu, T. Ruder, et al. 2019. *Using claims-based estimates of post-operative visits to revalue procedures with 10- and 90-day global periods*. Santa Monica, CA: RAND Corporation. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Downloads/RAND-Revaluation-Report.pdf.

National Center for Health Statistics. 2021. *Health, United States*, 2019. Hyattsville, MD: NCHS. https://www.cdc.gov/nchs/data/hus/hus19-508.pdf.

National Commission on Certification of Physician Assistants. 2022. Statistical profile of board certified PAs by specialty. Johns Creek, GA: NCCPA.

National Commission on Certification of Physician Assistants. 2014. *Income from physician assistant positions by principal clinical position: A supplement to 2013 statistical profile of certified physician assistants*. Johns Creek, GA: NCCPA. December.

Neprash, H. T., M. E. Chernew, A. L. Hicks, et al. 2015. Association of financial integration between physicians and hospitals with commercial health care prices. *JAMA Internal Medicine* 175, no. 12 (December): 1932–1939.

Newhouse, J. P. 2007. Medicare spending on physicians: No easy fix in sight. *New England Journal of Medicine* 356, no. 18 (May 3): 1883–1884.

O'Reilly, K. B. 2023. Fixing Medicare physician pay system a top priority for the AMA. American Medical Association. https://www.ama-assn.org/practice-management/medicare-medicaid/fixing-medicare-physician-pay-system-top-priority-ama.

Ochieng, N., and G. Clerveau. 2023. *How many physicians have opted out of the Medicare program?* Washington, DC: Kaiser Family Foundation. https://www.kff.org/medicare/issue-brief/how-many-physicians-have-opted-out-of-the-medicare-program/#:~:text=Few%20(1.1%25)%20Physicians%20Have,Out%20of%20Medicare%20in%202023&text=While-%20the%20overall%20opt%2Dout,and%20plastic%20and%20reconstructive%20surgery.

Ochieng, N., J. Fuglesten Biniek, M. Rae, et al. 2022. *Most office-based physicians accept new patients, including patients with Medicare and private insurance*. Washington, DC: Kaiser Family Foundation. https://www.kff.org/medicare/issue-brief/most-office-based-physicians-accept-new-patients-including-patients-with-medicare-and-private-insurance/.

Physician Payment Review Commission. 1996. *Annual report to the Congress*. Washington, DC: PPRC.

Physician Payment Review Commission. 1987. *Medicare physician payment: An agenda for reform*. Washington, DC: PPRC.

Post, B., T. Buchmueller, and A. M. Ryan. 2018. Vertical integration of hospitals and physicians: Economic theory and empirical evidence on spending and quality. *Medical Care Research and Review* 75, no. 4 (August): 399–433.

Post, B., E. C. Norton, B. Hollenbeck, et al. 2021. Hospital-physician integration and Medicare's site-based outpatient payments. *Health Services Research* 56, no. 1 (February): 7-15.

Schappert, S. M., and L. Santo, Department of Health and Human Services. 2023. *Percentage of office-based physicians accepting new Medicare, Medicaid or privately insured patients in the United States: National Ambulatory Medical Care Survey, 2021*. Hyattsville, MD: National Center for Health Statistics. https://www.cdc.gov/nchs/data/namcs/2021-P3P4-NAMCS-Provider-Data-Dictionary-COVID-Dashboard-RDC-Researcher-Use-508.pdf.

Short, M. N., and V. Ho. 2019. Weighing the effects of vertical integration versus market concentration on hospital quality. *Medical Care Research and Review* (February 9): 1077558719828938.

Song, Z., J. Wallace, H. T. Neprash, et al. 2015. Medicare fee cuts and cardiologist-hospital integration. JAMA *Internal Medicine* 175, no. 7 (July): 1229–1231.

Steinwald, B., P. B. Ginsburg, C. Brandt, et al. 2021. *Medicare advanced imaging payment: Dysfunctional policy making*. Los Angeles, CA: USC-Brookings Schaeffer Initiative for Health Policy. March.

Swankoski, K., A. O'Malley, H. Tu, et al. 2022. *Independent evaluation of Comprehensive Primary Care Plus (CPC+): Fourth annual report*. Report prepared by Mathematica for the Centers for Medicare & Medicaid Services. Baltimore, MD: CMS. https://innovation.cms.gov/data-and-reports/2022/cpc-plus-fourth-annual-eval-report.

Urwin, J. W., E. Gudbranson, D. Graham, et al. 2019. Accuracy of the Relative Value Scale Update Committee's time estimates and physician fee schedule for joint replacement. *Health Affairs* 38, no. 7 (July): 1079–1086.

Wray, C. M., M. Khare, and S. Keyhani. 2021. Access to care, cost of care, and satisfaction with care among adults with private and public health insurance in the U.S. JAMA *Network Open* 4, no. 6 (June 1): e2110275.

Zuckerman, S., M. K., R. Berenson, et al. 2016. *Collecting empirical physician time data: Piloting an approach for validating work relative value units*. Report prepared for the Centers for Medicare & Medicaid Services. Washington, DC: The Urban Institute.