

C H A P T E R

3

Hospital inpatient and outpatient services

R E C O M M E N D A T I O N

- 3** For fiscal year 2023, the Congress should update the 2022 Medicare base payment rates for acute care hospitals by the amount specified in current law.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

Hospital inpatient and outpatient services

Chapter summary

Medicare generally sets fee-for-service (FFS) payment rates for hospital inpatient and outpatient services under the inpatient prospective payment systems (IPPS) and the outpatient prospective payment system (OPPS). In 2020, about 3,100 short-term acute care hospitals paid under the IPPS provided about 7.5 million inpatient stays to 4.8 million FFS Medicare beneficiaries. That same year, roughly 3,600 hospitals paid under the OPPS provided 78.1 million visits to 18.2 million FFS Medicare beneficiaries. The IPPS and OPPS payments for these services totaled \$172.6 billion, including \$8.3 billion in uncompensated care payments.

In this chapter, we make a recommendation on a payment rate update for 2023. Because of standard data lags, the most recent complete data we have are from 2020 for most payment adequacy indicators. We have considered the effects of the coronavirus public health emergency (PHE) and associated relief policies on our indicators and whether those effects are likely to be temporary or permanent. To the extent that the effects of the PHE are temporary changes—even across multiple years—or vary significantly across individual hospitals, they are best addressed through targeted temporary funding policies rather than a permanent change to all hospitals' payment rates in 2023 and future years. Based on information available at the time of publication, we do not anticipate any PHE-related

In this chapter

- Are Medicare payments adequate in 2022?
- How should Medicare payments change in 2023?
- Mandated report on Bipartisan Budget Act of 2018 changes to the low-volume hospital payment adjustment

effects in 2023 other than increased wage rates, which should be accounted for under the current-law annual updates to the hospital market basket. To the extent that the PHE continues, any additional needed financial support should be targeted to affected hospitals that are necessary for beneficiary access to high-quality care.

Assessment of payment adequacy

In 2020, some hospital payment adequacy indicators improved while others declined; however, indicators varied substantially across hospitals and largely reflect temporary changes during the PHE rather than changes in the overall adequacy of Medicare payments to hospitals.

Beneficiaries' access to care—At certain points during the PHE, FFS Medicare beneficiaries' access to hospital care was disrupted and inpatient capacity was stressed. At the same time, fewer hospitals closed in 2020 and 2021 compared to prior years, hospitals maintained excess inpatient capacity in aggregate, and hospitals continued to have a financial incentive to serve FFS Medicare beneficiaries.

- **Capacity and supply of providers**—Short-term acute care hospitals continued to have significant excess inpatient capacity in 2020, as indicated by an aggregate occupancy rate of 62 percent. However, inpatient capacity—especially in intensive care units—was stressed at times in some states. In 2020 and 2021, the number of hospital closures declined substantially from the high in 2019.
- **Volume of services**—In 2020, inpatient stays and outpatient services per FFS beneficiary declined, driven by a decrease of over 40 percent in spring 2020, followed by partial rebounds by the end of the year.
- **Marginal profit**—IPPS hospitals with excess capacity continued to have financial incentives to provide inpatient and outpatient services to Medicare beneficiaries, as indicated in 2020 by a positive Medicare marginal profit of about 5 percent.

Quality of care—Quality of care in 2020 is difficult to assess. While we report 2020 mortality, readmissions, and patient experience results, we do not draw conclusions about whether any changes reflect the adequacy of Medicare's payments. In March 2019, the Commission recommended a redesign of the current hospital quality payment programs, including removing the current penalty-only quality programs and enacting a new hospital value incentive program that balances rewards and penalties and has the potential to drive further improvement in hospital quality.

Providers' access to capital—In 2020, IPPS hospitals' all-payer total margin remained strong but declined to 6.3 percent (a level similar to the average over the past 15 years). Within this aggregate result, the all-payer total margin reached a near record high for rural hospitals, reflecting targeted federal relief funds. In addition, certain large hospital systems reported that their 2021 all-payer operating margins (which exclude investment income) exceeded 2019 levels, suggesting that hospitals' access to capital strengthened in 2021.

Medicare payments and providers' costs—In 2020, Medicare's payments to hospitals continued to be below hospitals' costs. Because federal relief funds were intended to help cover lost revenue and payroll costs—including lost revenue from Medicare patients and the cost of staff who help treat these patients—we report a Medicare margin that includes a portion of these relief funds (based on FFS Medicare's share of 2019 all-payer operating revenue). After including the Medicare share of relief funds, IPPS hospitals' Medicare margin improved slightly in 2020, indicating that the federal relief funds did their intended job.

- **Medicare payments and providers' costs per service**—In 2020, IPPS payments per stay grew 8.7 percent, faster than in prior years; however, costs per stay grew even faster, rising 12.6 percent. Similarly, OPPS payments per service grew 13.5 percent, faster than in prior years, but costs per service grew even faster at 24.4 percent. For both IPPS stays and OPPS services, the faster growth in costs relative to payments is likely due to a combination of factors unique to the PHE, including spreading fixed costs over lower volume, increased wage rates, and pandemic-related protocols and supplies.
- **Medicare margin**—IPPS hospitals' Medicare margin across service lines declined between 2019 and 2020, from -8.7 percent to -12.6 percent without including relief funds. However, after including Medicare's share of reported federal relief funds, IPPS hospitals' Medicare margin was -8.5 percent, slightly above the 2019 margin. Among relatively efficient hospitals, the median Medicare margin was -1 percent in 2019 but declined to -3 percent in 2020, excluding relief funds. With relief funds, relatively efficient hospitals' median Medicare margin increased to 1 percent.
- **Projected Medicare margin**—The coronavirus PHE has made 2020 and 2021 anomalous years in many respects, and it is impossible to predict with certainty the extent to which the effects will continue into 2022 and beyond. Under these circumstances, we project that IPPS hospitals'

Medicare margin in 2022 will be close to -10 percent prior to allocating relief funds. We project that IPPS hospitals' Medicare margin including relief funds will be around -9 percent, and the median Medicare margin for relatively efficient hospitals will remain at about 1 percent. We anticipate that hospitals' declining pandemic-related costs and increasing patient volume in 2022 relative to 2020 will be roughly offset by declining relief funds and uncompensated care payments. However, hospitals' actual 2022 Medicare margin will depend in part on the duration and severity of the coronavirus pandemic, volume changes, case-mix changes, and changes in costs relative to the forecast for input price inflation, as well as any additional payment or other policy changes enacted due to the pandemic.

How should Medicare payment rates change in 2023?

Under current law, Medicare's base payment rates under the IPPS and OPPS increase annually based on the projected increase in the hospital market basket minus a projected increase in productivity. In addition, in each of years 2018 through 2023, the IPPS base payment rate increases by an additional 0.5 percent to phase out adjustments that were put in place to recoup prior coding-induced overpayments. The final update for 2023 will not be set until summer 2022, but CMS's 2021 third-quarter projections of the market basket and productivity (and the additional statutory increase to IPPS payments) would produce a 2.5 percent increase in the IPPS base payment rate and a 2.0 percent increase in the OPPS base payment rate. These projections for 2023 are based in part on an estimated 3.1 percent growth in wages and benefits, which is higher than in prior years. The final update will include August 2022 estimates of 2023 growth in wages and other inputs and thus could be lower or higher than the current projected update, given future projections of input price inflation and productivity.

Our payment adequacy indicators are mixed but generally positive, and we anticipate changes caused by the PHE to be temporary (other than potentially increased wage rates, which should be accounted for under the current-law annual updates to the hospital market basket). Given these factors, the Commission's recommendation is that the Congress should update IPPS and OPPS payment rates by the amount specified under current law in 2023. The Commission anticipates that this recommendation will be enough to maintain beneficiaries' access to hospital inpatient and outpatient care and keep IPPS and OPPS payment rates close to the cost of delivering high-quality care efficiently.

Mandated report on the Bipartisan Budget Act of 2018 changes to the low-volume hospital payment adjustment

Setting Medicare payments proportionate to an efficient provider's costs requires accounting for factors beyond providers' control that can affect the costs of furnishing services. Patient volume is one such factor, particularly in small and isolated communities where some providers (in particular, those with 200 or fewer all-payer inpatient stays) cannot achieve the economies of scale and service scope of their larger counterparts and thus have higher costs per inpatient stay. For these reasons, in 2001, the Commission recommended that CMS develop a graduated adjustment to IPPS payment rates for isolated hospitals with lower volumes of all-payer inpatient stays.

Starting in 2005, the Congress mandated that the Department of Health and Human Services (HHS) implement an empirically justified low-volume hospital adjustment to IPPS payments of no more than 25 percent for hospitals that had no more than 800 all-payer inpatient stays and were at least 25 miles from the nearest IPPS hospital. Subsequent laws, most recently the Bipartisan Budget Act (BBA) of 2018, temporarily modified the eligibility criteria for the low-volume hospital (LVH) payment adjustment for fiscal years 2019 through 2022. The law mandated that hospitals with fewer than 3,800 all-payer inpatient stays be eligible for the LVH adjustment (instead of hospitals with fewer than 1,600 Medicare stays, as mandated by the Affordable Care Act of 2010 (ACA)). However, the BBA of 2018 kept other aspects of the ACA changes to LVH policy, including specifying the exact adjustment (instead of having HHS determine an empirically justified adjustment) and the lower isolation requirement of fewer than 15 miles from the nearest IPPS hospital. The BBA of 2018 also required the Commission to evaluate and report on the effects of the LVH policy change.

Our analysis found that in 2019, the BBA of 2018 policy change raised the number of LVHs by 5 percent and increased LVH payments by about 19 percent, due to increases in LVHs, the average number of FFS Medicare stays per LVH, and the average LVH adjustment.

The BBA of 2018 requirement that LVH eligibility be based on all-payer volume (and not Medicare volume) is consistent with the Commission's prior recommendation, and LVH policy will become more consistent with our prior recommendation beginning in 2023 when CMS's authority to determine an empirically justified LVH adjustment is restored. Still, concerns remain that the policy is not well targeted to isolated hospitals and is duplicative for the majority of LVHs that already receive cost-based payments through their designation as a sole-community or Medicare-dependent hospital. ■

Background

In 2020, the Medicare fee-for-service (FFS) program and its beneficiaries paid hospitals \$172.6 billion for inpatient and outpatient services under the inpatient prospective payment systems (IPPS) and outpatient prospective payment system (OPPS) (Table 3-1)—down 7 percent from \$185.5 billion in 2019. The decline was driven by FFS Medicare beneficiaries' lower use of hospital services during the coronavirus pandemic.¹ In fiscal year 2020, about 3,150 hospitals received \$104.1 billion in IPPS payments from the Medicare program and its beneficiaries for 7.5 million inpatient stays by 4.8 million FFS Medicare beneficiaries. Approximately 2,700 of these hospitals received an additional \$8.3 billion from the Medicare program for uncompensated care (charity care and non-Medicare bad debts). In calendar year 2020, about 3,600 hospitals received \$60.2 billion in OPPS payments from the Medicare program and its beneficiaries for 78.1 million outpatient visits by 18.2 million FFS Medicare beneficiaries.²

How Medicare sets hospital payment rates

Medicare generally sets FFS payment rates for hospital inpatient and outpatient services under the IPPS and OPPS.^{3,4} CMS adjusts these systems' payment rates for factors outside hospitals' control, such as regional wage rates and patient characteristics. One rationale for

paying hospitals on a prospective basis is to increase hospitals' incentive to control their costs. Indeed, as we have reported in previous years' March reports, hospitals with higher costs are often those under less pressure to constrain costs.

Inpatient prospective payment systems

The IPPS primarily pays hospitals prospectively determined rates per inpatient stay for hospitals' operating and capital costs. The IPPS payments per stay are derived through a series of adjustments applied to separate, annually updated operating and capital base payment rates. Adjustments to base rates include those for geographic factors, case mix (the expected relative costliness of inpatient treatment for patients with similar clinical conditions), and certain hospital characteristics (such as teaching hospitals or those that serve a disproportionate share of low-income patients). The IPPS has additional special payments for new technologies, extraordinarily high-cost cases, and certain rural hospitals, as well as quality incentives and penalties.

In addition to the IPPS payments per stay, each IPPS disproportionate share hospital (DSH) receives uncompensated care payments from a fixed pool of dollars to help cover their costs of treating the uninsured. Because these are separate payments not tied to an FFS Medicare beneficiary's inpatient stay, we

**TABLE
3-1**

Medicare payments under the IPPS and OPPS, 2020

Medicare payment system	Number of hospitals	Payments (in billions)
IPPS—Inpatient services	3,150	\$104.1
IPPS—Uncompensated care	2,700	8.3
OPPS—Outpatient services	3,600	60.2
Total		172.6

Note: IPPS (inpatient prospective payment systems), OPPS (outpatient prospective payment system). The number of hospitals is rounded to the nearest 50. Payments include applicable beneficiary cost-sharing responsibilities. The year refers to fiscal year for inpatient services and calendar year for outpatient services.

Source: MedPAC analysis of Medicare Provider Analysis and Review data, IPPS final rule, and outpatient claims.

report uncompensated care payments separately from other IPPS payments.⁵

Outpatient prospective payment system

The unit of payment in the OPPTS consists of a primary service and ancillary items that are bundled, or “packaged,” with the primary service. Examples of primary services include emergency department visits, computed tomography (CT) scans, and surgical procedures. The OPPTS pays a predetermined amount for each primary service. CMS classifies the services into ambulatory payment classifications (APCs) based on clinical and cost similarity. For each APC, CMS determines a base payment rate using the geometric mean cost that hospitals incur when providing the services in the APC. CMS adjusts the base payment rate for geographic differences in input prices. The OPPTS also has special payments for new technologies, designed for situations in which individual services cost the hospital much more than the base payment, and for certain hospital types (such as cancer centers, children’s hospitals, and sole community hospitals). The OPPTS also pays separately for drugs that have costs that exceed a threshold, as well as for corneal tissue acquisition and blood and blood products.⁶

Are Medicare payments adequate in 2022?

To assess whether FFS Medicare payments in 2022 are adequate for relatively efficient hospitals (i.e., hospitals that consistently perform relatively well on cost and quality metrics), we examined payment adequacy indicators in four categories:

- beneficiaries’ access to hospital inpatient and outpatient care;
- quality of hospital care;
- hospitals’ access to capital; and
- the relationship between FFS Medicare payments and hospitals’ costs, both across all IPPS hospitals and for an identified group of relatively efficient hospitals.

In 2020—the most recent year of data for most of our measures—some hospital payment adequacy indicators

improved while others worsened; however, indicators varied substantially across hospitals, and the aggregate changes reflect temporary changes during the coronavirus public health emergency (PHE) rather than changes in the overall adequacy of Medicare payments to hospitals. (For a description of how the coronavirus pandemic has been incorporated into our payment adequacy framework, see text box.)

While it is impossible to precisely predict the future, especially given the evolving coronavirus pandemic, we anticipate that hospital payment adequacy indicators will return to historical trends in 2022. Including relief funds, we project that IPPS hospitals’ Medicare margin in 2022 will remain about –9 percent among all IPPS hospitals and will remain at about 1 percent for relatively efficient hospitals, as we expect that hospitals’ declining COVID-19 costs and rising patient volume in 2022 relative to 2020 will be roughly offset by reduced relief funds and uncompensated care payments.

Beneficiaries’ access to hospital inpatient and outpatient services was disrupted during the PHE but remained good overall

FFS Medicare beneficiaries’ access to hospital care was disrupted during the PHE; however, fewer hospitals closed in fiscal years 2020 and 2021 than in 2019, and hospitals continued to have excess inpatient capacity in aggregate and a financial incentive to serve FFS Medicare beneficiaries.

While the variable effects of the PHE continued in fiscal year 2021 and will continue to some extent in 2022, we anticipate that, in aggregate, indicators of beneficiaries’ access to care will remain positive.

In 2020 and 2021, hospitals had significant excess inpatient capacity in aggregate, but capacity was stressed at times

Short-term acute care hospitals continued to have significant excess inpatient capacity in aggregate, with just under two-thirds (62 percent) of all bed-days occupied during 2020, similar to the 64 percent rate in 2019. Occupancy rates continued to vary across types of hospitals in 2020, including a lower occupancy rate at critical access hospitals (34 percent) and a higher rate at hospitals that both treated a disproportionate share of low-income patients and were teaching hospitals (69 percent).

Assessing Medicare payment adequacy during the coronavirus public health emergency

On January 31, 2020, the Secretary of Health and Human Services first declared the coronavirus public health emergency (PHE). By late March 2020, the nation's health care system began to experience major changes in service utilization, as elective procedures were postponed to preserve clinical staffs availability and equipment for COVID-19 patients. The PHE has had tragic and disproportionate effects on Medicare beneficiaries. (For details on the effects of the pandemic on beneficiaries' health and access to care, see Chapter 1.) It has also had damaging effects on the nation's health care workforce, with frontline health care workers facing burnout and risks to their health and safety while treating COVID-19 cases.

From the perspective of assessing the adequacy of Medicare payments, the PHE also has had material effects on all of the Commission's payment adequacy indicators. Because of standard data lags, the most recent complete data we have are from 2020 for most payment adequacy indicators; however, we also include preliminary data from 2021 where possible. The effects of the PHE on indicators of Medicare's payment adequacy to hospitals include:

- dramatic drops in inpatient and outpatient volume in spring 2020, partially rebounding by the end of 2020;
- increases in mortality from COVID-19, as well as the suspension of collecting certain quality data;
- substantial federal funding that hospitals received and recorded as revenue during their 2020 fiscal year, which appears to have been slightly less than hospitals' pandemic-related costs, on average (although rural hospitals,

which received targeted relief funds, had a near record high all-payer total margin, and certain large hospital systems have reported 2021 all-payer operating margins that exceeded 2019 levels); and

- increased payments to hospitals, due to PHE-related Medicare payment policy changes, including the suspension of the 2 percent sequestration of Medicare payments and a 20 percent increase in payments for COVID-19 inpatient stays.

In this chapter, we use available data and changes in payment policy to project hospitals' Medicare margin for 2022 and recommend payment rate updates for 2023. However, significant uncertainty remains about the extent to which the pandemic will last or whether certain changes to hospital volume and financial performance will persist past the end of the PHE. Therefore, though analyzing 2020 data is important to understand what happened to beneficiaries' access to care, quality of care, providers' access to capital, and Medicare's payments and providers' costs, it will be more difficult to interpret these indicators than is typically the case.

