

Ambulatory surgical center services





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Chapter summary

Ambulatory surgical centers (ASCs) provide outpatient procedures to patients who do not require an overnight stay. In 2019, the 5,816 ASCs that were certified by Medicare treated 3.5 million traditional fee-for-service (FFS) Medicare beneficiaries. Medicare program and beneficiary spending on ASC services was about \$5.2 billion.

In this chapter, we make a recommendation on a payment rate update for 2022. Because of standard data lags, the most recent complete data we have for most payment adequacy indicators are from 2019. The coronavirus public health emergency (PHE) created some additional data lags. Where relevant, we have considered the effects of the 2020 coronavirus PHE on our indicators and whether those effects are likely to be temporary or permanent. To the extent the effects of the PHE are temporary or vary significantly across ASCs, they are best addressed through targeted temporary funding policies rather than a permanent change to all ASC payment rates in 2022 and future years. Based on information at the time of publication, we do not anticipate any long-term PHE-related effects that would warrant inclusion in the annual update to ASC payments in 2022.

Assessment of payment adequacy

To examine the adequacy of Medicare's payments to ASCs, we analyze beneficiaries' access to care (including the supply of providers and volume of

In this chapter

- Are Medicare payments adequate in 2021?
- How should Medicare payments change in 2022?

services), quality of care, and provider access to capital. Cost data are not available for ASCs. The available indicators of payment adequacy for ASC services are positive.

Beneficiaries' access to care—Our analysis of facility supply and volume of services indicates that beneficiaries' access to ASC services is adequate.

- *Capacity and supply of providers*—From 2014 to 2018, the number of ASCs increased by an average annual rate of 1.7 percent. In 2019, the number of ASCs increased 2.5 percent. Most new ASCs in 2019 (96 percent) were forprofit facilities.
- *Volume of services*—From 2014 through 2018, the volume of services per Part B FFS beneficiary increased by an average annual rate of 2.1 percent. In 2019, volume increased by 2.7 percent.

Quality of care—The first six years of ASC-reported quality data show improvement in performance from 2013 through 2017 and a plateau from 2017 to 2018. However, the measures used within the ASC Quality Reporting (ASCQR) Program will change substantially in the next few years. Among the eight quality measures for which data were available for multiple years through 2018, performance among the ASCs that reported data improved for most measures from 2013 through 2017, but from 2017 to 2018 performance was largely unchanged and decreased for one measure. For 2019 and beyond, CMS has been making several changes to the ASCQR Program. However, we remain concerned about the delayed use of Consumer Assessment of Healthcare Providers and Systems[®] (CAHPS[®]) measures, the lack of a valuebased purchasing program for the ASC sector, and the lack of claims-based outcome measures that apply to all ASCs. For example, CMS could add measures targeting the frequency of ASC patients receiving hospital care after ASC discharge or rates of surgical site infection.

Providers' access to capital—Because the number of ASCs—especially forprofit ASCs—has continued to increase and consolidation in the ASC market has maintained a steady pace, access to capital appears to be adequate.

Medicare payments and providers' costs—From 2014 through 2018, Medicare payments for ASC services per FFS beneficiary increased by an average annual rate of 5.8 percent. However, in 2019, growth in these payments increased by 8.3 percent. ASCs do not submit data on the cost of services they provide to Medicare beneficiaries. Therefore, we cannot calculate a Medicare margin as we do for other provider types to help assess payment adequacy.

The Commission believes cost data are vital for making informed decisions about updating ASC payment rates and for identifying an appropriate input price index for ASCs. Therefore, the Commission continues to recommend that the Secretary of Health and Human Services collect cost data from ASCs without further delay. Considering the available evidence of payment adequacy, the Commission recommends that for calendar year 2022, the Congress eliminate the update to the 2021 Medicare conversion factor for ambulatory surgical centers. ■

Background

An ambulatory surgical center (ASC) is a distinct entity that primarily provides outpatient surgical procedures to patients who do not require an overnight stay. In addition to ASCs, hospital outpatient departments (HOPDs) and, in some cases, physicians' offices are locations where providers perform outpatient surgical procedures.

Since 1982, Medicare has covered and paid for surgical procedures provided in ASCs. Medicare covers surgical procedures represented in about 3,500 Healthcare Common Procedure Coding System (HCPCS) codes under the ASC payment system. However, ASC volume for services covered under Medicare is concentrated in a relatively small number of HCPCS codes. For example, in 2019, 29 HCPCS codes accounted for 75 percent of the ASC volume for surgical services provided to Medicare beneficiaries. For procedures performed in an ASC, Medicare makes two payments: one to the facility through the ASC payment system and the other to the physician for his or her professional services through the payment system for physicians and other health professionals known as the physician fee schedule (PFS). According to surveys, most ASCs have partial or complete physician ownership (Ambulatory Surgery Center Association 2017, Leapfrog 2019). Physicians who perform surgeries in ASCs they own receive a share of the ASC's profit in addition to payment for their professional services. To receive payments from Medicare, ASCs must meet Medicare's conditions of coverage, which specify standards for administration of anesthesia, quality evaluation, operating and recovery rooms, medical staff, nursing services, and other aspects of care.