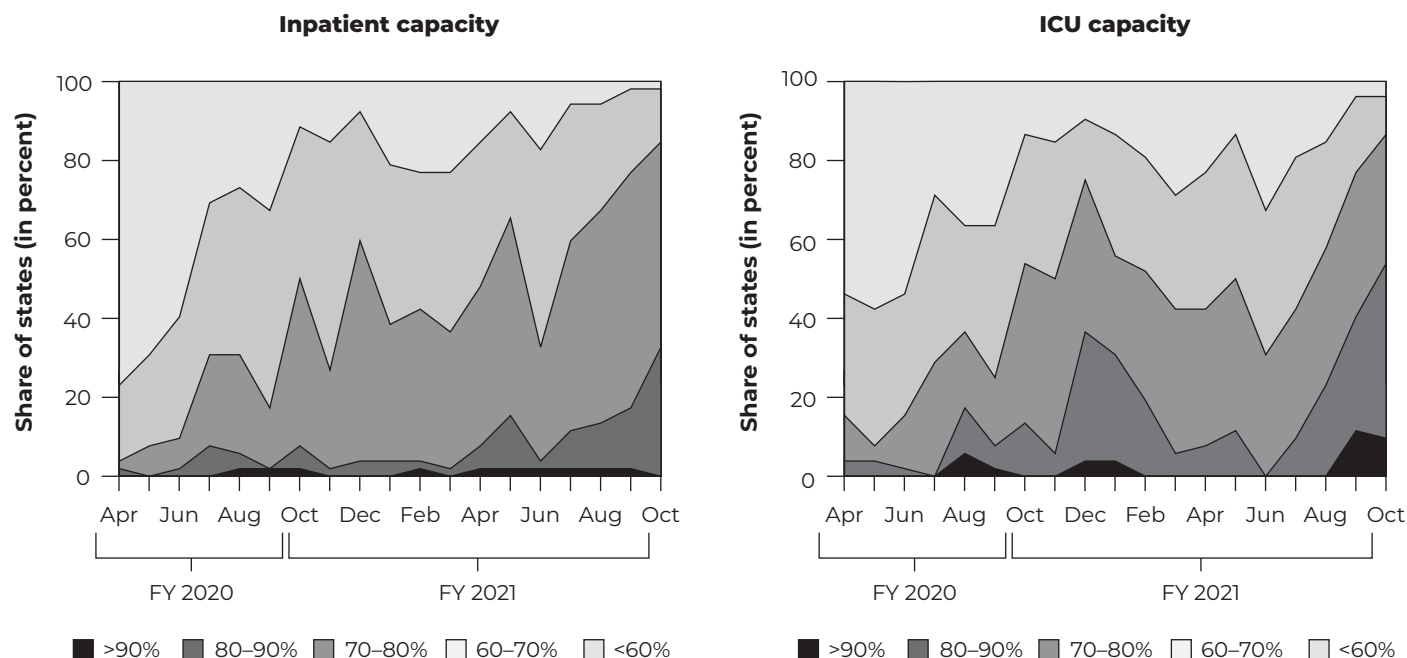
As the Commission stated last year, to the extent that the effects of the coronavirus pandemic are temporary—even if over multiple years—or vary significantly across individual hospitals, they are best addressed through targeted temporary funding policies rather than a permanent change to all hospitals' payment rates in 2023 and future years. Only permanent effects of the pandemic will be factored into our recommended changes to Medicare base payment rates. ■

However, both inpatient occupancy rates and intensive care unit (ICU) rates varied by month and state, with more states having higher occupancy rates as the coronavirus pandemic continued into 2021. Early in the pandemic, in April 2020, volume declined such

that four in five states had an inpatient occupancy rate of less than 60 percent and half of states had an ICU occupancy rate of less than 60 percent. In contrast, during the December 2020 surge in COVID-19 cases, nearly all states had inpatient and ICU occupancy rates

**FIGURE
3-1**

Hospitals had excess inpatient capacity in aggregate, but certain states' inpatient or intensive care unit capacity was stressed at times during the pandemic



Note: ICU (intensive care unit). Analysis includes state-aggregated data for inpatient and ICU bed utilization, developed from facility-level reporting. No statistical analysis is applied to account for non-response or for missing data within HealthData.gov-sourced data, but such analysis is applied for data from the Centers for Disease Control and Prevention.

Source: MedPAC analysis of Centers for Disease Control and Prevention National Healthcare Safety Network COVID-19 module reported data (April to July 2020) and HealthData.gov COVID-19 Reported Patient Impact and Hospital Capacity by State data (August 2020 to October 2021).

over 60 percent, and nearly half of states had an ICU occupancy rate of at least 80 percent. Capacity limits were further stressed in the surge of cases in October 2021, when over half of states had an ICU occupancy rate of at least 80 percent, including several southern states with ICU occupancy rates over 90 percent (Figure 3-1).

Fewer hospital closures in fiscal years 2020 and 2021 after a peak in 2019

The number of hospital closures declined substantially in fiscal years 2020 and 2021, falling from 46 in 2019 to 25 in 2020 and 10 in 2021.⁷ The decline in closures was likely a result of the substantial financial support provided by the federal government to hospitals during the PHE. In addition, some state and local governments

may have worked with hospitals to avoid closures during the pandemic to prevent situations where the demand for hospital care outstripped the local supply.

Of the 10 hospitals that closed in fiscal year 2021, 6 were in metropolitan areas and 4 were in rural areas. The majority of the hospitals that closed were small (8 of the 10 had 100 or fewer beds). Seven were paid under the IPPS, while three were critical access hospitals.

A majority of the hospitals that closed in 2021 cited financial reasons as a driving factor for closure. However, Medicare's payment policies were not a main contributor to the financial difficulties of the closed hospitals. Instead, substantial reductions in volume—due both to the pandemic and a longer-term trend of patients bypassing their local hospitals—was

cited by several hospitals as a main reason for closure. Rural hospitals often face the greatest challenges with declining admissions, in part due to rural beneficiaries increasingly bypassing their local hospitals to seek care at urban hospitals. In 2010, 40 percent of rural beneficiaries' hospital admissions were in urban hospitals; by 2018, this share had grown to 48 percent of their admissions. In addition to lower volume, 7 of the 10 closed hospitals were located in states that have not expanded Medicaid, which could lead to relatively higher uncompensated care burdens for hospitals in these states.

The effect of recent hospital closures on beneficiaries' access to hospital services varied. Three closures involved hospitals that were 25 to 35 miles from the next nearest hospital, but none were farther than 35 miles away from the nearest hospital. This suggests that most beneficiaries continued to have access to inpatient and emergency services in their region, but some faced moderately longer travel times. In addition, some of the former hospital locations still offered some services, such as urgent care or clinic services. While moderate increases in travel time may have a limited effect on access for some services, the Commission has expressed concern that the cumulative effect of years of rural hospital closures (with few offsetting new hospitals) could lead to longer travel times to access emergency care. In 2018, the Commission recommended that Medicare allow isolated freestanding emergency departments (EDs) to bill Medicare and that annual payments be made to such EDs to assist with fixed costs (Medicare Payment Advisory Commission 2018). Along these lines, the Congress recently enacted a program that will allow hospitals to convert to "rural emergency hospitals." These new hospitals will not provide inpatient care but will provide round-the-clock ED care and will be able to furnish other services. Medicare will pay these new providers a monthly fixed rate, enhanced outpatient rates, and standard rates for other types of care. The program starts on January 1, 2023.

In contrast to the decline in closures, the number of hospitals that opened has been relatively consistent over the last several years. In fiscal year 2021, 11 new hospitals opened. Similar to the previous few years, the hospitals that opened were small (all had 100 or fewer beds), and all but one were located in urban areas.

The coronavirus PHE made 2020 and 2021 anomalous years in many respects. Once the effects of the federal government's substantial financial support fades, it is unclear whether the rate of closures will remain low or revert to prepandemic levels.

Inpatient stays and outpatient services declined in 2020, driven by sharp declines in spring 2020

In 2020, the number of inpatient stays and outpatient services per FFS Medicare beneficiary declined, driven by sharp declines in spring 2020, followed by partial rebounds.

The decline in inpatient and outpatient hospital services in 2020 reflects both a decline in absolute access—as many hospitals canceled all but the most urgent procedures during parts of 2020 to help ensure capacity for COVID-19 patients—and beneficiaries' decisions to delay or forgo care, given the PHE. To help increase beneficiaries' access to hospital services during the PHE, CMS enacted multiple waivers (see text box on waivers to increase access, p. 78).

While the future duration and severity of the coronavirus PHE is unclear, we do not anticipate that it will cause any long-term deviations from the historical trend of slow declines in FFS Medicare beneficiaries' inpatient stays per capita and increases in outpatient services per capita as care continues to shift to outpatient settings.

Inpatient stays per capita declined in 2020 Inpatient stays per FFS Medicare beneficiary declined in 2020, driven by a large drop in spring 2020, followed by a partial rebound as beneficiaries and providers continued to postpone care because of the coronavirus pandemic (Figure 3-2, left panel, p. 79). As more discretionary and less severe inpatient stays were more likely to be postponed, the average reported case mix of inpatient stays increased in spring 2020, followed by a partial decline as more inpatient volume returned (Figure 3-2, right panel). For the first five months of fiscal year 2020 (from October 2019 through February 2020), inpatient stays per capita were slightly below 2019 levels, while average case mix was slightly higher—both consistent with historical trends. However, in March 2020, inpatient volume began to decline, and by April, inpatient stays per capita were 40 percent below the level in 2019.⁸ Average case mix followed an inverse trend, increasing to 7 percent above 2019 levels in April

Medicare waivers to increase access to hospital services during the coronavirus public health emergency

CMS has enacted numerous blanket waivers to increase Medicare beneficiaries' access to hospital services during the coronavirus public health emergency (PHE).⁹ These blanket waivers include:

- **Allowing hospitals to provide services in temporary expansion locations.** CMS has waived numerous requirements so that hospitals can provide inpatient and outpatient services in a variety of temporary expansion locations. Hospitals can provide acute inpatient services in areas of the hospital typically reserved for other types of inpatient care (such as rehabilitation or psychiatric care); change the status of provider-based outpatient departments; and screen patients at a location offsite from the hospital's campus.
- **Allowing new locations to enroll as hospitals.** CMS has waived certain hospital conditions of

participation so that hospitals can establish new locations and ambulatory surgical centers can enroll as hospitals.

- **Waiving certain hospital telehealth requirements.** CMS has waived requirements related to written agreements between telehealth locations so that additional hospitals can serve as distant-site locations for telehealth services.

In addition, CMS has allowed hospitals to apply for individual waivers. A key individual waiver for hospitals concerns acute hospital care at home. CMS has created the Acute Hospital Care at Home program that allows hospitals to apply for a waiver to provide certain health care services in a patient's home. As of the end of fiscal year 2020, about 80 hospital systems had been approved under the Acute Hospital Care at Home program.¹⁰ ■

2020. Inpatient volume partially rebounded by summer 2020 but remained about 15 percent below 2019 levels through the end of fiscal years 2020 and 2021, and case mix remained about 6 percent higher than 2019 levels. On average, across the entire fiscal year, inpatient volume declined 11.5 percent to 214 inpatient stays per 1,000 FFS Part A beneficiaries and average reported case mix increased 3.8 percent (data not shown).

Within this aggregate decline in inpatient stays per FFS Medicare beneficiary in 2020, the rate of decline differed across types of stays and types of hospitals. In particular:

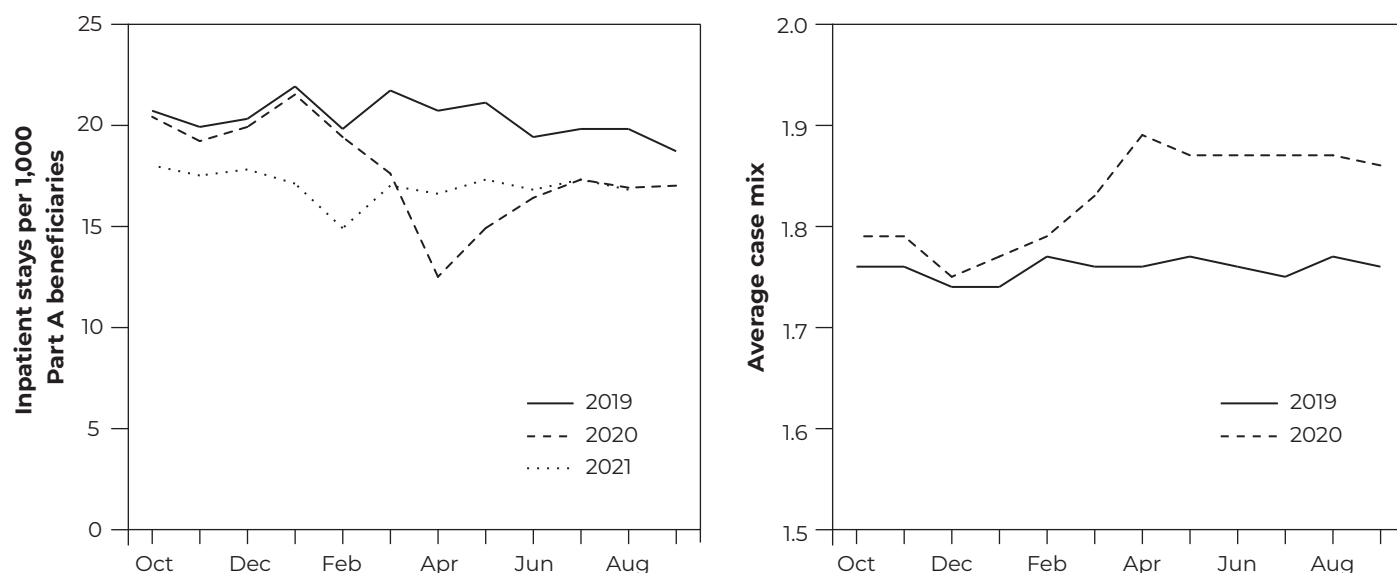
- **Inpatient stays for conditions with major complications and comorbidities declined at a slower rate than similar but less severe cases.** For example, inpatient stays for septicemia with major complications or comorbidities—the most

common type of stay—fell only 0.7 percent in 2020, while inpatient stays for septicemia without major complications or comorbidities declined 14.7 percent. Similarly, inpatient hip and knee joint replacements with major complications and comorbidities fell 6.2 percent, while those without major complications or comorbidities declined 33.8 percent.

- **Inpatient stays for respiratory conditions declined at a slower rate than those for musculoskeletal and circulatory conditions.** In 2020, inpatient stays per capita for respiratory conditions declined 6.5 percent, a slower rate than for the other two most common diagnostic categories—musculoskeletal conditions (18.6 percent) and circulatory conditions (14.0 percent). While inpatient stays across all respiratory conditions declined, there were large

**FIGURE
3-2**

In spring 2020, FFS Medicare beneficiaries' inpatient stays per capita declined sharply but rebounded by summer 2020 to about 15 percent below 2019 levels, with inverse trends in case mix



Note: FFS (fee-for-service). Analysis includes FFS Medicare beneficiaries' inpatient stays across all short-term acute care hospitals in the U.S. per 1,000 FFS Medicare Part A beneficiaries. "Case mix" refers to average Medicare severity-diagnosis related group weight. Years listed are fiscal years.

Source: MedPAC analysis of Medicare Provider Analysis and Review, Common Medicare Environment data, and preliminary 2021 claims data.

increases in inpatient stays per capita among the subset of Medicare severity-diagnosis related groups used for COVID-19 diagnoses, including an over 140 percent increase in respiratory infections and inflammation with major complications and comorbidities.

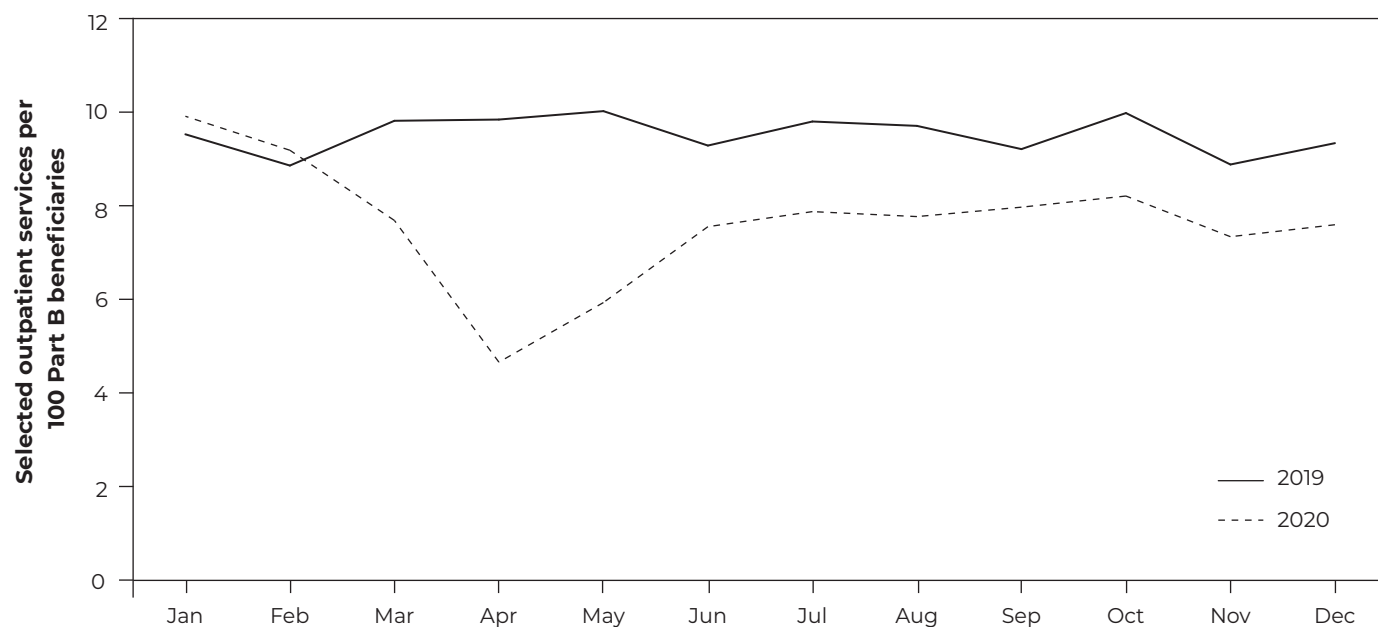
- **Very short and long inpatient stays declined at a slower rate than other inpatient stays.** In 2020, inpatient stays per capita shifted toward the extremes of one-day stays and long stays. For example, one-day stays fell 9.6 percent and stays of at least one week dropped 5.2 percent. In contrast, three-day inpatient stays per capita declined 17.6 percent, which likely reflects in part the waiver during the PHE of the three-day stay requirement for skilled nursing facilities (see Chapter 7).

- **Inpatient stays at urban hospitals declined at a slower rate than at rural hospitals.** In 2020, inpatient stays per capita at urban hospitals declined 11.2 percent, a slower rate than at rural hospitals in micropolitan areas (13.0 percent) or nonmicropolitan areas (14.1 percent). The continued shift of inpatient stays from rural hospitals to urban hospitals reflects, primarily, beneficiaries bypassing their local rural hospital for inpatient care.