Medicare pays ASCs for a bundle of facility services and items—such as nursing, recovery care, anesthetics, and supplies—through a system that is linked primarily to the outpatient prospective payment system (OPPS), which Medicare uses to set payment rates for most services provided in HOPDs. The ASC payment system is also partly linked to the PFS. A more detailed description of the ASC payment system can be found online at http:// medpac.gov/docs/default-source/payment-basics/medpac_ payment_basics_20_asc_final_sec.pdf?sfvrsn=0.

For most covered procedures, payment rates in the ASC payment system are the product of a relative weight and a conversion factor. The ASC relative weight, which

indicates a procedure's resource intensity relative to other procedures, is based on its relative weight under the OPPS. Although CMS links the ASC payment system to the OPPS, payment rates for all services covered under both systems are lower in ASCs for two reasons. First, CMS makes proportional adjustments to the relative weights of the OPPS because budget neutrality requirements do not allow changes in the relative weights to affect the level of Medicare spending from one year to the next. In 2020, this adjustment resulted in ASC relative weights that were 14.5 percent lower than the relative weights in the OPPS. Second, for most procedures covered under the ASC system, the payment rate is the product of its relative weight and an ASC conversion factor, set at \$47.75 for 2020, which was 41 percent lower than the OPPS conversion factor of \$80.78 for 2020.

The ASC conversion factor is lower than the OPPS conversion factor because it started at a lower level in 2008 and was updated at a lower rate than the OPPS conversion factor until 2019. CMS set the initial ASC conversion factor in 2008 such that total payments to ASCs under the revised payment system would equal what they would have been under the pre-2008 ASC payment system. From 2010 through 2018, CMS updated the ASC conversion factor based on the consumer price index for all urban consumers (CPI–U), while it used the hospital market basket (MB) index to update the OPPS conversion factor. The CPI–U has generally been lower than the hospital MB index. Therefore, before 2019, the ASC conversion factor was updated by smaller percentages than the OPPS conversion factor.

In a change of regulatory policy, CMS has instituted a policy of updating the ASC conversion factor using the hospital MB index from 2019 through 2023. Under this change, the updates to the ASC conversion factor will align with the updates to the OPPS conversion factor.

We are concerned that neither the CPI–U nor the hospital MB index reflects ASCs' cost structure (see text box, p. 155). Beginning in 2010, the Commission has repeatedly recommended that CMS collect cost data from ASCs with the purpose of identifying a price index that would be an appropriate proxy for ASC costs (Medicare Payment Advisory Commission 2010). CMS has shown occasional interest in collecting cost data and requested comments from stakeholders on whether the Secretary should collect cost data from ASCs to use in determining ASC payment

rates. Representatives of individual ASCs provided comments that generally opposed a requirement for ASCs to submit formal cost reports but indicated a willingness to complete surveys on the condition that they would not be administratively burdensome (Centers for Medicare & Medicaid Services 2017). The Commission asserts, however, that all other institutional providers submit at least abbreviated versions of cost reports to CMS, including small entities such as hospices and home health agencies. Moreover, ASCs in Pennsylvania submit revenue and cost data each year to the Pennsylvania Health Care Cost Containment Council, so it is clear that submission of cost data is feasible for ASCs. Nevertheless, CMS has not acted on this issue.

CMS uses a different method from the one described above to determine payment rates for "office-based" procedures, which are procedures that are predominantly performed in physicians' offices and were first covered under the ASC payment system in 2008 or later. Payment for office-based procedures is the lesser of the amount derived from the standard ASC method or the practice expense portion of the PFS rate that applies when the service is provided in a physician's office (the nonfacility practice expense, which covers the equipment, supplies, nonphysician staff, and overhead costs of a service).¹ CMS set this limit on the rate for office-based procedures to prevent migration of these services from physicians' offices to ASCs for financial reasons. Physicians who provide office-based procedures in ASCs receive a separate payment under the PFS (the full facility payment rate).

The ASC payment system somewhat parallels the OPPS in terms of which ancillary items are paid separately and which are packaged into the payment of the associated surgical procedure. However, the connection between the ASC payment system and the OPPS has been declining as CMS has increased the number of services in comprehensive ambulatory payment classifications (C-APCs), which combine all hospital outpatient services reported on a claim that are covered under Medicare Part B into a single payment, with a few exceptions. CMS has not implemented C-APCs for services provided in ASCs, stating that the system of processing ASC claims does not allow for the type of packaging of ancillary items necessary to create C-APCs. Therefore, the payment bundles for services in the C-APCs under the OPPS have greater packaging of ancillary items than the same

services under the ASC payment system. Consequently, a disconnect exists between OPPS payment rates and ASC payment rates for the services that are in C–APCs under the OPPS, and this disconnect has grown over time as CMS has substantially expanded the number of C–APCs. Forty-two percent of ASC surgical volume in 2019 comprised procedures that are in C–APCs under the OPPS, and about 72 percent of HCPCS codes for surgical procedures that are covered under the ASC payment system in 2020 are in C–APCs under the OPPS. The Commission supports the use of C–APCs in the OPPS and encourages CMS to implement them in the ASC payment system because the greater packaging of ancillary items that occurs with C–APCs gives providers an incentive to furnish care more efficiently.

Although we do not have recent ASC cost data that would allow us to quantify cost differences between settings, evidence suggests that ASCs are a lower cost setting than HOPDs. Studies that used data from the National Survey of Ambulatory Surgery found that the average time for ambulatory surgical visits for Medicare patients was 25 percent to 39 percent lower in ASCs than in HOPDs, which likely contributes to lower costs in ASCs (Hair et al. 2012, Munnich and Parente 2014). An additional study using data from a facility that has both an ASC and a hospital found that surgeries took 17 percent less time in the ASC (Trentman et al. 2010). Beneficiaries who are sicker may require more time to treat, and the studies that accounted for differences in health status between patients treated in ASCs and those in HOPDs generally estimated a somewhat smaller differential in average surgical time between ASCs and HOPDs. This finding is consistent with the Commission's analyses that found that, on average, beneficiaries receiving surgical services in HOPDs are not as healthy as beneficiaries receiving those services in ASCs, as indicated by risk scores from the CMS hierarchical condition categories risk adjustment model (Medicare Payment Advisory Commission 2017).

Although Medicare spending on services provided in ASCs has been increasing, ASCs represent only about 1 percent of total Medicare fee-for-service (FFS) spending. The small role of ASCs in total spending has likely contributed to the fact that little is known about the effect of the coronavirus public health emergency (PHE) on the ASC industry. To the extent that information is available, we include the effects of the coronavirus PHE on ASCs throughout our discussion of payment adequacy in the ASC sector (see text box).²

Overview of the effects of the coronavirus pandemic on the ASC sector

ince early 2020, the coronavirus pandemic and associated public health emergency (PHE) has had tragic effects on beneficiaries' health. It also has had material effects on providers' patient volume, revenues, and costs. The impacts of COVID-19 have varied considerably both geographically and over time, and it is not clear when or whether the full effects of the pandemic's effects will end. Information about the effect of the PHE on ambulatory surgical centers (ASCs) is limited, but the information we have suggests that ASC surgical volume dropped sharply in March and April of 2020 but rebounded by June. It is not clear the extent to which the volume in the ASC industry has returned to its previous level, but limited claims data and information from financial statements of large health care management companies that hold many ASCs suggest that volume has returned to 80 percent to 90 percent of its prepandemic level. The health care management companies also received federal grants that offset lost revenue; for example, United Surgical Partners received \$49 million and Surgery Partners received \$48 million in grants. While ASCs' surgical volume appears to have rebounded to some degree, uncertainty remains as to whether the pandemic will continue to affect patient care patterns, ASC volume, and ASC financial performance in 2021

and 2022. Some costs related to preventing the spread of coronavirus among ASC patients and staff may be ongoing. As applicable, more details about the impact of COVID-19 on ASCs can be found throughout this chapter.

In this chapter, we recommend payment rate updates for 2022. Because of standard data lags, the most recent complete data we have are from 2019 for most payment adequacy indicators. We use available data as well as changes in payment policy to make payment recommendations for 2022. To the extent that the effects of the coronavirus PHE are temporary or vary significantly across individual ASCs, they are best addressed through targeted temporary funding policies rather than a permanent change to all providers' payment rates in 2022 and future years. Nevertheless, for each payment adequacy indicator in this chapter, we discuss whether the effects of the coronavirus PHE on those indicators will more likely be temporary or permanent. Only permanent effects of the pandemic are factored into recommended permanent changes in Medicare payment rates. (For an overview of why our payment adequacy framework takes account of the PHE, see Chapter 2). ■

Are Medicare payments adequate in 2021?

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To address whether payments for the current year (2021) are adequate to cover the costs of efficient providers and how much payments should change in the coming year (2022), we examine several measures of payment adequacy. We evaluate beneficiaries' access to care by examining the supply of ASC facilities and changes over time in the volume of services provided, providers' access to capital, and changes in ASC revenue from the Medicare program. However, our assessment of quality of care (another measure of payment adequacy) is limited and does not fully represent quality in ASCs. Our available indicators of payment adequacy are positive.