Outpatient hospital services per capita declined in 2020 Similar to inpatient services, FFS Medicare beneficiaries' outpatient services per capita declined in 2020, driven by a large drop in spring 2020, followed by partial rebounds as beneficiaries continued to postpone care because of the coronavirus pandemic (Figure 3-3, p. 80). For January and February 2020, outpatient services per capita were similar to 2019

FIGURE
3-3

In spring 2020, FFS Medicare beneficiaries' outpatient services per capita declined markedly but rebounded by summer 2020 to about 20 percent below 2019 levels



Note: FFS (fee-for-service). Analysis includes 20 of the most common separately payable outpatient services across all outpatient prospective payment system hospitals in the U.S., per 100 FFS Medicare Part B beneficiaries.

Source: MedPAC analysis of outpatient claims and Common Medicare Environment data.

levels. However, in March 2020, outpatient volume began to decline, and by April, outpatient services per capita were more than 50 percent below the 2019 level. Outpatient volume partially rebounded by summer 2020 but remained about 20 percent below 2019 levels through the end of 2020.¹¹ Across the entire 2020 calendar year, outpatient volume fell 17.4 percent, to 4.3 outpatient services per 100 FFS Part B beneficiaries (data not shown). In 2021, outpatient services per capita declined to 25 percent below 2019 levels in January and February as COVID-19 cases rose throughout much of the country; that figure rebounded by June 2021 to 10 percent below 2019 levels.

In 2020, the volume of outpatient services declined in each of the four broad outpatient service categories

and for key hospital groups, but the rate of decline differed:

- **Tests and procedures declined at a slower rate than evaluation and management (E&M) and imaging services.** In 2020, the number of services per capita fell by 2.2 percent for tests and 13.0 percent for procedures. In contrast, E&M services fell 24.8 percent and imaging services fell 17.6 percent. The magnitude of the decline in the test category was mitigated by the large number of COVID-19 specimen collections. The smaller decline in procedures relative to E&M and imaging could have been due to the procedures being less elective than the services in the E&M and imaging categories.

- **Outpatient services at critical access hospitals declined at a slower rate than at other hospitals.**
In 2020, outpatient services per capita declined 14 percent at critical access hospitals but 20 percent at OPPS hospitals.

One component of outpatient services that continued to grow in 2020 was separately payable drugs, though the growth was slower than in previous years. While it is difficult to directly measure changes in volume of drugs over time, given the difference in units, Medicare spending per capita for separately payable drugs furnished in hospital outpatient departments (HOPDs) grew by 6.7 percent (including nearly 1 percentage point from the suspension of sequestration of Medicare payments). This increase is smaller relative to previous years. From 2015 through 2019, per capita spending on separately payable drugs rose by 14.7 percent per year, on average. The higher spending on separately payable drugs in 2020 was due largely to growth in administration of chemotherapy drugs. The most frequently used method for administering chemotherapy rose by 1.8 percent.

In 2020, hospitals with excess capacity continued to have a financial incentive to serve Medicare beneficiaries

Hospitals with excess capacity continued to have financial incentives to provide inpatient and outpatient services to FFS Medicare beneficiaries: In 2020, IPPS hospitals' marginal profit on IPPS and OPPS services was about 5 percent—lower than the 8 percent in 2019 but still positive. We calculate hospitals' Medicare marginal profit by comparing Medicare's IPPS and OPPS payments to the *variable* cost of treating an additional FFS Medicare patient. To make a conservative estimate of hospitals' Medicare marginal profit, we use a broad definition of variable costs that is consistent with our prior estimates of the share of costs that varied over a one-year period. We have found that roughly 80 percent of costs are variable, including in 2020; to the extent that a higher share of costs is fixed, the marginal profit would be higher.

The rapid response to the coronavirus pandemic has demonstrated that at least some hospitals can substantially lower their costs over a matter of months. For example, the largest hospital systems were able to substantially reduce costs in the second quarter of

2020 relative to the prior year, despite the expectation that the reduction in volume would be temporary.¹² We expect that hospitals will have an even greater ability to adjust costs when they have a longer period to adjust to environmental changes and the resulting long-term changes in volume that can be anticipated.

Quality of care is difficult to assess

Quality of care in 2020 is difficult to assess due to effects of the coronavirus pandemic on beneficiaries and providers. Each year we track changes in mortality, hospital readmissions, and patient experience and determine whether they have improved, worsened, or stayed the same. While we report 2020 results, we do not draw conclusions about whether any changes reflect the adequacy of Medicare's payments. The 2020 results reflect temporary changes in the delivery of care and data limitations unique to the PHE rather than trends in the quality of care provided to beneficiaries. Further, some of the Commission's quality metrics rely on risk-adjustment models that use performance from previous years to predict beneficiary risk. COVID-19 is a new diagnosis and is not included in the current risk-adjustment models, though many associated conditions are. As a result, our models may not adequately represent the acuity and mix of patients receiving care in 2020.

Mortality

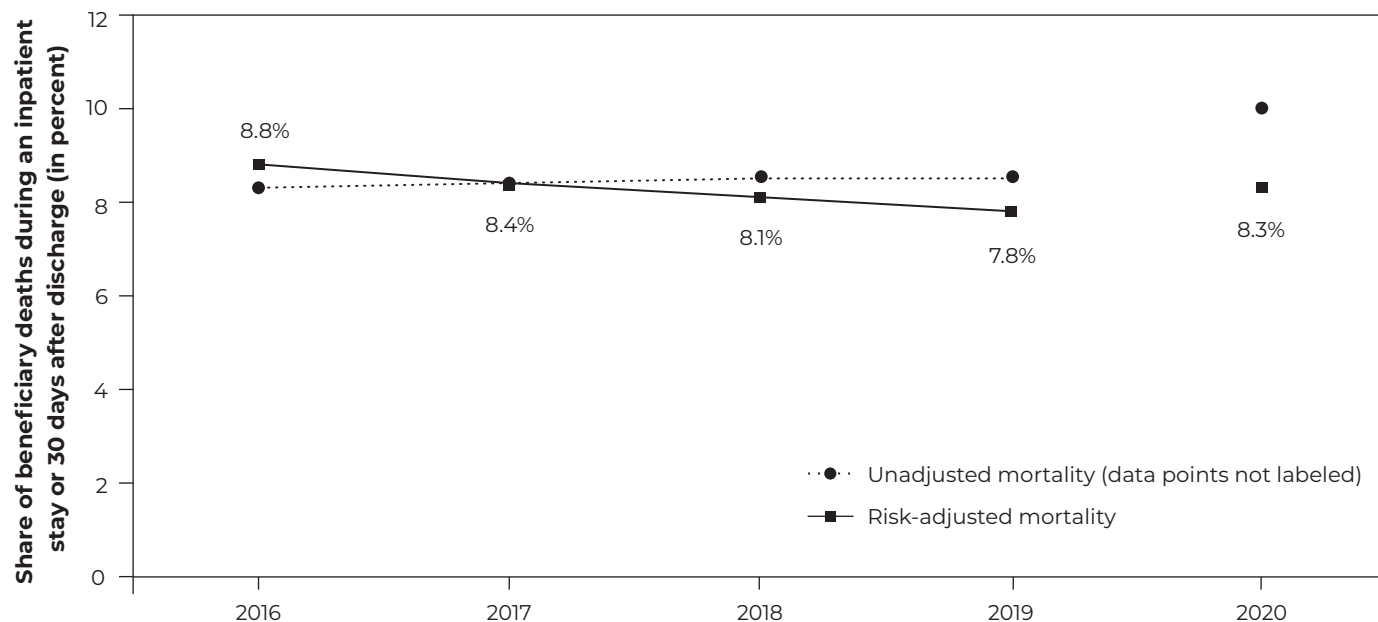
In 2020, mortality rates rose nationwide due to deaths from COVID-19. FFS Medicare beneficiaries' risk-adjusted mortality rate (death during a hospital stay or 30 days after discharge) was 8.3 percent (Figure 3-4, p. 82). From 2016 to 2019, the risk-adjusted mortality rate fell (that is, improved) by 1.0 percentage point, including a 0.3 percentage point decline in 2019 to 7.8 percent. Over the four-year period, unadjusted mortality rates were relatively stable, but expected mortality increased because beneficiaries admitted to hospitals in recent years tended to have more comorbidities and thus a higher risk of mortality.

Readmissions

Many factors related to the coronavirus pandemic affected hospitalization rates, including both greater demand for beds for patients suffering from COVID-19, which strained hospital capacity at times in some

FIGURE
3-4

FFS Medicare beneficiaries' risk-adjusted, all-condition mortality rates, 2016-2020



Note: FFS (fee-for-service). Analysis includes FFS Medicare beneficiaries ages 65 or older. The 2016–2019 risk-adjusted values differ from what was presented in the March 2021 report to the Congress because of the use of an updated version of the 3M™ all-patient refined–diagnosis related group software. The 2019 and 2020 value points are not connected because we cannot draw conclusions on the quality of care due to the effects of the coronavirus pandemic.

Source: MedPAC analysis of Medicare Provider Analysis and Review data.

states, and lower demand for beds as some patients avoided hospitals due to fears of infection. In 2020, the risk-adjusted readmission rate (FFS Medicare beneficiaries over age 65 readmitted within 30 days after discharge) was 14.8 percent (Figure 3-5). From 2016 to 2019, the risk-adjusted readmission rate declined (that is, improved) by 0.4 percentage point, to 15.3 percent. In part, the improvement can be attributed to the Hospital Readmission Reduction Program that the Congress enacted in 2010 (Medicare Payment Advisory Commission 2018).

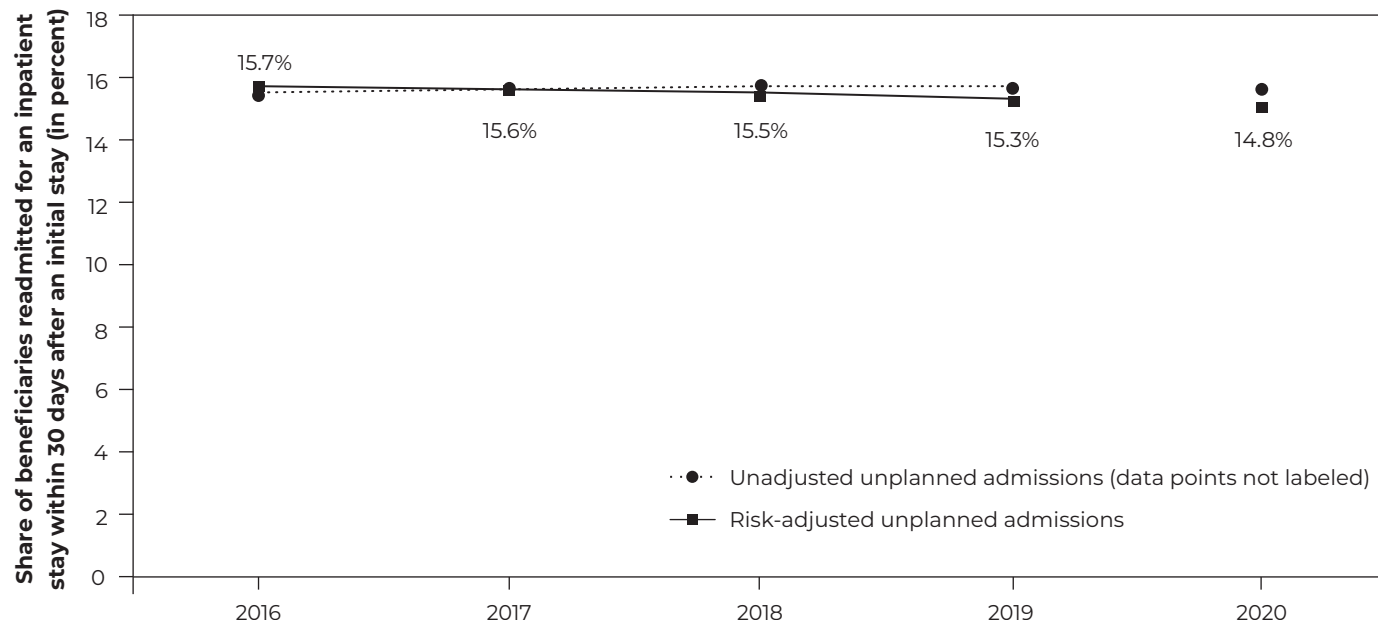
Patient experience

Hospitals collect Hospital Consumer Assessment of Healthcare Providers and Systems® (H-CAHPS®) surveys from a sample of admitted patients, which CMS uses to calculate results for 10 measures of patient

experience included in hospitals' overall ratings.¹³ The H-CAHPS measures key components of quality by assessing whether something that should happen during a hospital stay (such as clear communication) actually happened or how often it happened. In the last half of 2020, 72 percent of surveyed patients rated their overall hospital experience a 9 or 10 on a 10-point scale, which is 1 percentage point less than in previous years (Table 3-2, p. 84).¹⁴ Communication with nurses, communication with doctors, and receipt of discharge information had the highest scores, with at least 80 percent of surveyed patients answering with the most positive response. From 2019 to 2020, responsiveness of hospital staff, communication about medicines, and cleanliness of hospital environment scores dropped by 3 percentage points. In 2020, the care-transition measure result continued to be the lowest score, with

FIGURE
3-5

FFS Medicare beneficiaries' risk-adjusted, all-condition readmission rates, 2016-2020



Note: FFS (fee-for-service). Analysis includes FFS Medicare beneficiaries ages 65 or older. The 2016–2019 risk-adjusted values differ from what was presented in the March 2021 report to the Congress because of the use of an updated version of the 3M™ all-patient refined–diagnosis related group software and use of CMS’s updated unplanned admissions definition. The 2019 and 2020 value points are not connected because we cannot draw conclusions on the quality of care due to the effects of the coronavirus pandemic.

Source: MedPAC analysis of Medicare Provider Analysis and Review data.

only 52 percent of surveyed patients responding with “Strongly Agree” that they understood their care plan when they left the hospital.

Need for a redesign of hospital quality payment programs

In March 2019, the Commission recommended that the Congress replace Medicare’s current hospital quality programs (including the penalty-only programs) with a single, outcome-focused quality-based payment program for hospitals—that is, the hospital value incentive program (HVIP)—that balances rewards and penalties and has the potential to drive further improvement in hospital quality (Medicare Payment Advisory Commission 2019). Initially, the HVIP can incorporate existing quality measure domains such as readmissions, mortality, spending, patient experience, and hospital-acquired conditions (or infection rates).

A key feature of the HVIP design is that it accounts for differences in providers’ patient populations by incorporating a peer-grouping methodology. Quality-based payments are distributed to hospitals separated into 10 peer groups, defined by the share of treated beneficiaries with full dual eligibility for Medicare and Medicaid (as a proxy for income). The grouping of hospitals into peer groups that serve similar populations makes payment adjustments more equitable than existing quality payment programs.

Hospitals’ access to capital remained strong in 2020, and preliminary data suggest it strengthened in 2021

Hospitals’ access to capital remained strong in 2020. IPPS hospitals’ all-payer total margin declined slightly in 2020 but reached near record highs for rural

**TABLE
3-2**

Hospital patient experience measures, 2016–2020

H-CAHPS® measure	2016	2017	2018	2019	2020	Percentage point change, 2019–2020
Hospital rating	73%	73%	73%	73%	72%	–1
Recommend the hospital	72	72	72	72	71	–1
Communication with nurses	80	80	81	81	80	–1
Communication with doctors	82	82	81	82	81	–1
Responsiveness of hospital staff	69	70	70	70	67	–3
Communication about medicines	65	66	66	66	63	–3
Cleanliness of hospital environment	75	75	75	76	73	–3
Quietness of hospital environment	63	62	62	62	63	1
Discharge information	87	87	87	87	86	–1
Care transition	52	53	53	54	52	–2

Note: H-CAHPS® (Hospital Consumer Assessment of Healthcare Providers and Systems®). H-CAHPS is a standardized 32-item survey of patients' evaluations of hospital care. The survey items are combined to calculate measures of patient experience for each hospital. The H-CAHPS measures included in the table are the "top-box," or the most positive, response to H-CAHPS survey items. The top-box response is "Always" for four H-CAHPS composite measures (communication with nurses, communication with doctors, responsiveness of hospital staff, and communication about medicines) and two individual items (cleanliness of hospital environment and quietness of hospital environment), "Yes" for the discharge information composite, "9" or "10" (high) for the hospital rating item, "Definitely yes" for the recommend the hospital item, and "Strongly agree" for the care transition composite. Each year's results are based on a sample of hospital surveys of hospitals' patients from January to December. Results in 2020 include only surveys from patients discharged July to December 2020 rather than the customary full year.

Source: MedPAC analysis of Medicare Provider Analysis and Review claims and IPPS final rules.

hospitals, which received targeted federal relief funds. Preliminary data for large publicly traded hospital systems suggest that hospitals' all-payer operating margin increased in 2021 relative to the prior record high in 2019.

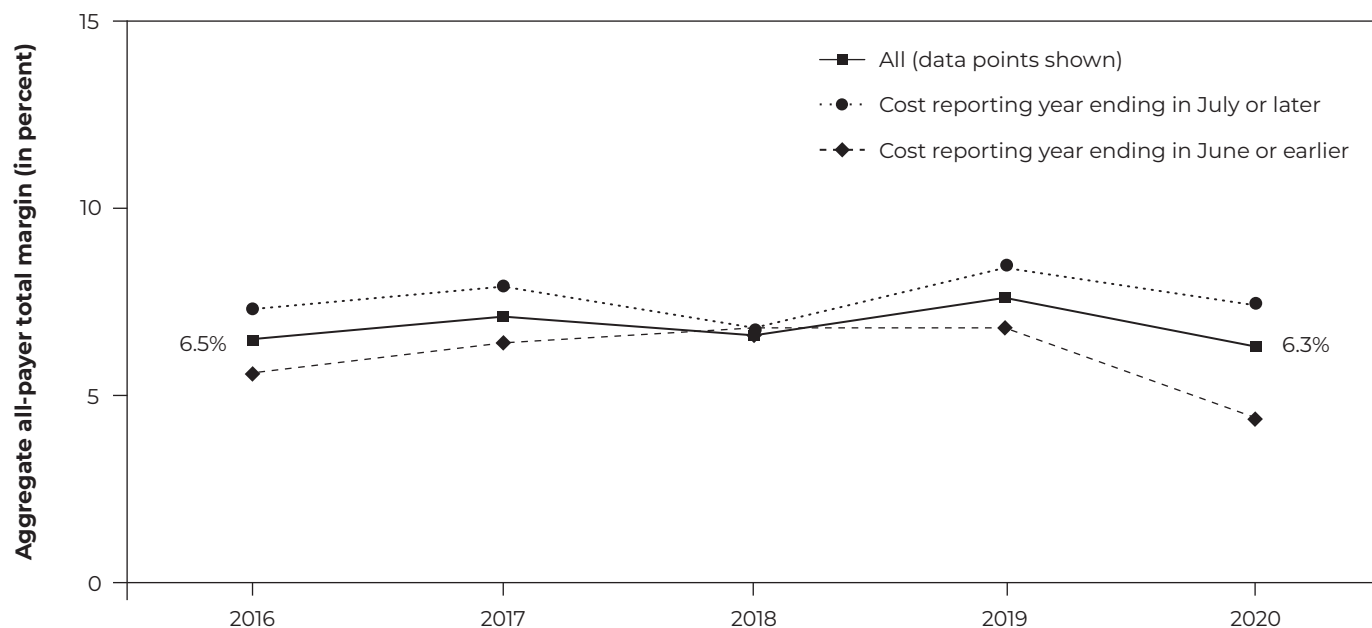
In addition, while hospital employment declined slightly in 2020, hospitals' strong all-payer operating margin and the tight labor market in the overall economy suggest that the decline in hospital employment reflects a shortage of labor supply rather than an inability of hospitals to continue paying their workers.