Beneficiaries' access to care: Supply of ASCs and volume of services indicate adequate access

Beneficiaries have adequate access to care in ASCs. The number of ASC facilities has increased, and the volume of services provided to Medicare beneficiaries in ASCs also has increased. Access to ASCs may be beneficial

Number of ASCs and operating rooms grew, 2014-2019

	2014			Average annual percent change		
		2018	2019	2014-2018	2018-2019	
Total number of ASCs	5,301	5,674	5,816	1.7%	2.5%	
New	191	230	226	N/A	N/A	
Closed or merged	126	103	84	N/A	N/A	
Total number of ORs	16,544	17,376	17,848	1.2	2.7	
New	514	660	676	N/A	N/A	
Closed or merged	347	271	204	N/A	N/A	

Note: ASC (ambulatory surgical center), N/A (not applicable), OR (operating room). The average annual percentage change data for the "new" and "closed or merged" categories are shown as "N/A" because they are outside the purpose of this table, which is to show the growth in the total number of ASCs and ORs.

Source: MedPAC analysis of Provider of Services file from CMS, 2020.

to patients and physicians compared with HOPDs, the provider type most similar to ASCs. For patients, ASCs can offer more convenient locations, shorter waiting times, and easier scheduling relative to HOPDs. ASCs offer physicians more control over their work environment and specialized staff. However, these same qualities could lead to overuse of surgical procedures.

Capacity and supply of providers: Number of ASCs is increasing

From 2018 to 2019, the number of ASCs increased 2.5 percent to 5,816 ASCs (Table 5-1). This annual growth rate was faster than growth in the period from 2014 to 2018, when the number of ASCs increased, on average, 1.7 percent per year. In 2019, 226 new ASCs opened, while 84 ASCs closed or merged with other facilities. The number of ASCs that closed or merged had been consistent from 2015 through 2018 (between 100 and 110 each year, data not shown), but a smaller number of ASCs closed in 2019. Finally, the number of ASCs that billed Medicare for at least one surgical service in 2019 was 5,143 (data not shown).

From 2014 to 2019, the number of ASCs has been increasing at a faster rate than preceding years. For example, the rate of growth from 2014 through 2019 was

1.9 percent but only 0.8 percent from 2010 through 2014 (data not shown). The increased growth in the number of ASCs in more recent years is attributable, at least in part, to a change in payment policy for newly acquired ASCs under which health care management companies, such as Tenet and HCA, continued investments in outpatient surgical capacity (Oliver 2020). Companies that acquire ASCs have the option of maintaining the facility as an ASC or converting it to an off-campus provider-based department (PBD) of a hospital (most likely an outpatient surgery department).

However, in response to provisions in Section 603 of the Bipartisan Budget Act of 2015, CMS in 2017 aligned payment rates for all services provided in newly acquired facilities established as off-campus PBDs with PFS payment rates, which are typically lower than ASC rates. Therefore, beginning in 2017, there has been little incentive for a hospital system to acquire an ASC and convert it to an off-campus PBD. Instead, it is now more financially beneficial to maintain the facility as an ASC.

The number of operating rooms (ORs) in ASCs is also growing (Table 5-1). In 2019, there were more than 17,800 ORs in ASCs, or an average of 3.1 per facility. From 2014 to 2018, the total number of ASC ORs increased 1.2 percent per year, a slower rate than the growth in the number of ASCs over the same period (1.7 percent per year). However, from 2018 to 2019, the number of ORs in ASCs increased by about 2.7 percent, slightly higher than the growth rate in the number of ASCs during this period, which suggests the size of ASCs decreased from 2014 to 2018 but increased slightly from 2018 to 2019.

Consistent with previous years, most ASCs in 2019 were for profit (94.9 percent) and located in urban (including urban and suburban) areas (93.3 percent) (Table 5-2). ASCs that were new in 2019 were still likely to be for profit, but compared with existing ASCs, new ASCs were slightly more likely to be nonprofit and urban. Beneficiaries who do not live near an ASC can obtain ambulatory surgical services in HOPDs and, in some cases, physicians' offices. Beneficiaries who live in rural areas can travel to urban areas to receive care in ASCs.

Geographic distribution of ASCs is uneven

In addition to ASCs locating more in urban than rural areas, the concentration of ASCs varies widely among states. In 2019, Maryland had the most ASCs per Medicare beneficiary (38 ASCs per 100,000 Part B beneficiaries), followed by Georgia, Alaska, and New Jersey (23 to 18 ASCs per 100,000 Part B beneficiaries) (Figure 5-1, p. 144).³ Kentucky, the District of Columbia, West Virginia, and Vermont had the fewest ASCs per beneficiary (fewer than 4 ASCs per 100,000 beneficiaries). The number of ASCs in Vermont increased from 1 to 2 in 2019, making the number of ASCs per 100,000 beneficiaries in Vermont greater than 1 for the first time since we started tracking this measure.

Even though beneficiaries can receive largely the same services in HOPDs if an ASC is not located near them, the small number of ASCs in some states and rural areas raises concerns about beneficiaries' access to ambulatory surgical services if payment rates for surgical services provided in HOPDs are set at the level in the ASC payment system (site-neutral payments). In its June 2013 report, the Commission identified surgical services that are viable for site-neutral payments between the ASC payment system and the OPPS (Medicare Payment Advisory Commission 2013a). If implemented, this policy would lower payment for some services in HOPDs. Hospitals could respond by reducing their provision of these services. In areas that have low ASC concentration, site-neutral payments could make it more difficult for beneficiaries to access ambulatory surgical services.



Most ASCs are for profit and urban

	ASCs that were:					
Type of ASC	Open in 2014	Open in 2019	New in 2019			
For profit	94.9%	94.9%	95.6%			
Nonprofit	3.6	3.7	4.0			
Government	1.5	1.3	0.4			
Urban	92.9	93.3	93.8			
Rural	7.1	6.7	6.2			

Note: ASC (ambulatory surgical center). Percentages may not sum to 100 due to rounding.

Source: MedPAC analysis of Provider of Services file from CMS, 2020.

We found that rural beneficiaries—defined as those who live outside metropolitan statistical areas (MSAs) are less likely to receive care in an ASC than urban beneficiaries—defined as those living in an MSA. In 2019, 7.4 percent of rural beneficiaries received care in an ASC compared with 10.8 percent of urban beneficiaries.

Specialization of ASCs largely unchanged, some growth in pain management

In 2019, the majority of ASCs that billed Medicare specialized in a single clinical area, of which gastroenterology (21 percent of ASCs) and ophthalmology (21 percent of ASCs) were the most common. Overall, in 2019, 65 percent of ASCs were single-specialty facilities and 35 percent were multispecialty facilities (Table 5-3, p. 145).⁴ In 2019, multispecialty ASCs most commonly focused on two specialties: pain management and orthopedic services or gastroenterology and ophthalmology (8 percent of all ASCs). From 2014 to 2019, ASCs specializing in pain management services grew most rapidly.

Continued growth in the number of ASCs suggests that Medicare's payment rates have been adequate. Other factors also have likely influenced the long-term growth in the number of ASCs:



- Changes in clinical practice and health care technology have expanded the provision of surgical procedures in ambulatory settings. There is potential for this trend to continue as momentum grows for knee and hip arthroplasty (knee and hip replacement) to be done in ambulatory settings.
- ASCs can offer patients greater convenience than HOPDs, such as the ability to schedule surgery more quickly.
- For most procedures covered under the ASC payment system, beneficiaries' coinsurance is lower in ASCs than in HOPDs.⁵

- Physicians have greater autonomy in ASCs than in HOPDs, which enables them to design customized surgical environments and hire specialized staff.
- Physicians who invest in ASCs and perform surgeries on their patients in those ASCs can increase their revenue by receiving a share of ASC facility payments. The federal anti-self-referral law (also known as the Stark Law) does not apply to ASC services.
- Because physicians are able to perform more procedures in ASCs than in HOPDs in the same amount of time, they can earn more revenue from professional fees.

Specialization of ASCs billing Medicare in 2014 and 2019

	201	2019			
Type of ASC	Number of ASCs	Share of all ASCs	Number of ASCs	Share of all ASCs	
Single specialty	2,978	62%	3,356	65%	
Gastroenterology	1,059	22	1,082	21	
Ophthalmology	1,049	22	1,057	21	
Pain management	364	8	619	12	
Dermatology	201	4	209	4	
Urology	129	3	134	3	
Cardiology	12	0	88	2	
Podiatry	98	2	83	2	
Orthopedics/musculoskeletal	30	1	32	1	
Respiratory	19	0	26	1	
OB/GYN	10	0	13	0	
Neurology	5	0	6	0	
Other	2	0	7	0	
Multispecialty	1,862	38	1,787	35	
More than 2 specialties	1,460	29	1,283	25	
Pain management and orthopedics	163	3	195	4	
Gastroenterology and ophthalmology	167	3	194	4	
Other with 2 specialties	72	1	115	2	
Total	4,840	100	5,143	100	

Note: ASC (ambulatory surgical center), OB/GYN (obstetrics and gynecology). A "single-specialty ASC" is defined as one with more than 67 percent of its Medicare claims in one clinical specialty. A "multispecialty ASC" is defined as one with more than 67 percent of its Medicare claims in more than one clinical specialty. ASCs included in this analysis are limited to those in the 50 states and the District of Columbia with a paid Medicare claim in 2019. Columns containing the share of all ASCs may not sum to 100 percent due to rounding. The share of single-specialty ASCs in 2019 does not sum to the listed total of 65 percent and the share of multispecialty ASCs in 2014 does not sum to the listed total of 38 percent due to rounding.