Finally, hospitals maintained strong access to capital bond and equity markets.

Hospitals' all-payer total margin remained strong but declined in 2020

IPPS hospitals' all-payer total margin remained strong but declined in 2020; however, there was wider

variation across hospitals than in prior years. This greater variation in 2020 reflects differences in both the extent to which hospitals received targeted relief funds and the extent to which their cost reporting periods included the receipt of these funds. While the 2020 all-payer margins described below were calculated using the best available data, payment adequacy metrics that include federal relief funds need to be interpreted with caution. In particular, the amount of relief funds providers will end up retaining is still not known. Furthermore, timing differences in cost reporting periods and when providers received federal relief funds can lead otherwise similar providers to appear to have very different measures of financial performance. In 2022, we will know more about hospitals' final 2020 financial performance, when reporting periods for 2020 funds close and selected audits begin.

**FIGURE
3-6****In 2020, IPPS hospitals' all-payer total margin declined but remained strong with the support of federal relief funds**

Note: IPPS (inpatient prospective payment systems). Hospitals' margin is calculated as aggregate payments minus aggregate allowable costs, divided by aggregate payments. "All-payer total margin" includes payments from all payers, from investments, and, in 2020, reported federal relief funds.

Source: MedPAC analysis of hospital cost reports.

IPPS hospitals' all-payer total margin remained strong but declined from the record high of 7.6 percent in 2019 to 6.3 percent in 2020 (similar to the 15-year average) (Figure 3-6). However, this margin includes hospitals with cost reporting years that ended prior to attestation deadlines for federal relief funds. When limited to IPPS hospitals with a cost reporting year ending before July 2020—that is, before hospitals' 90-day deadline to attest to the receipt of the general Provider Relief Fund payments announced in April—the all-payer total margin was only 4.4 percent, more than 2 percentage points lower than these hospitals' margin in 2019. In contrast, when limited to IPPS hospitals with a cost reporting year ending in July or later, the all-payer total margin was 7.4 percent, less than 1 percentage point lower than these hospitals' margin in 2019. Between 2019 and 2020, IPPS hospitals' all-payer

operating margin (which excludes investment income) had a similar pattern, declining from 6.5 percent to 5.2 percent (data not shown).

Across all fiscal year 2020 cost reporting periods, IPPS hospitals reported receiving over \$32 billion in federal relief funds through the Provider Relief Fund and Paycheck Protection Program. These funds may not yet be completely reported, as about one-third of IPPS hospitals did not report receiving any relief funds during their 2020 cost reporting year. However, this absence likely reflects a combination of factors, including some hospitals receiving or attesting to funds after their cost reporting deadline, some including relief funds in their total revenue but not recording them on the new cost report line, and others—such as hospitals that are part of HCA or Kaiser Permanente—returning received relief funds.¹⁵ Without these

reported relief funds, we estimate that IPPS hospitals' all-payer total margin would have declined to 3.0 percent, equivalent to a drop in net income of \$50 billion—substantially less than the American Hospital Association's estimate of \$320 billion (American Hospital Association 2020).

In 2020, all-payer total margin for rural hospitals reached a near record high due to targeted relief funds Rural hospitals received substantial federal relief funds during the PHE. In addition to 2 percent of their prior year's gross revenue received through the general distribution of payments from the Provider Relief Fund, rural hospitals also received the majority of the \$11 billion in Provider Relief Fund payments that were targeted to rural hospitals and clinics. Each rural hospital's targeted distribution was calculated as a graduated base payment of \$1 million to \$3 million plus nearly 2 percent of the hospitals' operating expenses in the prior year.¹⁶ Because of the floor on the graduated minimum payment, the smallest rural hospitals disproportionately benefited from these targeted distributions. In addition, many rural hospitals have fewer than 500 employees and therefore were eligible for a forgivable Paycheck Protection Program loan up to \$10 million.¹⁷

Thanks to these targeted funds, rural hospitals' all-payer total margin reached a near record high in 2020 and rural hospital closures declined in 2021 (Figure 3-7). Rural IPPS hospitals' all-payer total margin increased to 6.6 percent in 2020—the highest in over 20 years—and critical access hospitals' all-payer total margin reached a record high of 6.4 percent. Without the federal relief funds, rural IPPS hospitals' all-payer total margin would have declined to 2.6 percent and critical access hospitals' all-payer total margin would have declined to 2.1 percent. Furthermore, the record high margins in 2020 were achieved even including rural hospitals with cost reporting years that ended prior to attestation deadlines for federal relief funds. When limited to rural hospitals with a cost reporting year ending July or later, the all-payer total margin was even higher, at 7.4 percent for rural IPPS hospitals and 6.7 percent for critical access hospitals (data not shown).

In 2020, all-payer total margin for disproportionate share hospitals declined slightly despite receipt of targeted relief funds DSH hospitals also received substantial federal relief funds during the PHE. In

addition to receiving 2 percent of their prior year's gross revenue through the general distribution of Provider Relief Fund payments, DSH hospitals received \$13 billion in Provider Relief Fund payments targeted to safety-net hospitals (defined as those that treated a disproportionate share of low-income patients, had high uncompensated care costs, and had low profit margins), with a minimum distribution per hospital of \$5 million and a maximum distribution of \$50 million. DSH hospitals also received a portion of the \$20.8 billion targeted to hospitals with a large number of COVID-19 cases.¹⁸

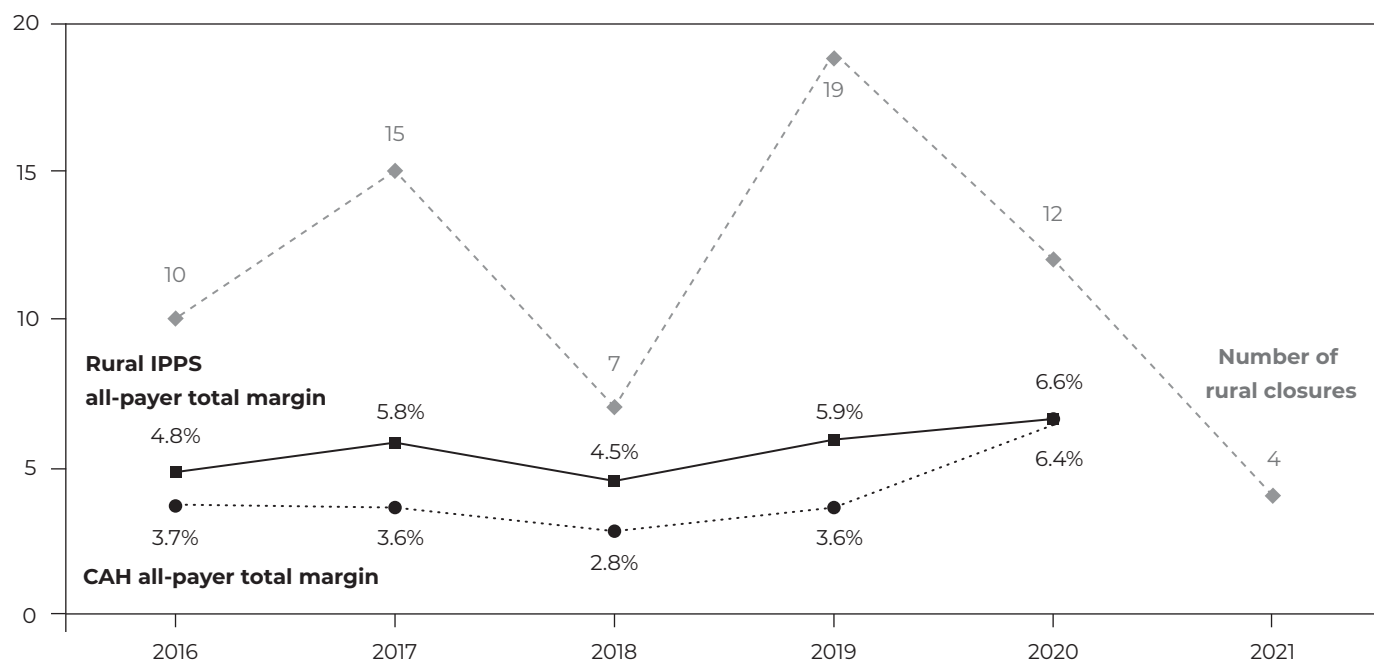
While DSH hospitals' all-payer total margin in 2020 remained strong, it declined from 2019 levels, despite DSH hospitals receiving targeted relief funds.¹⁹ Between 2019 and 2020, DSH hospitals' all-payer total margin dropped from the relative high of 7.5 percent to 6.1 percent. Among those with a cost report year ending in October 2020 or later—after the 90-day period hospitals had to attest to the June 2020 first round of targeted relief funds—the all-payer total margin was higher, at 8.0 percent, but still slightly below these hospitals' margin in 2019.

Preliminary data from 2021 suggest that hospitals' all-payer operating margins exceeded prepandemic levels

For the six largest hospital systems (representing over 20 percent of IPPS hospitals), profits in 2021 were larger than profits in 2019 (Ascension 2021, CommonSpirit 2021, Community Health Systems 2021, HCA Healthcare 2021, Tenet Health 2021, Trinity Health 2021). The most recent cost report data for most hospitals is fiscal year 2020. However, larger nonprofit systems have reported data through June 30, 2021, through disclosures to their bond investors, and for-profit hospitals have reported data through September 30, 2021, to their shareholders. The three largest nonprofit systems (representing over 10 percent of IPPS hospitals) reported that operating profits were higher in their fiscal year ending June 30, 2021, than they were in their 2019 or 2020 fiscal years. All three of the largest publicly traded for-profit acute care hospital chains (representing 10 percent of IPPS hospitals) reported higher profits during the first nine months of 2021 than in the first nine months of 2019 (Community Health Systems 2021, HCA Healthcare 2021, Tenet Health 2021).

**FIGURE
3-7**

Rural hospitals' all-payer total margins reached record highs in 2020, with corresponding declines in fiscal year 2021 closures



Note: IPPS (inpatient prospective payment systems), CAH (critical access hospital). Hospitals' margins are calculated as aggregate payments minus aggregate allowable costs, divided by aggregate payments. "All-payer total margin" includes payments from all payers, from investments, and, in 2020, from reported federal relief funds. "Closures" refers to hospital locations that ceased providing inpatient services and does not include the relocation of inpatient services from one hospital to another under common ownership within 10 miles, nor does it include hospitals that both opened and closed within a 5-year time period.

Source: MedPAC analysis of hospital cost reports, CMS Provider of Services file, census data on metropolitan and micropolitan areas, internet searches, and personal communication with the Department of Health and Human Services Office of Rural Health Policy.

While margins reflect current year profitability, we can look to changes in stock prices to see opinions regarding hospitals' future prospects. During the first two years of the pandemic, from the start of 2020 to the end of 2021, the stock prices of the three largest publicly traded acute care hospital companies all rose by more than 70 percent compared with a rise of less than 50 percent for the overall S&P 500. This increase suggests that financial markets look favorably on hospitals' earning prospects and are willing to invest equity capital in hospital operators.

Therefore, while the effect of the coronavirus pandemic on hospitals' finances varied substantially across hospitals, we have no evidence that it has had a negative effect on hospitals' long-term access to the capital markets.

In 2020, hospital employment declined

In fiscal year 2020, hospital employment declined to 6.1 million employees from 6.3 million in 2019, driven by a 2 percent drop in spring 2020 followed by a partial rebound; by the end of 2021, hospital employment remained about 1 percent below the 2019 level.²⁰

The lower number of hospital employees reflects a combination of factors, including furloughs during the initial wave of the coronavirus pandemic as procedures were canceled, followed by hospitals (like other employers) having difficulty filling vacant positions. To help fill these short-term shortages, some hospitals turned to travel nurses (Gottlieb and Zenilman 2020). In the short run, these efforts to relieve staffing shortages may have increased hospitals' labor costs and

contributed to staffing shortages at other hospitals, as nurses left to become travel nurses. However, we have not yet seen these increased labor costs or shifts in labor force contribute to materially lower profits or access issues. The combination of hospitals' continued high all-payer total margin and worker shortages suggests a labor supply shortage rather than an inability of hospitals to continue paying their workers.

Future hospital employment trends are less clear. For example, in the short term, some groups have forecasted a nursing shortage as the PHE contributes to burnout and induces retirement (Berlin et al. 2021). However, longer term, the Bureau of Labor Statistics projects employment of registered nurses from 2020 to 2030 to grow 9 percent, about as fast as the average for all occupations. In addition, student enrollment in nursing schools increased in 2020 (American Association of Colleges of Nursing 2021).

In sum, labor shortages are straining hospitals, but we do not see evidence that this trend is due to a lack of financial resources. In addition, it is not clear that the shortage will be a long-term issue. To the extent that wages are projected to grow, Medicare's payment rates (which are adjusted for input inflation) will be increased accordingly under current law.

In 2020 and 2021, hospitals maintained strong access to bonds and federal loans

In 2020 and 2021, hospitals maintained strong access to bonds. In both 2020 and 2021, hospitals issued about \$17 billion in new financing, which was below 2019 levels but higher than in 2018. In contrast, during this period, hospitals' refunding of bonds fell to about \$4 billion, lower than in 2018 or 2019. In 2020, hospital construction spending also remained strong, at about \$25 billion, similar to prior years.

In addition, in 2020, hospitals' temporary access to capital increased substantially, as hospitals received over \$83 billion in accelerated Medicare payments.²¹

In 2020, Medicare payments were near costs for relatively efficient hospitals when including relief funds

Between 2019 and 2020, IPPS hospitals' Medicare margin fell from -8.7 percent to -12.6 percent, and the median Medicare margin among relatively efficient hospitals fell from -1 percent to -3 percent when

excluding federal relief funds. However, because federal relief funds were intended to help cover lost revenue and payroll costs—including lost revenue from Medicare patients and the cost of staff that help treat these patients—we also report a Medicare margin that includes a portion of these relief funds (based on FFS Medicare's share of 2019 all-payer operating revenue). With these relief funds, IPPS hospitals' Medicare margin increased slightly to -8.5 percent, and the median Medicare margin for relatively efficient hospitals rose to 1 percent. While our 2020 Medicare margin calculations use the best available data, payment adequacy metrics involving federal relief funds need to be interpreted with caution, since they are still subject to change and are sensitive to hospitals' cost reporting periods.

Projecting IPPS hospitals' Medicare margin in 2022 involves substantial uncertainty, but we project that it will be around -10 percent excluding relief funds and about -9 percent including relief funds. Among relatively efficient hospitals, we project the median Medicare margin to be close to break-even (about 0 percent excluding relief funds and 1 percent with relief funds).

In 2020, growth in IPPS payments per inpatient stay was faster than in prior years, but costs per stay rose even faster

In 2020, both IPPS payments per inpatient stay and costs per stay grew faster than in prior years, but costs grew faster than payments. In 2020, IPPS payments per inpatient stay rose 8.7 percent to almost \$14,000 per stay, nearly three times the 3.2 percent average from 2016 to 2019 (Table 3-3, p. 90). The faster growth in 2020 relative to prior years resulted primarily from:

- **A higher annual update to payment rates.** In 2020, the annual update to IPPS operating base rates was 2.6 percent, and there was an additional 0.5 percent statutory increase.²² These were both higher than in prior years primarily because of faster estimated growth in input prices and the expiration of budgetary reductions mandated through 2019.²³
- **Faster growth in case mix.** In 2020, there was a 3.5 percent increase in reported inpatient case mix, net of the changes from annual updates to relative weights. This growth was faster than in prior

Medicare payment policy changes to increase payments for inpatient care during the public health emergency

The Congress and CMS have enacted numerous changes to Medicare's hospital payment policies in response to the coronavirus public health emergency (PHE).

Suspension of Medicare sequestration

Pandemic relief laws have suspended the 2 percent sequestration of the Medicare program's share of fee-for-service (FFS) Medicare payments from May 1, 2020, through March 31, 2022, and have suspended half of the 2 percent sequestration from April 1, 2022, through June 30, 2022.

We estimate that in fiscal year 2020, the five months of the suspension of Medicare sequestration raised Medicare inpatient prospective payment systems (IPPS) payments by nearly \$0.8 billion, equivalent to a 0.7 percent increase in IPPS payments.

A 20 percent increase for COVID-19 stays

Pandemic relief laws also have established a 20 percent increase to IPPS payments for beneficiaries diagnosed with COVID-19 during the PHE.²⁴

We estimate that in fiscal year 2020, the 20 percent increase in COVID-19 stays raised Medicare's payments by about \$0.7 billion, equivalent to a 0.7 percent increase in IPPS payments.

New COVID-19 treatments add-on payment (NCTAP)

To mitigate potential financial disincentives for hospitals to provide new COVID-19 treatments during the COVID-19 PHE, effective November 2, 2020, through the end of the PHE, CMS has implemented an enhanced inpatient PPS payment—called the new COVID-19 treatments add-on payment (NCTAP)—for eligible inpatient cases that involve use of certain new products authorized or approved to treat COVID-19. CMS set the NCTAP at the lesser of (1) 65 percent of the operating outlier threshold for the claim or (2) 65 percent of the cost of a COVID-19 stay beyond the inpatient operating PPS Medicare payment (including the 20 percent add-on payment). Because these payments first became effective in fiscal year 2021, we do not yet have any claims information regarding NCTAP payments. ■

years because the PHE led to both an increase in severe respiratory conditions and a drop in lower-severity inpatient stays as beneficiaries deferred nonurgent care.