Source: MedPAC analysis of Medicare carrier file claims, 2019.

• Increased interest across the health care industry in value-based care and the provision of care in lower cost settings has increased the strategic investment interest of hospital systems, insurers, and private equity firms in ASCs (Barclays 2018, Japsen 2018).

Number of beneficiaries treated and volume of services per beneficiary increased from 2018 to 2019

The volume of ASC surgical procedures per FFS beneficiary increased from 2018 to 2019. Also, the number of FFS beneficiaries treated in ASCs and the volume of ASC surgical services per FFS beneficiary increased from 2018 to 2019. Because ASC services are covered under Part B, we limited our analysis to FFS beneficiaries who have Part B coverage. The volume of services per 1,000 FFS beneficiaries increased by an average of 2.1 percent per year from 2014 through 2018 and increased by 2.7 percent in 2019 (Table 5-4, p. 146).

In addition, from 2014 through 2018, the number of FFS beneficiaries who received ASC services grew an average 1.4 percent per year and by 0.9 percent in 2019 (data not shown). Also, the number of services per beneficiary receiving care in ASCs from 2014 through 2018 increased at an average annual rate of 0.9 percent and by 1.0 percent in 2019 (data not shown).

TABLE 5-4

Volume of ASC services per FFS beneficiary increased in 2019

	2014	2018	2019	2014-2018	2018-2019		
Volume of services (in millions)	6.0	6.6	6.7	2.3%	1.8%		
Volume per 1,000 FFS beneficiaries	180.5	196.3	201.6	2.1	2.7		

Note: ASC (ambulatory surgical center), FFS (fee-for-service). The volume of services for 2014 and 2018 have been modified to reflect the volume of services covered under the ASC payment system in 2019 that was provided in those years.

Source: MedPAC analysis of physician/supplier standard analytic files from CMS, 2014-2019.

The coronavirus PHE undoubtedly depressed ASC volume among Medicare beneficiaries in 2020, but data limitations prevent us from providing a precise estimate of this effect. However, we used ASC claims from the first 6 months of 2020 to evaluate how volume of the 29 most frequently provided services in ASCs changed each month. These 29 services constituted about 75 percent of the total ASC volume in 2019. Our analysis of these claims indicates that volume of these services in April 2020 was only 11 percent of the volume in January 2020, before the PHE began. After April 2020, volume of these services strongly rebounded, and in June 2020 the volume of these services was 87 percent of the volume in January 2020.

Services that have historically contributed the most to overall ASC volume continued to be a large share of the total in 2019. For example, the HCPCS code for cataract removal with intraocular lens insertion (HCPCS 66984) had the highest volume in both 2014 and 2019, accounting for 18.9 percent of the total in 2014 and 18.5 percent in 2019. Moreover, 19 of the 20 most frequently provided HCPCS codes in 2014 were among the 20 most frequently provided in 2019 (Table 5-5). These services made up about 71 percent of ASC Medicare volume in 2014 and about 69 percent in 2019.

A potential concern about the services most frequently provided in ASCs is the extent to which they are unnecessary or low value, such as spinal injections and other pain management services (Pinto et al. 2012). We have found that 7 of the 20 procedures listed in Table 5-5 were pain management services. Moreover, the procedures with the second-highest revenue for ASCs in 2019 were insertion or replacement of spinal neurostimulators. Volume for these procedures increased sharply from about 2,600 in 2014 to 12,000 in 2019 (data not shown).

Volume of outpatient surgical procedures has been increasing at similar percentages in ASCs and HOPDs

In 2019, volume per FFS beneficiary of surgical procedures covered under the ASC payment system increased by 2.7 percent in ASCs and by 3.0 percent in HOPDs. From 2014 through 2018, average annual growth in volume per FFS beneficiary of surgical services covered by the ASC payment system was 2.1 percent in ASCs compared with 1.9 percent in HOPDs.

Maintaining or expanding access to ASCs can be beneficial for patients and Medicare

Maintaining beneficiaries' access to ASCs has some benefits because services provided in this setting are less costly to Medicare and beneficiaries than services delivered in HOPDs.⁶ Medicare payment rates for surgical services performed in HOPDs are almost twice as high as in ASCs. For example, the payment rate in 2021 for cataract surgery with intraocular lens insertion (the service most frequently provided in ASCs) is \$2,079 in HOPDs compared with \$1,045 in ASCs. The lower payment rate in ASCs for this service has been financially beneficial to Medicare and beneficiaries. Other studies similarly find that ASCs are less costly than HOPDs in the Medicare and non-Medicare context and that price growth at ASCs has been slower than price growth at HOPDs (Carey 2015, Robinson et al. 2015). TABLE 5-5

The 20 most frequently provided ASC services in 2019 were similar to those provided in 2014

	2014	2019		
Surgical service	Percent of volume	Rank	Percent of volume	Rank
Cataract surgery w/ IOL insert, 1 stage	18.9%	1	18.5%	1
Upper GI endoscopy, biopsy	8.5	2	7.8	2
Colonoscopy and biopsy	6.7	3	6.8	3
Lesion removal colonoscopy (snare technique)	5.4	4	6.5	4
After cataract laser surgery	4.5	5	4.1	6
Inject foramen epidural: lumbar, sacral	4.5	6	4.6	5
Injection spine: lumbar, sacral (caudal)	3.4	7	2.5	8
Inject paravertebral: lumbar, sacral	2.8	8	3.4	7
Diagnostic colonoscopy	2.6	9	1.6	11
Colorectal screen, high-risk individual	2.1	10	2.1	9
Colorectal screen, not high-risk individual	2.0	11	1.5	12
Cataract surgery, complex	1.6	12	1.4	14
Injection procedure for sacroiliac joint, anesthetic	1.1	14	1.4	13
Upper GI endoscopy, diagnosis	1.1	14	0.9	19
Destroy lumbar/sacral facet joint	1.1	15	1.7	10
Inject spine, cervical or thoracic	1.0	16	1.0	17
Revision of upper eyelid	1.0	17	0.9	18
Cystoscopy	1.0	18	1.0	16
Inject paravertebral: cervical or thoracic	0.9	19	1.2	15
Lesion remove colonoscopy, hot biopsy forceps	0.9	20	0.4	34
Total	71.0		69.3	
Total volume for all ASC services	5,988,067		6,689,177	

Note: ASC (ambulatory surgical center), IOL (intraocular lens), GI (gastrointestinal). In both percentage columns, the numbers do not sum to the "Total" because of rounding.

Source: MedPAC analysis of physician/supplier standard analytic files from 2014 and 2019.

Medicare program spending and overall beneficiary cost sharing could be reduced if medical professionals provided more surgical services in ASCs than HOPDs or if Medicare reduced HOPD payment rates to the level of ASC payment rates. This issue is pertinent to the ASC sector because among even the most frequently provided services in ASCs, substantial volume is provided in HOPDs. For example, medical professionals performed 403,000 Medicare-covered cataract surgeries with intraocular lens insertion in HOPDs in 2019, which was 25 percent of the total volume for this service. However, most ASCs have some degree of physician ownership, and as owners of a business, these physicians have an incentive to perform more surgical services than if they provided outpatient surgery only in HOPDs they do not own. It is not clear whether the physician owners of ASCs act on this incentive. The most recent studies on the effect of ASC physician ownership are somewhat dated, but these studies offer limited evidence that physicians who have an ownership stake in an ASC perform a higher volume of certain procedures than physicians who do not



Quality measures used in the Medicare ASC Quality Reporting Program

		Required in:		
Descr	iption of quality measure	2020	2024	
ASC-1	: Patient burn	Yesa	No	
ASC-2	: Patient fall	Yesa	No	
ASC-3	: Wrong site, wrong side, wrong patient, wrong procedure, wrong implant	Yesa	No	
ASC-4	: Hospital transfer/admission	Yesa	No	
ASC-9	Endoscopy/polyp surveillance: Appropriate follow-up interval for normal colonoscopy in average-risk patients	Yes	Yes	
ASC-1	0: Endoscopy/polyp surveillance: Colonoscopy interval for patients with a history of adenomatous polyps—avoid inappropriate use	Yes ^b	No	
ASC-1	1: Cataracts: Improvement in patient's visual function within 90 days following cataract surgery	Voluntary	Voluntary	
ASC-1	2: Facility seven-day risk standardized hospital visit rate after outpatient colonoscopy	Yes	Yes	
ASC-1	3: Normothermia outcome: Percentage of patients under anesthesia who are normothermic within 15 minutes of arrival in the post-anesthesia care unit	Yes	Yes	
ASC-1	4: Unplanned anterior vitrectomy: Percentage of cataract surgery patients who have an unplanned removal of the vitreous	Yes	Yes	
ASC-1	5: Five patient experience measures from the Outpatient and Ambulatory Surgery Survey Consumer Assessment of Healthcare Providers and Systems (CAHPS [®]):			
	ASC–15a: About facilities and staff			
	ASC-15b: Communication about procedure			
	ASC–15c: Preparation for discharge and recovery			
	ASC-15d: Overall rating of facility			
	ASC-15e: Recommendation of facility	No ^c	No	
ASC-1	7: Hospital visits after orthopedic ASC procedures	No ^d	Yes	
ASC-1	8: Hospital visits after urology ASC procedures	No ^d	Yes	
ASC-1	9: Hospital visits after general surgery ASC procedures	No ^e	Yes	
Note:	ASC (ambulatory surgical center). ^a Retained in the ASC Quality Reporting (ASCQR) Program, but data collection was suspended by CMS starting in 201 ^b Discontinued by CMS from the ASCQR Program beginning in 2021. ^c CMS has delayed the implementation of this measure indefinitely. ^d CMS will activate this measure in 2022. ^e CMS will activate this measure in 2024.	9.		