- **Increases in Medicare payments during the PHE.** During the PHE, the Congress increased Medicare IPPS payments, including suspending the 2 percent sequestration of the Medicare program's share of all FFS payments beginning May 1, 2020, and a 20 percent increase to IPPS payments for COVID-19 cases beginning April 1, 2020 (see text box on increased Medicare payments for inpatient care during the PHE). We estimate that these two payment changes each raised IPPS payments by 0.7 percent.

In 2020, hospitals' IPPS costs per stay grew even faster than payments per stay: 12.6 percent, or more than four times the 2.8 percent average from 2016 to 2019 (Table 3-3, p. 90). This faster growth in IPPS costs per stay resulted primarily from:

- **Faster growth in case mix.** In 2020, the case mix grew more quickly than in previous years as the PHE raised the average complexity of inpatient stays. Some of the 3.5 percent growth in case mix in 2020 likely reflects increases in coding intensity, but most of the faster growth in reported case mix reflects a rise in the average relative costs of inpatient stays.

TABLE
3-3

In 2020, IPPS payments per stay grew 8.7 percent while costs per stay grew 12.6 percent

	Annual change 2020	Average of annual changes, 2016–2019
IPPS payments per stay	8.7%	3.2%
Annual update to IPPS operating rates	2.6	1.5
Other non-budget-neutral updates to operating rates	0.5	–0.3
Reported case mix (net)	3.5	1.5
Sequestration suspension and increase for COVID-19 stays	1.4	0.0
All other factors	0.4	0.4
IPPS costs per stay	12.6	2.8
Input prices	2.0	2.3
Reported case mix (net)	3.5	1.5
All other factors	6.7	–1.0

Note: IPPS (inpatient prospective payment systems). “IPPS payments per stay” exclude those for uncompensated care because these are not payments for Medicare fee-for-service beneficiaries’ inpatient stays. The “annual update to IPPS operating rates” includes estimates of changes in market basket and productivity as of the time of the final rule, as well as the budgetary reductions required by the Affordable Care Act of 2010 in each of 2010 to 2019. “Other non-budget-neutral updates” includes the statutory adjustments for coding and documentation improvements. “Reported case mix (net)” reflects the change in average relative (transfer-adjusted) weight assigned to inpatient stays, less the change anticipated and accounted for through budget neutrality factors. “Input prices” reflects CMS’s estimate of actual change in inpatient hospital market basket as of the third quarter of 2021 (and does not include change in the capital market basket). Components may not sum due to rounding.

Source: MedPAC analysis of Medicare Provider Analysis and Review claims, IPPS final rules, hospital cost reports, and CMS market basket data.

- **Factors unique to the public health emergency.** In most years, the growth in IPPS costs per stay is below the change in input prices and reported case mix, implying that hospitals have improved their productivity, coded patients more extensively, or both. However, in 2020, costs per case grew 6.7 percentage points faster than the combined growth in input prices and reported case mix. This additional cost growth is likely due to a combination of several factors unique to the PHE, including:
 - **Spreading fixed costs over fewer inpatient stays.** As inpatient stays across all payers declined over 8 percent in 2020, hospitals’ fixed costs were spread over fewer inpatient stays. The share of inpatient costs that are fixed depends on the length of time examined and whether the changes in volume are anticipated to be temporary or permanent. Historically, an

estimated 20 percent of hospitals’ costs were fixed over a one-year period, in part because that is a sufficient amount of time for hospitals to adjust labor costs for longer-term trends in patient volume. However, it is more difficult to adjust staffing costs for a shorter, temporary reduction in volume. For that reason, more than 20 percent of costs could have been fixed in 2020. Nevertheless, the publicly reported systems showed a material decline in costs when volume declined in the second quarter of 2020, suggesting that even over a short period of time, a large share of costs is variable.

- **Increase in patient severity beyond reported case mix.** The reported 3.5 percent growth in case mix may be an underestimate of the actual severity of cases, since COVID-19 cases were likely more costly to treat than typical respiratory infections in prior years. While

COVID-19 inpatient stays received a 20 percent increase in payments to help cover these additional costs, across all cases, hospitals' outlier costs per case increased.

- **Higher labor costs per stay.** While total hours worked by hospital employees declined during parts of the PHE, hospitals' labor costs per stay likely rose in 2020, as hospitals hired additional, more expensive staff (such as traveling nurses); in addition, some existing hospital staff worked overtime to handle COVID-19 surges and to cover for other staff on sick leave.
- **Higher supply costs per stay.** During the PHE, services required more supplies than in prior years, such as personal protective equipment and COVID-19 tests; in addition, costs for certain supplies increased because of shortages.
- **Lower productivity per stay.** The addition of new COVID-19 safety protocols and the need for staff to work outside of their typical roles could have lowered productivity.

While IPPS per stay payments and costs grew substantially in 2020, aggregate IPPS payments and costs declined. Payment and cost growth per stay were more than offset by an over 11 percent drop in IPPS stays per FFS Medicare beneficiary and a nearly 3 percent drop in number of FFS Part A Medicare beneficiaries (largely driven by the continued shift of Medicare beneficiaries from FFS to Medicare Advantage).

In 2020, OPPS payments per service grew faster than in prior years, but costs per service increased even faster

In 2020, OPPS payments per separately paid service rose by 13.5 percent, much higher than the 7.1 percent average from 2016 to 2019 (Table 3-4, top rows, p. 92). The growth in 2020 resulted primarily from:

- **Annual update to payment rates.** In 2020, the OPPS update increased payments per service by 1.2 percent. While the OPPS update is set at the IPPS update, the effect of the annual OPPS update is smaller than the effect of the IPPS update for two reasons. First, the OPPS update for 2020 was reduced by a budget-neutrality adjustment to

offset a large amount of “pass-through” spending for expensive drugs and devices. This adjustment reduced the OPPS base payment rate increase to 1.6 percent. Second, the OPPS update does not affect the base payment rates of separately payable drugs and devices, which are based on costs and represent 23 percent of OPPS payments. Therefore, the average effect of the update across OPPS services was 1.2 percent ($77 \text{ percent} \times 1.6 \text{ percent} + 23 \text{ percent} \times 0 \text{ percent}$).

- **Faster growth in complexity.** In 2020, OPPS payments per service rose 6.1 percent due to the mix of outpatient services, measured by the OPPS relative weights of the services. This growth was faster than in prior years because the PHE led to a larger reduction in services that have low relative weights (such as E&M services) compared with services that have high relative weights (such as procedures). This increase in service complexity increased OPPS spending by 4.6 percent.
- **Continued growth in spending on separately payable drugs despite the decline in separately payable outpatient services.** Payments for separately payable drugs grew 29 percent per service, net of the effect of the relaxation of the sequester in May 2020. Separately paid drugs are about 23 percent of total OPPS spending, so this increase in drug spending boosted OPPS spending per service by 6.6 percent (net of the sequester). While this growth rate was slower than in recent years, the fact that drug and device spending grew while the volume of separately paid services declined contributed strongly to the large increase in OPPS spending per separately payable service.
- **Increases in Medicare payments during the PHE.** We estimate that the suspension of the 2 percent sequestration of the Medicare program's share of FFS payments beginning May 1, 2020, raised OPPS payments per service by \$0.5 billion in 2020, which increased spending per OPPS service by 0.9 percent.

In 2020, hospitals' OPPS costs per separately payable service grew even faster than payments per service, at an estimated 24.4 percent, four times the average 6.1 percent growth from 2016 to 2019 (Table 3-4, bottom rows, p. 92). The faster per service cost growth relative to prior years resulted in part from faster growth in the

**TABLE
3-4****In 2020, OPPS payments per service grew 13.5 percent
while costs per service grew 24.4 percent**

	Annual change 2020	Average of annual changes, 2016–2019
OPPS payments per service	13.5%	7.2%
Annual update to OPPS rates	1.2	2.1
Average relative weight of services	4.6	2.3
Separately payable drugs and devices	6.6	2.9
PHE payment changes: suspension of sequestration	0.9	0.0
All other factors	0.0	0.0
OPPS costs per service	24.4	6.1
Input prices	1.6	1.8
Resource requirements of services provided	6.2	2.8
Separately payable drugs and devices	5.7	2.5
All other factors	9.0	-1.0

Note: OPPS (outpatient prospective payment system). Components may not sum due to rounding. "Annual update to OPPS rates" includes estimates of changes in the inpatient operating market basket and productivity as of the time of the final rule, budgetary reductions required by the Affordable Care Act of 2010 in each year from 2010 to 2019, adjustments for year-to-year changes in OPPS spending on outliers and pass-through items to maintain budget neutrality, and the share of OPPS payments for separately payable drugs that are not affected by the annual update. "Input prices" reflects CMS's estimate of actual change in inpatient market basket as of the third quarter of 2021. The effect of separately paid drugs and devices is smaller on costs than on payments because we assumed the payments for separately paid drugs and costs for separately paid drugs are equal. The costs for outpatient care are higher than the payments, so the increase in drug costs from 2019 to 2020 had a smaller effect on costs than on payments.

Source: MedPAC analysis of OPPS claims, OPPS final rules, hospital cost reports, and CMS market basket data.

average resource requirements of the services provided and higher costs of separately payable drugs. However, given that these factors and input price growth accounted for only 14.1 percentage points of the 24.4 percent growth, we estimate that other factors resulted in costs rising by about an additional 9 percent. Similar to the additional growth in inpatient costs per stay, this additional per service cost growth was likely driven by factors unique to the PHE, including increased time associated with providing outpatient services due to COVID protocols, increased testing and protective equipment costs, and spreading fixed costs over fewer services.

The higher growth in OPPS payments and costs than in IPPS payment and costs reflects continued growth in the use and prices of separately payable drugs. These drugs are profitable to hospitals in aggregate because

many hospitals acquire the drugs through the 340B drug pricing program, which enables covered hospitals to purchase drugs at significantly reduced prices.

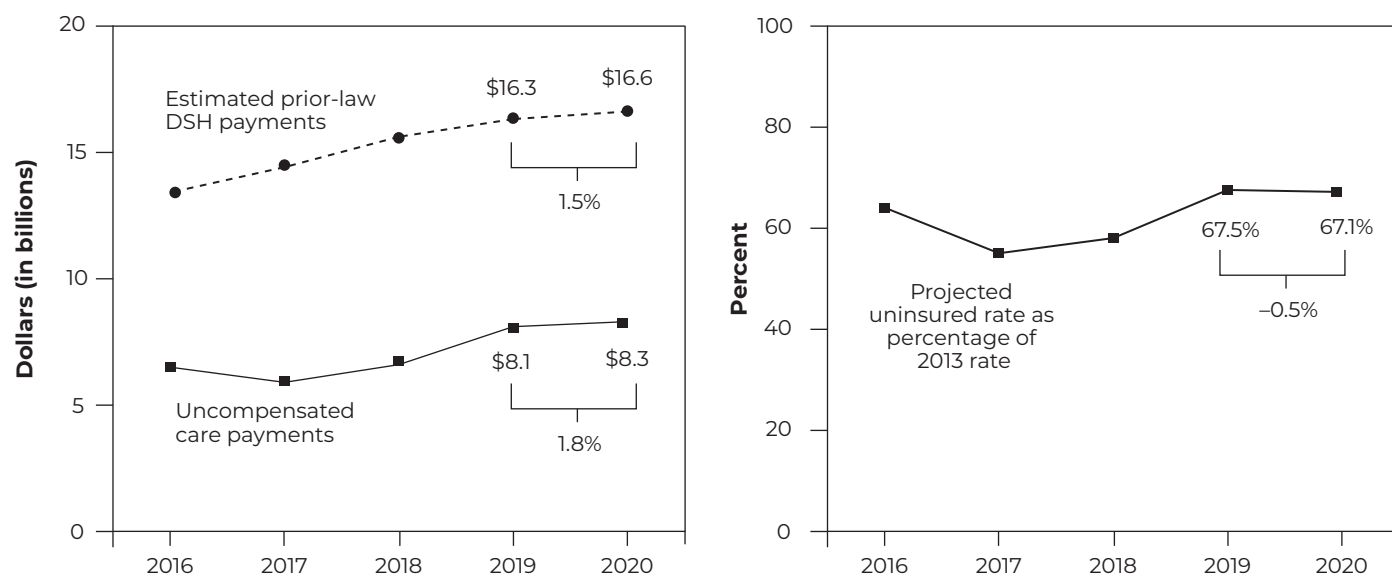
While OPPS payments and costs per service grew substantially in 2020, aggregate OPPS payments and costs declined. Growth in per visit payments and costs were more than offset by an over 17 percent decline in OPPS visits per FFS Medicare beneficiary and a 2.6 percent decline in FFS Part B Medicare beneficiaries (largely driven by the continued shift of Medicare beneficiaries from FFS to Medicare Advantage).

In 2020, uncompensated care payments increased about 2 percent

In addition to IPPS payments for FFS Medicare beneficiaries' inpatient stays, the Medicare program also makes uncompensated care payments to hospitals

FIGURE
3-8

Medicare's uncompensated care payments to hospitals increased nearly 2 percent in 2020



Note: Uncompensated care payments are post sequestration; the 2 percent sequestration of Medicare payments was suspended in May 2020. CMS estimated that from 2019 to 2020, the uninsured rate declined from 9.5 percent to 9.4 percent, equivalent to a change from 67.7 percent to 67.1 percent of the 2013 uninsured rate of 14 percent. There was also a 0.2 percentage point mandatory reduction through 2019, bringing the projected uninsured rate in 2019 down to 67.5 percent.

Source: MedPAC analysis of inpatient prospective payment systems final rules.

to help cover their costs of treating the uninsured. When the rate of the uninsured rises and hospitals have greater losses on uncompensated care, the Medicare program makes higher uncompensated care payments to hospitals.

In 2020, uncompensated care payments grew 1.8 percent to \$8.3 billion (Figure 3-8). Under current law, the uncompensated care pool is the product of two factors: 75 percent of the estimated DSH payment under prior law and the uninsured rate as a percentage of the rate in 2013. This amount is subject to sequestration (when it is in effect). Thus, the 1.8 percent growth in the 2020 uncompensated care pool was the result of:

- an estimated 1.5 percent increase in what DSH payments would have been under prior law (from \$16.3 billion up to \$16.6 billion);²⁵

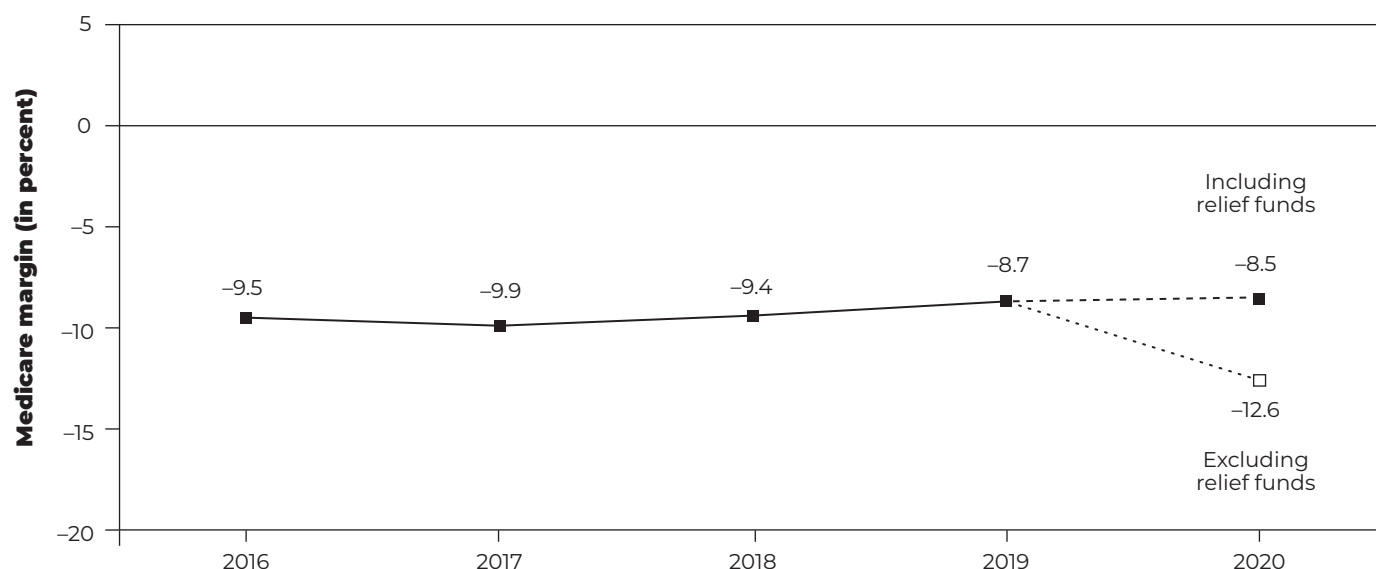
- a projected 0.5 percent decline in the national uninsured rate relative to 2013 (after taking into account the mandatory 0.2 percent point reduction through 2019); and
- a 0.8 percent increase from the suspension of the 2 percent sequestration of Medicare payments starting in May 2020.

In 2020, IPPS hospitals' Medicare margin remained negative but increased slightly when Medicare's share of federal relief funds is included

In 2020, IPPS hospitals' Medicare margin declined from -8.7 percent to -12.6 percent when excluding the reported federal relief funds.²⁶ However, because federal relief funds were intended to help cover lost revenue and payroll costs—including lost revenue from Medicare patients and the cost of staff who help

**FIGURE
3-9**

In 2020, IPPS hospitals' Medicare margin remained negative but increased slightly when including Medicare's share of federal relief funds



Note: IPPS (inpatient prospective payment systems). "Relief funds" refers to Provider Relief Fund payments and Paycheck Protection Program forgiven loans recorded on hospitals' cost reports, with the Medicare share calculated using fee-for-service Medicare's share of 2019 all-payer operating revenue. Hospitals' "Medicare margin" is calculated as aggregate Medicare payments minus aggregate allowable Medicare costs, divided by aggregate payments. Payments and costs include multiple hospital service lines (including inpatient, outpatient, swing bed, skilled nursing, rehabilitation, psychiatric, and home health services) as well as direct graduate medical education and uncompensated care payments.

Source: MedPAC analysis of hospital cost reports.

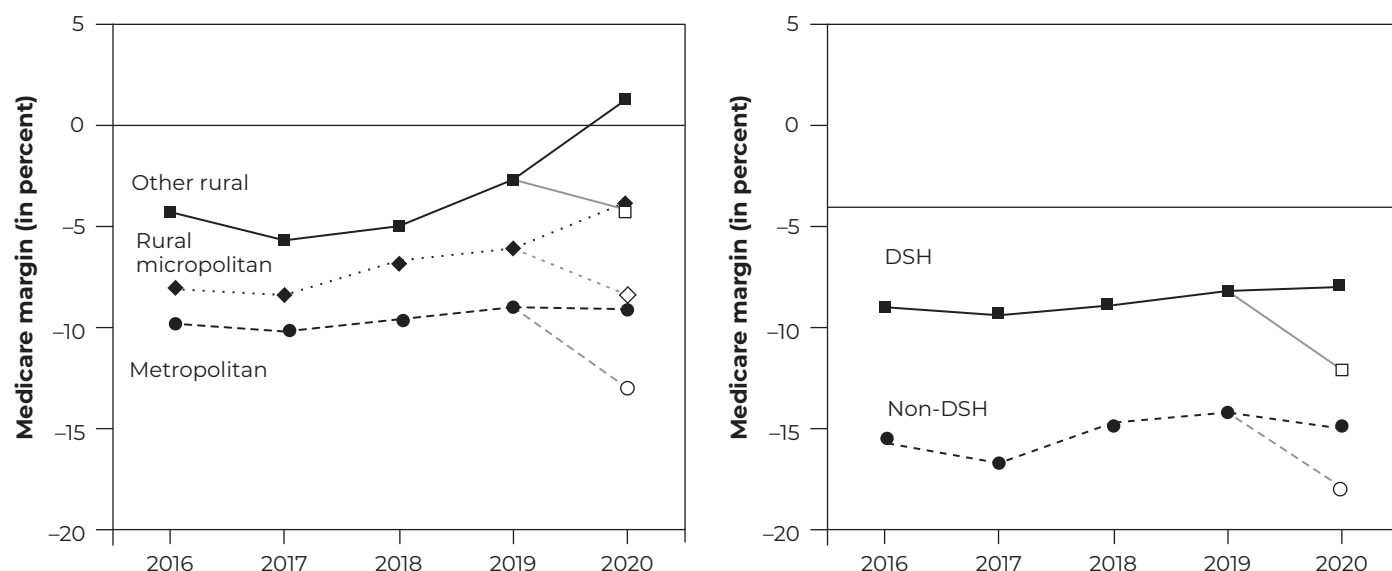
treat these patients—we include a portion of these relief funds (based on FFS Medicare's share of 2019 all-payer operating revenue) in our Medicare margins. Using this method, we allocated \$6.4 billion of the \$33 billion in federal funds that hospitals reported on their cost reports toward hospitals' care of FFS Medicare beneficiaries. With these relief funds, IPPS hospitals' 2020 Medicare margin increased slightly to -8.5 percent (Figure 3-9). Our 2020 Medicare margins use the best available data, but payment adequacy metrics involving federal relief funds need to be interpreted with caution, as they are still subject to change and are sensitive to hospitals' cost reporting periods. Nonetheless, the existing data show that the federal relief funds did their job of keeping hospitals' financial performance on trend.

Consistent with historical trends, in 2020 the Medicare margin continued to vary substantially across hospital characteristics, and some variations widened due to targeted relief funds and differences in the extent to which hospitals controlled their costs. In particular:

- **In 2020, rural hospitals continued to have a higher Medicare margin than urban hospitals and had a larger increase when including federal relief funds.** Between 2019 and 2020, the Medicare margin fell at both rural and urban hospitals when excluding relief funds, but the decline was smaller at rural hospitals: Rural nonmicropolitan ("other rural") IPPS hospitals' Medicare margin fell from -2.6 percent to -4.2 percent and rural micropolitan hospitals' Medicare margin fell from -6.1 percent

**FIGURE
3-10**

IPPS hospitals' Medicare margin was higher among rural hospitals and those that treat a high share of low-income patients, with increases over 2019 when including Medicare's share of federal relief funds



Note: IPPS (inpatient prospective payment systems), DSH (disproportionate share hospital). "Relief funds" refers to Provider Relief Fund payments and Paycheck Protection Program forgiven loans recorded on hospitals' cost reports, with the Medicare share calculated using fee-for-service Medicare's share of 2019 all-payer operating revenue; the lower unfilled markers in 2020 (connected with a gray line) show the margin when excluding relief funds. Hospitals' "Medicare margin" is calculated as aggregate Medicare payments minus aggregate allowable Medicare costs, divided by aggregate payments. Payments and costs include multiple hospital service lines (including inpatient, outpatient, swing bed, skilled nursing, rehabilitation, psychiatric, and home health services) as well as direct graduate medical education and uncompensated care payments. Metropolitan (urban) counties contain an urban cluster of 50,000 or more people, and rural micropolitan counties contain a cluster of 10,000 to 50,000 people.

Source: MedPAC analysis of hospital cost reports.

to -8.4 percent, while urban hospitals' Medicare margin fell from -9.0 to -13.0 percent. Rural hospitals received substantial federal relief funds during the PHE. After allocating a share of these relief funds to Medicare, the Medicare margin at rural hospitals increased: Rural nonmicropolitan IPPS hospitals' Medicare margin rose to 1.3 percent—the first time it was positive since 2015—and rural micropolitan IPPS hospitals' Medicare margin rose to -3.8 percent—its highest level since 2013.²⁷ In contrast, metropolitan IPPS hospitals' Medicare margin remained steady at about -9 percent with relief funds (Figure 3-10, left panel).

- **In 2020, disproportionate share hospitals continued to have a higher Medicare margin than other hospitals and had a larger increase after allocating federal relief funds.** Between 2019 and 2020, both DSH hospitals' and non-DSH IPPS hospitals' Medicare margin declined by similar amounts when excluding relief funds: DSH hospitals' Medicare margin fell from -8.2 percent to -12.1 percent and IPPS non-DSH hospitals' Medicare margin fell from -14.2 percent to -17.9 percent. However, DSH hospitals received substantial federal relief funds during the PHE. After allocating a share of these relief funds to Medicare, DSH hospitals' Medicare margin rose to a five-year high of -8.0 percent, a

slight increase.²⁸ In contrast, non-DSH hospitals' Medicare margin still declined relative to 2019, to -15.0 percent with relief funds (Figure 3-10, right panel, p. 95).

- **For-profit hospitals continued to have a higher Medicare margin than nonprofits and maintained a positive Medicare margin even prior to relief fund allocation.** Between 2019 and 2020, for-profit IPPS hospitals' Medicare margin held steady at 0.5 percent when excluding relief funds, while nonprofit IPPS hospitals' Medicare margin declined from -10.1 percent to -14.8 percent. In part, this disparity reflects how for-profit hospitals were able to control their costs in concert with their declining Medicare payments, while nonprofit hospitals lowered their costs by only about half of their decline in Medicare payments. When relief funds were included, for-profit IPPS hospitals' Medicare margin increased to 3.1 percent, the highest level since 2002. In contrast, nonprofit hospitals' Medicare margin still declined slightly relative to 2019, to -10.5 percent with relief funds.

In 2020, relatively efficient hospitals' median Medicare margin increased slightly when including Medicare's share of federal relief funds Because hospitals vary in the extent to which they control costs and provide quality care, the Commission also examines Medicare margins among relatively efficient hospitals (see text box). In each year from 2015 to 2019, the median Medicare margin for each cohort of hospitals we identified as relatively efficient was between -2 percent and 0 percent. In 2020, the median Medicare margin among the 15 percent of hospitals we identified as relatively efficient was -3 percent when excluding reported relief funds and 1 percent when Medicare's share of relief funds and actual hospital costs were included (Table 3-5, p. 98).²⁹ This is consistent with data over the last several years showing relatively efficient hospitals approximately breaking even on Medicare.³⁰ In 2020, the relatively efficient hospitals' lower costs per inpatient stay (91 percent of the national median) allowed them to generate better Medicare margins than the comparison group. The relatively efficient group also had better patient satisfaction, with 72 percent of H-CAHPS respondents rating the hospital a 9 or 10 in 2020, compared with 69 percent for other hospitals. In addition, while mortality rates increased in 2020 at both relatively

efficient and other hospitals because of the effects of the pandemic, the relatively efficient hospitals (those that had relatively good prepandemic quality metrics) continued to have lower risk-adjusted median mortality and readmission rates than other hospitals during the pandemic. Among our sample of 292 relatively efficient hospitals, relative mortality was 8 percentage points below the national median and relative readmission rates were 4 percentage points below the national median in 2020—levels similar to prior years. These results suggest that relatively efficient and other hospitals' mortality metrics were equally affected on average by the pandemic.

As in past years, relatively efficient hospitals were spread across the country and represented diverse categories of hospitals, including teaching, nonteaching, rural, urban, for-profit, and nonprofit hospitals, as well as hospitals serving large shares of low-income patients. On average, the shares of Medicare and Medicaid patients are similar in both groups. While most types of hospitals were represented in the efficient group, a disproportionate share of efficient hospitals had relatively high volumes of admissions. Volume primarily affects our efficiency measures in two ways. First, higher-volume hospitals tended to have lower risk-adjusted mortality. Second, we require some consistency of results over three years and remove from the efficient group any hospital that performed in the bottom third on any metric in a single year.³¹ Thus, random variation in smaller hospitals may make them more likely to be excluded from our efficient group. About 34 percent of the relatively efficient hospitals had a high share of patients receiving supplemental security income (SSI) payments (a share above the median); the underrepresentation of hospitals serving low-income patients could reflect higher readmission rates for low-income patients.³² For-profit and nonprofit hospitals were both deemed relatively efficient between 15 percent and 16 percent of the time. While for-profit hospitals tended to have lower costs, nonprofit hospitals tended to perform slightly better on our quality metrics.

Projected Medicare aggregate margin for 2022

We project IPPS hospitals' Medicare margin in 2022 based on payments and costs from the most recent year of available data (2020) and policy and environmental changes that took place in 2021 and are anticipated in 2022. While the coronavirus PHE has

Identifying relatively efficient hospitals

The Commission follows two principles when identifying a set of efficient providers. First, the providers must do relatively well on cost and quality metrics. Second, the performance has to be consistent, meaning that the provider cannot have poor performance on any metric over the past three years. In the hospital sector, the variables we use to identify relatively efficient hospitals are hospital-level mortality rates (risk-adjusted, all-condition mortality during an inpatient stay through 30 days after discharge), readmission rates (risk-adjusted, all-condition readmission rates within 30 days after an initial stay), and standardized inpatient Medicare costs per case. Our assessment of efficiency is not in absolute terms but, rather, relative to a comparison group of other hospitals paid under Medicare's inpatient prospective payment systems (IPPS).³³

Categorizing hospitals as relatively efficient

We assigned IPPS hospitals to the relatively efficient group or the control group according to each hospital's performance relative to the national median on a set of risk-adjusted cost and quality metrics for the three years prior to the most recent cost report year. We then examined the performance of the two hospital groups in the most recent cost report year.

Hospitals were identified as relatively efficient if they met four criteria in each of the three prior years:

- Risk-adjusted mortality rates were among the best two-thirds of all hospitals.
- Risk-adjusted readmission rates were among the best two-thirds of all hospitals.
- Standardized costs per inpatient stay were among the best two-thirds of all hospitals.
- Risk-adjusted mortality or standardized costs per stay were among the best one-third of all hospitals.

The objective was to identify a sample of hospitals that consistently performed at an above-average level on at least one measure (cost or quality) and that always performed reasonably well on all measures. Because we screen out hospitals that have few Medicaid patients or have poor performance in a single year, our methodology does not seek to identify all efficient hospitals, only a subsample of relatively efficient hospitals. The rationale for this methodology and the details of computing the various measures are discussed in our March 2011 report (Medicare Payment Advisory Commission 2011). As a secondary check on hospital quality, we use the Consumer Assessment of Healthcare Providers and Systems survey to require that at least 60 percent of the hospital's patients rated the hospital a 9 or 10 on a 10-point scale (in the year prior to the performance period).³⁴ ■

made 2020 and 2021 anomalous years in many respects and it is impossible to predict with certainty the extent to which these effects will continue into 2022, we project that IPPS hospitals' Medicare margin in 2022 will be approximately -10 percent when excluding relief funds and will remain around -9 percent with relief funds. Among relatively efficient hospitals, we project that the median Medicare margin in 2022 will remain close to break-even.

We project that Medicare's payments to hospitals will be higher in 2022 than in 2020 owing to the inclusion of relief funds, but slightly lower when excluding these funds. The key changes to Medicare's payments to hospitals in 2021 and 2022 are:

- **Lower annual updates to hospital rates.** The annual update to the IPPS and OPPI base rates was 2.4 percent in 2021 and 2.0 percent in 2022—both

**TABLE
3-5**

Performance of relatively efficient hospitals

Relative performance measure	Type of hospital	
	Relatively efficient	Other
Number of hospitals	292	1,598
Share of hospitals in our study sample	15%	85%
Historical performance, 2017–2019 (percent of national median)		
Mortality rate	89%	101%
Readmission rate	92	102
Standardized Medicare costs per stay	90	103
Performance metrics, 2020 (percent of national median)		
Mortality rate	92%	101%
Readmission rate	96	102
Standardized Medicare costs per stay	91	104
Share of patients rating the hospital a 9 or 10 (out of 10), 2020	72	69
Median Medicare margin, 2020		
Medicare margin excluding relief funds	–3%	–10%
Medicare margin with relief funds	1	–6
All-payer total margin	7	5

Note: “Relatively efficient hospitals” and “other hospitals” were identified based on their mean performance during the period from 2017 to 2019 relative to the median hospital’s performance during those years. We removed hospitals with a low share of Medicaid patient days reported on cost reports (the bottom 10 percent of hospitals) and hospitals in markets with high service use (top 10 percent of hospitals) due to concerns that socioeconomic conditions and aggressive treatment patterns can influence unit costs and risk-adjusted quality metrics. “Mortality rate” is the risk-adjusted rate of mortality within an inpatient stay through 30 days after the stay. “Readmission rate” is the risk-adjusted rate of readmission within 30 days of an inpatient stay. “Standardized Medicare costs per stay” are standardized for area wage rates, case-mix severity, prevalence of outlier and transfer cases, interest expense, low-income shares, and teaching intensity. “Share of patients rating the hospital a 9 or 10 (out of 10)” is based on Hospital Consumer Assessment of Healthcare Providers and Systems survey data collected from patients discharged July to December 2020.

Source: MedPAC analysis of Medicare cost report and claims-based quality data.

lower than the 2.6 percent update in 2020 but higher than levels in 2018 and 2019. In addition, for fiscal years 2018 through 2023, IPPS operating rates have increased/will increase 0.5 percent to offset prior coding overpayments (as required by the Medicare Access and CHIP Reauthorization Act of 2018).

- **Declines in the uncompensated care pool.** In 2021, the uncompensated care pool declined slightly, but it will fall 13 percent in 2022. This drop is driven by a nearly 13 percent overestimate of 2021

DSH payments (in part from much lower than anticipated volume in 2020), an over 5 percent increase in DSH payments from 2021 to 2022 (largely from anticipated increases in inpatient stays), and a nearly 6 percent decline in the uninsured rate from 2021 to 2022 (in part from temporary Medicaid enrollment support in recent legislation).³⁵

- **Declining federal relief funds and Medicare payment changes.** Some federal relief funds and Medicare payment changes during the PHE

continued into 2021 and will continue into at least part of 2022. For example, Provider Relief Fund payments—a portion of which support providers’ care of FFS Medicare beneficiaries—began in 2020 and over \$25 billion is scheduled to be distributed in fiscal year 2022.³⁶ In addition, the 2 percent sequester reduction in Medicare’s share of payment rates was suspended starting May 1, 2020, lasting through March 31, 2022, and then phased in at a 1 percent reduction through June 30, 2022. The additional 20 percent payment for COVID-19 inpatient stays will be in effect through the end of the PHE.

- **Increases in volume.** We expect that FFS Medicare volume per capita will be higher in 2022 than in 2020 (i.e., will return to closer to historical trends), since we do not anticipate any months comparable to the dramatic volume decline in April 2020. As the pandemic eventually subsides, we anticipate that some beneficiaries and providers will reschedule previously delayed care and some beneficiaries will require more care than they would have if they had not delayed. However, there may also be some offsetting declines due to the higher mortality during 2020 and 2021 of the highest-need patients.

An area of greater uncertainty is hospitals’ cost growth. However, we anticipate that in 2022, cost growth will once again be less than the combined growth in input prices and case mix, consistent with historical trends (Medicare Payment Advisory Commission 2020). Based on CMS’s most recent projections, we account for increased wage growth in 2022 in our cost growth estimates. While hospitals will continue to have COVID-19 cases in 2022 and incur associated costs, we expect that these costs will not be as high as they were in 2020 or 2021. Furthermore, because hospitals will continue to receive some relief funds in 2022 as well as additional Medicare payments for COVID-19 cases through the end of the PHE, we anticipate that these additional payments will roughly offset hospitals’ COVID-19 costs.³⁷

Based on these factors, we project IPPS hospitals’ Medicare margin in 2022 to be about –10 percent excluding relief funds and –9 percent with relief funds. We also project relatively efficient hospitals’ median Medicare margin in 2022 to be about 0 percent excluding relief funds and 1 percent with relief funds. The exact increase in hospitals’ Medicare margin will

depend in large part on the duration and severity of the coronavirus pandemic, volume changes, case-mix changes, and changes in costs relative to input price inflation, as well as any congressional or federal response to the pandemic in 2022.

How should Medicare payments change in 2023?

Under current law, Medicare’s base payment rates under the IPPS and OPPS are increased annually based on the projected increase in the hospital market basket less a projected increase in productivity. In addition, in each year from 2018 through 2023, the IPPS base payment rate is increased by an additional 0.5 percent to phase out adjustments that were put in place to recoup prior coding-induced overpayments. The final update for 2023 will not be set until summer 2022, but CMS’s third-quarter 2021 projections of the market basket and productivity (and the additional statutory increase to IPPS payments) would result in the IPPS base payment rate increasing by 2.5 percent and the OPPS base payment rate increasing by 2.0 percent. These projections are based in part on an estimated 3.1 percent growth in wages and benefits in 2023, which is higher than in prior years. The final update will include August 2022 estimates of 2023 growth in wages and other inputs and thus could be lower or higher than the current projected update, given future projections of input price inflation and productivity.

The update recommendation for hospital payment rates in 2023 is based on indicators of beneficiaries’ access to care, quality of care, hospitals’ access to capital, and the relationship between FFS Medicare payments and hospital costs.

RECOMMENDATION 3

For fiscal year 2023, the Congress should update the 2022 Medicare base payment rates for acute care hospitals by the amount specified in current law.

RATIONALE 3

Our payment adequacy indicators in 2020 were mixed but generally positive. FFS Medicare beneficiaries continued to have good access to inpatient and outpatient acute hospital care, and hospitals

The Bipartisan Budget Act of 2018 mandated that the Commission report on the modification of the low-volume hospital payment adjustment

SEC. 50204. EXTENSION OF INCREASED INPATIENT HOSPITAL PAYMENT ADJUSTMENT FOR CERTAIN LOW-VOLUME HOSPITALS.

(b) MEDPAC REPORT ON EXTENSION OF INCREASED INPATIENT HOSPITAL PAYMENT ADJUSTMENT FOR CERTAIN LOW-VOLUME HOSPITALS.—

(1) IN GENERAL.—Not later than March 15, 2022, the Medicare Payment Advisory Commission shall submit to Congress a report on the extension of the increased inpatient hospital payment adjustment for certain low-volume hospitals under section 1886(d)(12) of the Social Security Act (42 U.S.C. 1395ww(d)(12)) under the provisions of, and amendments made by, this section.

(2) CONTENTS.—The report under paragraph (1) shall include an evaluation of the effects of such extension on the following:

- (A) Beneficiary utilization of inpatient hospital services under title XVIII of the Social Security Act (42 U.S.C. 1395 et seq.).
- (B) The financial status of hospitals with a low volume of Medicare or total inpatient admissions.
- (C) Program spending under such title XVIII.
- (D) Other matters relevant to evaluating the effects of such extension. ■

maintained strong access to capital markets. Federal relief funds largely offset hospitals' pandemic costs on average and more than offset costs for groups of hospitals that received targeted funds. In other words, federal relief funds did their intended job of meeting hospitals' additional financial challenges during the pandemic.

Furthermore, we anticipate that changes caused by the PHE will be temporary (other than possibly increased wage rates, which should be accounted for under the current-law annual updates to the hospital market basket) and that relatively efficient hospitals' median Medicare margin will remain near break-even in 2022.

The Commission anticipates that a current-law update to hospital payment rates in 2023 would be enough to maintain beneficiaries' access to hospital inpatient and outpatient care and keep IPPS and OPDS payment rates close to the cost of delivering high-quality care efficiently.

Importantly, the current-law update will be tied to August 2022 forecasts of how much wages and other input prices will grow in fiscal year 2023. The current forecast of a 2.0 percent current-law update in 2023 includes a 3.1 percent growth in wages and benefits (which is higher than in prior years), slower growth in other inputs, and a productivity adjustment. However, the final update could be lower or higher than 2.0 percent, given future projections of input price inflation and productivity.

IMPLICATIONS 3

Spending

- Maintaining the current-law update would not change spending relative to current law.

Beneficiary and provider

- We do not expect the recommendation, relative to current law, to materially affect beneficiaries' access to care or providers' willingness to treat Medicare beneficiaries.

Mandated report on Bipartisan Budget Act of 2018 changes to the low-volume hospital payment adjustment

By law, CMS adjusts the per stay payments of hospitals with low inpatient volume to account for their higher costs due to a lack of economies of scale. The Congress dramatically altered the low-volume hospital (LVH) policy in 2010 by temporarily shifting away from empirical analyses conducted by CMS to set the LVH adjustments and eligibility by relying on statutorily defined, broader criteria and a specified sliding scale payment adjustment. The Commission noted several concerns with the modified LVH policy, including that the adjustment was not well targeted to hospitals most in need of support. Subsequently, the Bipartisan Budget Act (BBA) of 2018 temporarily extended and modified the LVH payment adjustment in the IPPS and mandated that the Commission evaluate the effects of this policy change (see text box on the mandate).

Background

In its June 2001 report to the Congress, the Commission recommended that the Congress require the Secretary to implement a graduated adjustment to IPPS payments per inpatient stay for isolated hospitals with low all-payer inpatient volume. The rationale behind the recommendation was that low-volume hospitals (in particular, those with 200 or fewer all-payer inpatient stays per year) lack economies of scale and thus have higher standardized costs per inpatient stay (Medicare Payment Advisory Commission 2001). The Commission stated that a low-volume adjustment was justified for isolated hospitals because the low-volume challenge was beyond those hospitals' control due to their location in low-population-density rural areas. The key policy questions were which hospitals should get an adjustment and how large of an adjustment should be applied to IPPS payment rates.

Consistent with the Commission's 2001 recommendation, the Medicare Modernization Act of 2003 required CMS to implement an IPPS payment adjustment for low-volume, isolated hospitals, beginning in 2005. The law required that CMS determine the empirical relationship between all-payer volume and standardized costs per case and set the LVH adjustment accordingly, subject to three

limitations: First, CMS could not give adjustments to hospitals with more than 800 stays; second, the hospitals must be more than 25 miles from another IPPS hospital; and third, the adjustment could not be more than 25 percent (Table 3-6, p. 102).

In implementing the LVH adjustment for 2005, CMS limited the adjustment to hospitals with fewer than 200 stays that were more than 25 miles from another IPPS hospital and set the adjustment at 25 percent for all qualifying hospitals. In making this decision, CMS cited the Commission's work and its own analysis, which found that hospitals with fewer than 200 stays had sufficiently higher costs relative to payments to justify an adjustment, and that, for a large majority of these hospitals, the maximum adjustment of 25 percent would be appropriate. CMS also noted that its evidence was not robust and that the relationship between standardized costs and stays is becoming less significant over time (Centers for Medicare & Medicaid Services 2004). CMS updated its analysis in the 2006 final rule but maintained the 2005 criteria in each year through 2010. Under these criteria, 10 or fewer hospitals received the LVH adjustment each year.

In the ACA, the Congress dramatically altered the program by temporarily shifting from having CMS set the LVH adjustment based on its empirical analyses to statutorily specifying broader eligibility criteria and a sliding-scale payment adjustment. Specifically, starting in 2010, the LVH eligibility criteria were expanded to apply to all hospitals with fewer than 1,600 Medicare inpatient stays that were more than 15 miles from the nearest IPPS hospital. Qualifying hospitals with fewer than 200 Medicare inpatient stays would receive the maximum 25 percent adjustment, with a smaller adjustment for hospitals with a larger number of stays.³⁸ As a result, between 2010 and 2011, the number of hospitals qualifying for the LVH adjustment increased from 3 to nearly 500 hospitals. Subsequent legislation continued to extend these temporary criteria through 2017.

The Commission noted several concerns with the modified LVH policy:

- The adjustment was not well targeted, because it is based on Medicare inpatient stays rather than total inpatient stays, while economies of scale depend on total stays.

**TABLE
3-6**

Legislative history of the low-volume hospital IPPS payment adjustment and eligibility criteria, 2005 to present

Law	Effective fiscal years	Inpatient volume criterion	Isolation criterion	Low-volume payment adjustment percentage
Medicare Modernization Act of 2003	2005–2010	< 800 <i>all-payer</i> inpatient stays	> 25 road miles to nearest IPPS hospital	Empirically justified by CMS (up to 25%); CMS set adjustment at 25% for hospitals with less than 200 stays, 0% for all others
Affordable Care Act of 2010 and subsequent laws	2011–2018	< 1,600 <i>Medicare</i> inpatient stays	> 15 road miles	Up to 25% (linear decline between 200 and 1,599 stays)
Bipartisan Budget Act of 2018	2019–2022	< 3,800 <i>all-payer</i> inpatient stays	> 15 road miles	Up to 25% (linear decline between 500 and 3,799 stays)
Bipartisan Budget Act of 2018	2023 and beyond	< 800 <i>all-payer</i> inpatient stays	> 25 road miles	Empirically justified by CMS (up to 25%)

Note: IPPS (inpatient prospective payment systems). The “inpatient volume criterion” is assessed by CMS using a year 2 to 3 years prior to the year in which the adjustment is made. The “isolation criterion” initially required a low-volume hospital to be more than 25 road miles from the nearest “Subsection (d) hospital” (i.e., a short-term acute care hospital paid under the IPPS or a state waiver) and did not require any minimum distance to the nearest critical access or specialty hospital. The Consolidated Appropriations Act of 2018 altered the distance criterion such that the distance criterion for Subsection (d) hospitals not operated by the Indian Health Service (IHS) applied to only other non-IHS Subsection (d) hospitals, and vice-versa. The “low-volume payment adjustment percentage” is applied to all IPPS payments (exclusive of certain quality payment adjustments), including cost-based hospital-specific rate payments, uncompensated care payments, and indirect medical education payments for Medicare Advantage beneficiaries. “Subsequent laws” refers to the American Taxpayer Relief Act of 2012 (§605); Pathway for SGR Reform Act of 2013 (§1105); Protecting Access to Medicare Act of 2014 (§105); and the Medicare Access and CHIP Reauthorization Act of 2015 (§204).

Source: MedPAC analysis of 42 USC 1395ww(d)(12) and cited laws, regulations (42 CFR 412.101), and CMS final rules.

- The empirical support for adjustments at the higher volume limit is unclear.
- Under both the prior and modified LVH policies, the policy was not well targeted to isolated hospitals (as LVHs can be within any distance of critical access hospitals).
- The LVH adjustment was duplicative for the subset of LVHs that already received cost-based payments through their designation as a sole-community or Medicare-dependent hospital (Medicare Payment Advisory Commission 2012a, Medicare Payment Advisory Commission 2012b).

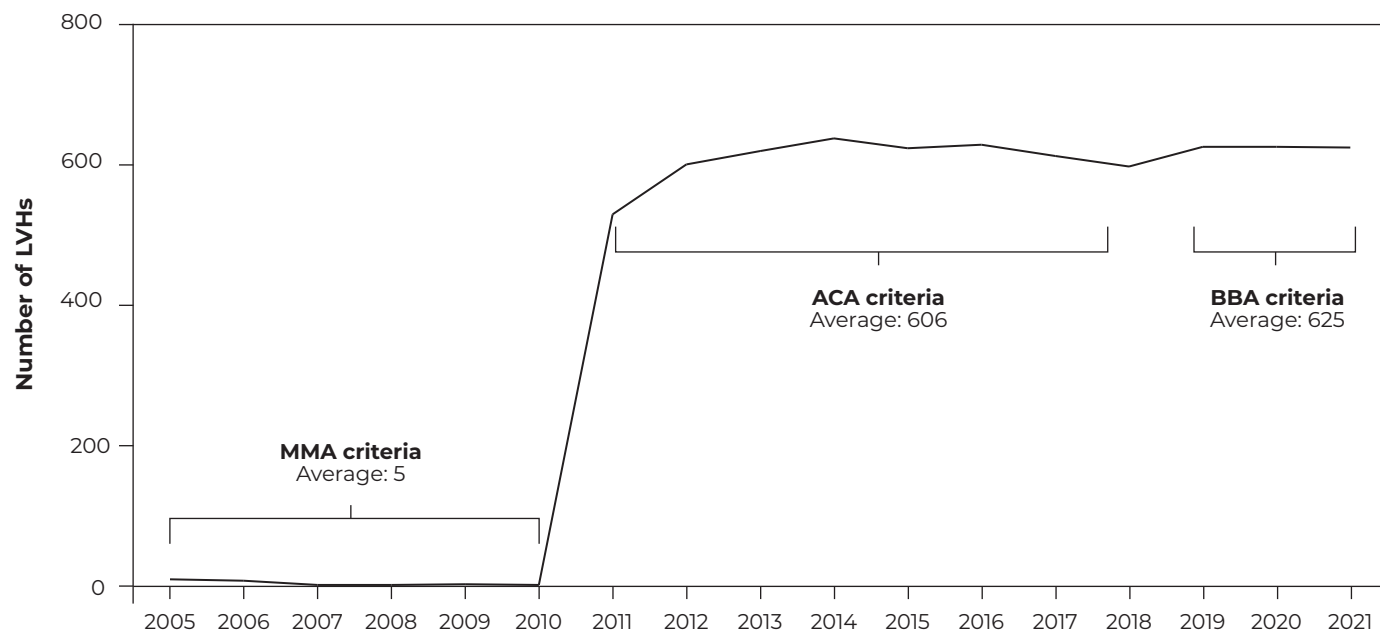
The BBA of 2018 modified the eligibility criteria to revert to basing the low-volume criteria on all-payer

inpatient stays, addressing one of the Commission’s concerns. However, the modified volume criteria—up to 3,800 all-payer inpatient stays—was still substantially higher than the criterion of a maximum of 800 stays in the Medicare Modernization Act of 2003, and the extension maintained a statutorily specified sliding-scale adjustment, with qualifying hospitals with fewer than 500 Medicare stays receiving the maximum 25 percent adjustment, instead of letting CMS determine an adjustment empirically.³⁹

Absent additional congressional action, in fiscal year 2023, the LVH payment adjustment policy will revert to the narrower eligibility criteria established in the Medicare Modernization Act of 2003.

**FIGURE
3-11**

**Number of LVHs increased about 3 percent after
Bipartisan Budget Act of 2018 modifications**



Note: LVH (low-volume hospital), MMA (Medicare Modernization Act of 2003), ACA (Affordable Care Act of 2010), BBA (Bipartisan Budget Act).

Source: MedPAC analysis of CMS final inpatient prospective payment systems rules, Medicare Provider Analysis and Review data, and the inpatient provider specific file.

Effects of changes to LVH policy enacted in the BBA of 2018

The modified LVH policy enacted in the BBA of 2018, effective beginning in 2019, had a modest effect on the number and characteristics of LVHs but a larger effect on total LVH payments, as the policy shifted LVH adjustments toward those hospitals with fewer all-payer inpatient stays and resulted in an increased number of hospitals receiving the maximum 25 percent adjustment.

BBA modifications modestly increased the number of LVHs and shifted adjustment toward LVHs with lower all-payer inpatient volume

The change in eligibility criteria in the BBA of 2018 resulted in a slight increase in the number of LVHs (Figure 3-11). Across the three years since the BBA modified LVH criteria based on all-payer volume (2019

to 2021), there were an average of 625 LVHs. This was about 3 percent above the average number of LVHs from 2011 to 2018 (606) and a 5 percent increase from the number of LVHs in 2018, but very similar to the number from 2014 to 2016. Since 2011, nearly 20 percent of IPPS hospitals were LVHs (data not shown).

In 2019, the vast majority (92 percent) of LVHs retained their 2018 status; thus, the change in eligibility criteria in the BBA of 2018 had a minimal effect on LVHs' characteristics. Both before and after the policy change, LVHs were more likely than other hospitals to be located in rural areas (75 percent vs. 12 percent) and to be government owned (31 percent vs. 11 percent). LVHs were also more likely than other hospitals to receive additional payments from other IPPS adjustments—that is, hospitals designated as disproportionate share hospitals (90 percent vs. 81 percent), sole-community

**TABLE
3-7****Bipartisan Budget Act of 2018 modifications better targeted support to hospitals with fewer economies of scale: Illustrative example**

Example hospital	Inpatient stays			LVH adjustment percentage	
	All-payer	Medicare	Non-Medicare	ACA criteria	BBA criteria
Medium all-payer stays					
Hospital A: High Medicare share (70%)	1,400	980	420	11.1%	18.2%
Hospital B: Low Medicare share (30%)	1,400	420	980	21.1	18.2
Low all-payer inpatient stays					
Hospital C: High Medicare share (70%)	700	490	210	19.8	23.5
Hospital D: Low Medicare share (30%)	700	210	490	24.8	23.5

Note: LVH (low-volume hospital), ACA (Affordable Care Act of 2010), BBA (Bipartisan Budget Act of 2018).

Source: MedPAC example based on LVH criteria in CMS regulations.

hospitals (42 percent vs. 7 percent), or Medicare-dependent hospitals (17 percent vs. 2 percent).

The BBA of 2018 set the new LVH eligibility criteria such that virtually all LVHs eligible in 2018 would remain eligible in 2019, but it also allowed some hospitals with low all-payer volume but relatively higher Medicare volume to become eligible. The altered low-volume eligibility criterion did not affect LVHs' median all-payer inpatient stays (about 1,400) or FFS Medicare inpatient stays (slightly over 500); however, in 2020, the average number of FFS Medicare inpatient stays per LVH increased 6 percent, since the 8 percent of LVHs in 2019 that were added after 2018 had higher FFS Medicare inpatient stays.

In addition, the change to a criterion based on all-payer volume shifted the LVH adjustments toward the subset of LVHs with lower all-payer inpatient volume, consistent with MedPAC's original 2001 recommendation. The prior ACA criterion favored hospitals with lower Medicare shares, while the BBA criterion favors hospitals with lower all-payer volume, regardless of Medicare share (Table 3-7). This modification to LVH eligibility improved the targeting of the LVH adjustment, since it is all-payer volume that determines economies of scale.

LVH payments increased after BBA policy change

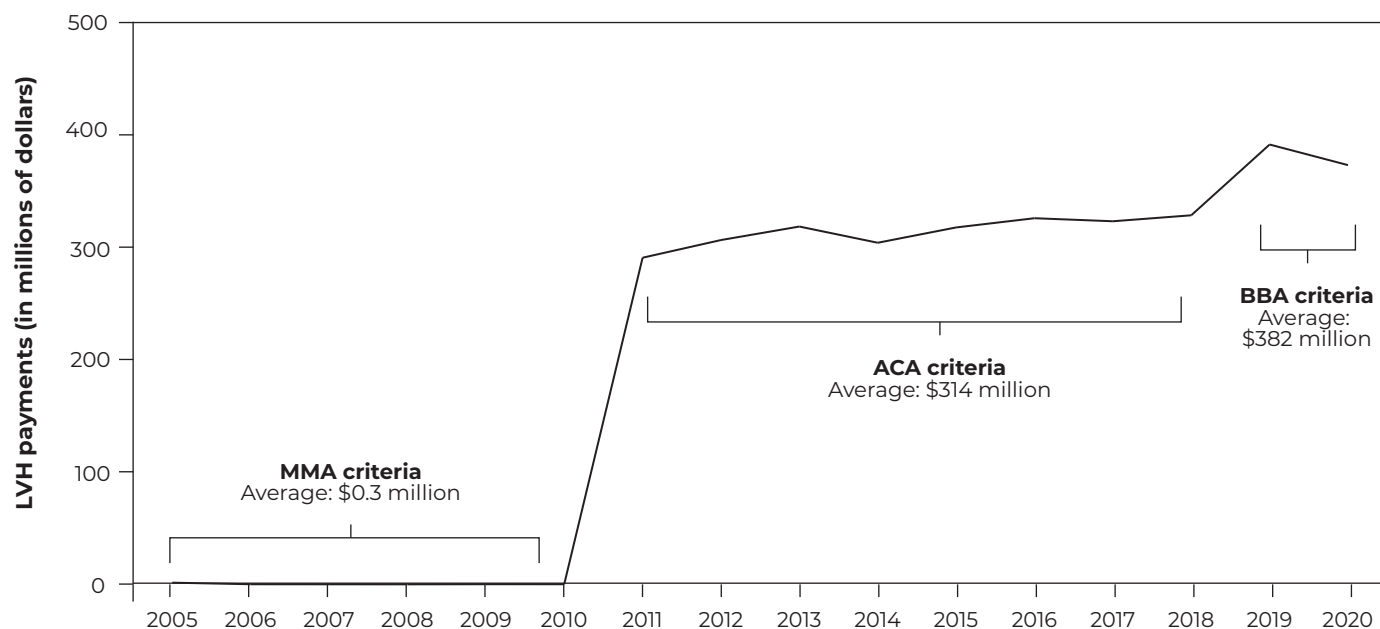
While the change in eligibility criteria enacted in the BBA of 2018 resulted in a modest change in the number and characteristics of LVHs, it had a larger effect on aggregate LVH payments (Figure 3-12). Specifically, across 2019 and 2020, annual LVH payments averaged \$382 million, up 22 percent from the 2010 to 2018 annual average, including a 19 percent increase from 2018 to 2019. The dramatic growth in LVH payments in 2019 was driven by the higher number of LVHs (5 percent), the rise in average FFS Medicare cases per LVH (6 percent), and the increase in the average LVH adjustment percentage (5 percent).⁴⁰ The higher average LVH adjustment percentage between 2018 and 2019 was produced in part by the larger share of LVHs receiving the maximum adjustment (11 percent vs. 15 percent) (data not shown).

Before and after BBA modifications, LVHs had a higher Medicare margin but lower all-payer total margin than other hospitals

Both before and after the LVH payment policy changes in the BBA of 2018, LVHs had a higher Medicare margin than other hospitals but a lower all-payer total margin (Table 3-8, p. 106). For example, in 2018, LVHs' inpatient Medicare margin was about 7 percentage points higher

**FIGURE
3-12**

**Bipartisan Budget Act of 2018 modifications
increased LVH payments by 19 percent in 2019**



Note: LVH (low-volume hospital), MMA (Medicare Modernization Act of 2003), ACA (Affordable Care Act of 2010), BBA (Bipartisan Budget Act).

Source: MedPAC analysis of CMS final inpatient prospective payment systems rules and Medicare Provider Analysis and Review data.

than other hospitals', and this difference increased to 8 percentage points in 2019. This finding suggests that (1) the LVH adjustment—in combination with the other inpatient payment adjustments received by many LVHs—increases Medicare payments by an amount that more than offsets the extra inpatient costs that LVHs may incur due to a lack of economies of scale and (2) the switch to an all-payer volume criterion slightly helped LVHs' inpatient Medicare margins. LVHs also had a higher overall Medicare margin than other hospitals, but to a lesser extent than the difference in inpatient Medicare margin, suggesting that LVHs often struggle with economics of scale across all service lines (because they receive a low-volume payment adjustment only for their inpatient services).⁴¹ Despite these higher overall Medicare margins, LVHs had an all-payer total margin that was about 3 percentage

points below that of other hospitals in both 2018 and 2019. That LVHs' all-payer total margin was lower despite a higher Medicare margin suggests lower profit levels from commercially insured patients, owing to a combination of factors, including a lack of low-volume adjustment by commercial insurers, relatively less market power in negotiating rates than larger hospitals, and possibly a different payer mix on average.

Conclusion

The BBA of 2018 required that LVH volume criteria be based on a low number of all-payer inpatient stays (instead of Medicare stays) and modified the statutorily set adjustment. This modification expanded the number of LVHs in 2019 by 5 percent but increased LVH payments by 19 percent, reflecting the increased number of LVHs as well as the increase in the average

**TABLE
3-8**

Both before and after the Bipartisan Budget Act of 2018 modifications, LVHs had a higher Medicare margin but lower all-payer total margin than other hospitals

Aggregate margin	2018			2019		
	LVHs	Non-LVHs	Difference	LVHs	Non-LVHs	Difference
Inpatient Medicare	-5.9%	-13.0%	7.1	-4.5%	-12.6%	8.0
Overall Medicare	-8.6	-9.3	0.7	-6.2	-8.8	2.6
All-payer total margin	3.9	6.8	-2.9	4.8	7.7	-2.9

Note: LVH (low-volume hospital). A margin is calculated as aggregate payments minus aggregate allowable costs, divided by aggregate payments. "Inpatient Medicare" includes all inpatient services reimbursed under the IPPS exclusive of uncompensated care payments. "Overall Medicare" margin refers to the aggregate margin across multiple hospital service lines (including inpatient, outpatient, swing bed, skilled nursing, rehabilitation, psychiatric, and home health services) as well as direct graduate medical education and uncompensated care payments. "All-payer total margin" includes all patient care services funded by all payers plus nonpatient revenue such as investment income. Difference in components may not equal "difference" due to rounding.

Source: MedPAC analysis of hospital cost report data.

number of FFS Medicare stays per LVH and in the average LVH adjustment.

The current requirement that LVH eligibility be based on all-payer volume (and not Medicare volume) is consistent with Commission's prior recommendation, and LVH policy will become more consistent with that recommendation beginning in 2023 when CMS's authority to determine an empirically justified LVH adjustment is restored. Still, concerns remain that the policy is not well targeted to isolated hospitals and is

duplicative for the majority of LVHs that already receive cost-based payments through their designation as a sole-community or Medicare-dependent hospital.

The Commission continues to support higher payment rates for providers that have high costs due to factors outside of their control, such as isolated providers with low patient volume. However, these special payments should be empirically determined, narrowly targeted, and not duplicative of other payment adjustments. ■

Endnotes

- 1 Throughout this chapter, we use the term “FFS Medicare” as equivalent to the CMS term “Original Medicare.” In addition, unless otherwise noted, throughout this chapter, all years referring to inpatient services refer to fiscal year while those referring to outpatient services refer to calendar year, consistent with when CMS updates these two payment systems.
- 2 Medicare uses the OPPS to pay for outpatient services at all IPPS hospitals (other than those that are part of the Indian Health Service); at certain specialized short-term acute care hospitals (cancer and children’s hospitals); and at other types of hospitals, such as psychiatric, long-term care, and rehabilitation hospitals.
- 3 The IPPS and OPPS reimburse hospitals for their facility costs; clinicians that provide services at hospitals are paid separately under the physician fee schedule (see Chapter 4). Examples of other Medicare payment methodologies for inpatient and outpatient services at short-term acute care hospitals include cost-based payment to small hospitals designated as critical access hospitals and Maryland’s all-payer global budget. In addition, even at IPPS hospitals, certain inpatient costs are paid separately, such as organ acquisition costs and costs of medical education. Hospitals also receive separate Medicare payments for post-acute care services. These other payment methodologies are beyond the scope of this chapter.
- 4 Under the IPPS and OPPS, Medicare pays a prospective rate minus any beneficiary liability, such as a deductible or copayment; the provider collects the remaining amount from the beneficiary or a supplemental insurer. Medicare reimburses hospitals for 65 percent of bad debts resulting from beneficiaries’ nonpayment of deductibles and copayments after hospitals have made reasonable efforts to collect the unpaid amounts.
- 5 More information on the IPPS is available at https://www.medpac.gov/wp-content/uploads/2021/11/medpac_payment_basics_21_hospital_final_sec.pdf.
- 6 More information on the OPPS is available at https://www.medpac.gov/wp-content/uploads/2021/11/medpac_payment_basics_21_opd_final_sec.pdf.
- 7 Hospital closures are defined as cessation of Medicare beneficiaries’ access to inpatient services at a general short-term acute care hospital or critical access hospital in the United States (exclusive of territories). Closures do not include the relocation of inpatient services from one hospital to another under common ownership within 10 miles, nor do closures include hospitals that both opened and closed within a five-year time period. The number of hospital closures and openings in a given year can change over time as hospitals reopen or dates of closure are updated.
- 8 The extent of the spring 2020 declines varied across types of inpatient stays, with smaller decreases among emergency stays. For example, FFS Medicare beneficiaries’ inpatient stays with heart attacks declined 30 percent during the initial wave of the COVID-19 pandemic in April 2020, while the volume of inpatient total hip replacements declined 75 percent in April 2020.
- 9 For more details on waivers enacted by CMS, see <https://www.cms.gov/files/document/covid-19-emergency-declaration-waivers.pdf>.
- 10 For more details on the Acute Hospital Care at Home program, see <https://qualitynet.cms.gov/acute-hospital-care-at-home>.
- 11 The volume of elective services appeared to have declined in 2020 to a greater degree than nonelective services. For example, the volume per capita of a chest X-ray with two views was 49 percent lower in December 2020 than in December 2019, but volume per capita of the most common method for chemotherapy administration was 4 percent higher in December 2020 than in December 2019.
- 12 For example, during the second quarter of 2020, HCA Healthcare had a 12 percent drop in revenue from 2019. But for every dollar of revenue lost, they were able to reduce expenses by 73 cents and remain profitable (HCA Healthcare 2020). Over longer periods, we would expect more than 73 percent of costs to be variable.
- 13 CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality.
- 14 CMS is not publicly reporting H-CAHPS results based on surveys collected the first two quarters of 2020.
- 15 Both HCA and Kaiser reported returning CARES act funding. See <https://hcahealthcareimpact.com/protecting-our-organization/cares-act-funding/> and <https://wa-business.kaiserpermanente.org/kaiser-permanente-cares-act-funding/>.

- 16 In addition to rural hospitals and clinics, certain hospitals in small metropolitan areas and rural specialty hospitals were also eligible for a portion of the targeted distribution of Provider Relief Fund payments for providers in rural areas. For more details on the targeted Provider Relief Fund distributions, see <https://www.hrsa.gov/provider-relief/past-payments/targeted-distribution>.
- 17 For more details on the Paycheck Protection Program, see <https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program>.
- 18 For more details on the targeted Provider Relief Fund distributions, see <https://www.hrsa.gov/provider-relief/past-payments/targeted-distribution>.
- 19 Consistent with prior years, in 2020, hospitals with a higher share of FFS Medicare stays for beneficiaries dually eligible for Medicaid and Medicare had a lower median all-payer margin than those with a lower share.
- 20 Employment estimates are per the Bureau of Labor Statistics' national current employment statistics (<https://www.bls.gov/ces/data/>) and include private general medical and surgical hospitals and government (federal, state, and local) hospitals. End of fiscal year estimates are from September.
- 21 For more details on the COVID-19 Accelerated and Advance Payments program, see <https://www.cms.gov/files/document/covid-medicare-accelerated-and-advance-payments-program-covid-19-public-health-emergency-repayment.pdf>.
- 22 The 0.5 percent statutory increase is from phasing out adjustments that were put in place to recoup prior coding-induced overpayments.
- 23 The Affordable Care Act of 2010 required a budgetary reduction to IPPS payments in each of the years 2010 to 2019. Other factors contributing to the higher growth in 2020 include lower-than-average productivity offsets.
- 24 CMS applied the 20 percent increase only to inpatient operating PPS payments (and not to inpatient capital PPS payments). To address potential Medicare program integrity risks, starting September 1, 2020, claims for COVID-19 admissions were eligible for the 20 percent increase only if they also had a positive COVID-19 laboratory test documented in the patient's medical record. For more information on CMS's implementation, see <https://www.cms.gov/files/document/se20015.pdf>.
- 25 The 1.5 percent increase in estimated 2020 DSH payments under prior law was a result of a 3.1 percent annual update in 2020 (inclusive of the 0.5 percent statutory increase) and a 1.6 percent overestimate of projected 2019 DSH payments.
- 26 Hospitals' Medicare margin refers to the aggregate margin across hospitals and multiple hospital service lines (including inpatient, outpatient, swing bed, skilled nursing, rehabilitation, psychiatric, and home health services), as well as direct graduate medical education and uncompensated care payments. It does not include payments and costs for clinician services provided in hospitals.
- 27 From 2019 to 2020, critical access hospitals' Medicare margin increased slightly when excluding relief funds and reached a record high of 3.6 percent with relief funds.
- 28 As the safety-net hospital targeted relief funds had a minimum distribution of \$5 million, the effect of the relief funds was greater on DSHs' median Medicare margin. For example, among DSHs in the highest quartile of Medicare FFS inpatient stays for beneficiaries dually eligible for Medicaid and Medicare, the median Medicare margin in 2020 increased to -1.5 percent when including relief funds and to +1.8 percent when limited to those with cost reporting periods after June 30, 2020.
- 29 If costs would have been reduced more in the absence of relief funds, the margin decline would have been smaller.
- 30 We have also found that hospitals under financial pressure (those that do not have material profits on non-Medicare patients) have a stronger incentive to control costs and roughly broke even on Medicare in recent years. For-profit hospitals, which have an incentive to maximize shareholder returns, have also roughly broken even on Medicare in recent years (Medicare Payment Advisory Commission 2021).
- 31 We do not adjust our costs per inpatient stay for economies of scale. However, we excluded all hospitals with fewer than 500 Medicare inpatient stays from our analysis. For the remaining hospitals, economies of scale are not a material factor when evaluating costs per discharge because costs are roughly proportionate to the volume of stays for hospitals with over 500 Medicare stays per year (generally over 1,000 all-payer stays). Teaching hospitals tend to have higher costs per stay, but we standardize costs per stay by adjusting for the effect of case mix, outlier cases, and the cost of training residents. After these adjustments, teaching hospital costs on average are similar to non-teaching hospital costs. For a more complete description of the methodology, see online Appendix 3-B from our 2016 report to the Congress, available at <http://www.medpac.gov>.
- 32 We adjust costs per stay for the share of Medicare patients that are on SSI. This is consistent with the rationale behind the DSH program, which was based on the empirical finding that hospitals with higher shares of low-income Medicare patients had higher costs. However, we do not adjust readmission or mortality metrics for patient income. This

is based on our policy of not adjusting quality metrics for income. Because hospitals with high shares of low-income patients tend to have higher readmission rates, only 100 of the 292 relatively efficient hospitals had high levels of low-income Medicare patients on SSI. Prior to accounting for relief funds, the median Medicare margin for the 100 hospitals with a higher share of Medicare patients was 3 percent in 2020, and it was 6 percent after accounting for relief funds. The higher margins at hospitals with low-income patients reflects the fact that these hospitals receive more DSH and uncompensated care add-on payments.

- 33 The objective of this analysis is to find a subset of the relatively efficient hospitals rather than to identify all efficient hospitals. For example, we exclude small hospitals with under 500 inpatient stays from our analysis, not because we know they are inefficient but because we have an insufficient volume of claims to know whether or not they performed at a relatively efficient level.
- 34 We use medians rather than means to limit the influence of outliers on our set of efficient providers.
- 35 The Families First Coronavirus Response Act provided a significant incentive (a 6.2 percentage point increase in the Federal Medical Assistance Percentage rate) to states to forgo disenrolling beneficiaries throughout the PHE. For more information on CMS's projections of the uninsured rate in 2022, see <https://www.cms.gov/files/document/addendum-certification-rates-uninsured-update-fy-2022-final.pdf-0>.
- 36 For more information on the Provider Relief Fund Phase 4 distribution and relief funds from the American Rescue Plan, see <https://www.hhs.gov/about/news/2021/09/10/hhs-announces-the-availability-of-25-point-5-billion-in-covid-19-provider-funding.html>.
- 37 We do not expect the temporary changes to hospital quality programs during the coronavirus PHE to affect IPPS

hospitals' 2022 Medicare margin. Under the hospital value-based purchasing program (HVPB), CMS is applying neutral payment adjustments, instead of rewards or penalties, to all hospitals for fiscal year 2022. This will change the distribution of HVPB funds from earlier years. However, because the Medicare margin includes payments and costs across all hospitals, this temporary change will not affect the aggregate margin computation. The hospital readmissions and health-care-acquired conditions penalty programs continue in fiscal year 2022.

- 38 CMS implemented the sliding scale LVH adjustment for hospitals with more than 200 and fewer than 1,600 Medicare inpatient stays as $((4/14) - (\text{stays}/5,600))$, equivalent to $((1,600 - \text{stays})/5,600)$.
- 39 CMS implemented the sliding scale LVH adjustment for hospitals with more than 500 and fewer than 3,800 all-payer stays as $((95/330) - (\text{stays}/13,200))$, equivalent to $((3,800 - \text{stays})/13,200)$.
- 40 Other factors that increased LVH payments in 2019 included a 51 percent increase in uncompensated care payments to LVHs, as the LVH adjustment is applied to uncompensated care payments. This is greater than the 22 percent increase in aggregate uncompensated care payments across all IPPS hospitals, as LVHs were more likely than non-LVHs to treat a disproportionate share of low-income patients.
- 41 Between 2018 and 2019, the overall Medicare margin rose for both LVHs and other hospitals. As discussed in our March 2021 report, several factors contributed to hospitals' higher Medicare margin in 2019, including growth in uncompensated care payments (Medicare Payment Advisory Commission 2021). Since LVHs are more likely to also be disproportionate share hospitals, they benefit differentially from increased uncompensated care payments.

References

- American Association of Colleges of Nursing. 2021. Student enrollment surged in U.S. schools of nursing in 2020 despite challenges presented by the pandemic. Press release. April 1. <https://www.aacnnursing.org/News-Information/Press-Releases/View/ArticleId/24802/2020-survey-data-student-enrollment>.
- American Hospital Association. 2020. *Hospitals and health systems face unprecedented financial pressures due to COVID-19: June update*. Washington, DC: AHA.
- Ascension. 2021. Consolidated financial statements and supplementary information, years ended June 30, 2021, and 2021, with reports of independent auditors.
- Berlin, G., M. Lapointe, M. Murphy, et al. 2021. *Nursing in 2021: Retaining the healthcare workforce when we need it most*. New York, NY: McKinsey & Company.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2004. Medicare program; changes to the hospital inpatient prospective payment systems and fiscal year 2005 rates. *Federal Register* 69, no. 154 (August 11): 49201.
- CommonSpirit. 2021. Continuing disclosure annual report as of and for the year ended June 30, 2021.
- Community Health Systems. 2021. Community Health Systems, Inc. announces third quarter 2021 results. News release. October 27.
- Gottlieb, J. D., and A. Zenilman. 2020. *When nurses travel: Labor supply elasticity during COVID-19 surges*. Becker Friedman Institute for Economics working paper no. 2020-166. Chicago, IL: University of Chicago.
- HCA Healthcare. 2021. HCA Healthcare reports third quarter 2021 results; revises 2021 guidance. News release. October 22.
- HCA Healthcare. 2020. HCA Healthcare reports second quarter 2020 results. News release. July 22. <https://investor.hcahealthcare.com/news/news-details/2020/HCA-Healthcare-Reports-Second-Quarter-2020-Results/default.aspx>.
- Medicare Payment Advisory Commission. 2021. *Report to the Congress: Medicare payment policy*. 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 and the health care delivery system*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2012a. *Report to the Congress: Medicare and the health care delivery system*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2012b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2011. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2001. *Report to the Congress: Medicare in rural America*. Washington, DC: MedPAC.
- Tenet Health. 2021. Tenet reports third quarter 2021 results; raises 2021 financial guidance. Press release. October 20. <https://investor.tenethealth.com/press-releases/press-release-details/2021/Tenet-Reports-Third-Quarter-2021-Results-Raises-2021-Financial-Guidance/default.aspx>.
- Trinity Health. 2021. Consolidated financial statements as of and for the years ended June 30, 2021 and 2020; supplemental Consolidating Schedules as of and for the year ended June 30, 2021 and independent auditors' reports.