Source: Final rule for outpatient prospective payment system and ambulatory surgical center payment system, 2020.

(Hollingsworth et al. 2010, Mitchell 2010, Strope et al. 2009).

Other studies suggest that the presence of an ASC in a market is associated with a higher volume of outpatient surgical procedures (Hollenbeck et al. 2015, Hollenbeck et al. 2014, Hollingsworth et al. 2011, Koenig and Gu 2013). Although none of these studies assessed the

appropriateness of the additional procedures, they suggest that the presence of ASCs might increase overall surgical volume. It is plausible, based on the results of these studies, that reductions in Medicare spending due to lower payment rates for ASCs relative to HOPDs could be partially offset by a higher overall number of surgical procedures. Research suggests that physician ownership has also increased use in health care sectors other than ASCs. Studies found that physician ownership of advanced imaging equipment has resulted in higher use of that equipment relative to physician nonowners (Hughes et al. 2010, Shreibati and Baker 2011). However, another study refuted those results, finding that physician ownership of advanced imaging equipment had no effect on use of that equipment (Ohsfeldt et al. 2015). A study of physicianowned cardiac hospitals suggests that markets with such hospitals had slightly higher growth rates in profitable cardiac surgeries relative to markets that did not have one of those hospitals (Stensland and Winter 2006).

Another setting that has a substantial overlap of services with ASCs is physician offices. In general, Medicare payment rates are higher in ASCs than in physician offices for the same procedure. Services that are frequently provided in both ASCs and physician offices include cystoscopy, pain management, and, to a lesser extent, cataract procedures. Cystoscopy is performed much more frequently in offices than in ASCs, pain management is about equally common in these two settings, and cataract procedures are done more frequently in ASCs than in offices.

Quality of care: Improvement in performance on ASC quality measures appears to have plateaued

ASC-reported quality data demonstrated modest improvement from 2013 to 2017 and largely plateaued from 2017 to 2018. CMS established the ASC Quality Reporting (ASCQR) Program in 2012 (Centers for Medicare & Medicaid Services 2011). Under this system, ASCs that do not successfully submit quality measurement data have their payment update for that year reduced by 2 percentage points. Actual performance on these quality measures does not affect an ASC's payments; CMS requires ASCs only to submit the data to receive a full update. The Commission has recommended a valuebased purchasing program for ASCs that would reward high-performing providers and penalize low-performing providers (see text box, p. 152).

The quality measures for which ASCs submit data continue to evolve. In the last two years, CMS made several revisions to the initial ASCQR measure set, which resulted in CMS measuring ASC quality based on nine measures (plus one voluntary measure) for 2020 and seven measures (plus one voluntary measure) for 2024 (Table 5-6). In recent years, CMS has chosen to discontinue or delay several measures that were considered "topped out" (meaning full or nearly full compliance with these measures has been reached), demonstrated less utility, or were not ready for use, including the discontinuation of the current adverse event measures (ASC–1 through ASC–4) and the delay of measures of patient experience.⁷ For 2022, CMS will implement two new claims-based measures of beneficiaries' visits to a hospital subsequent to an ASC orthopedic or urology procedure (ASC–17 and ASC–18, respectively). For 2024, CMS will implement a new claims-based measure of beneficiaries' visits to a hospital subsequent to general surgery procedures (ASC–19).

Results from reported ASC quality data

Data reported by ASCs for 2013 to 2018 suggest improvement in ASC quality of care from 2013 to 2017, but mixed results from 2017 to 2018 (Table 5-7, p. 150). For ASC-1 through ASC-4, it was difficult to precisely determine how ASC performance changed from 2017 to 2018 because it was not clear where to set the cutoff for outlier values to exclude from our analysis. We chose to exclude observations higher than 30 percent. Among the eight quality measures for which CMS made data available for both 2017 and 2018, performance improved slightly on two measures, stayed about the same on three measures, and declined slightly on three measures. For the four adverse event measures, the data show consistently low levels of these events in each of the five years. Also, the share of ASCs reporting zero adverse events increased for three of these measures and stayed at the same level for one of these measures. For example, from 2013 to 2018, the share of ASCs without any patient burns increased from 88 percent to 93 percent, and the share of ASCs without any patient falls increased from 91 percent to 94 percent (data not shown). However, from 2017 to 2018, the average share of patients experiencing falls increased slightly from 0.08 percent to 0.09 percent.

In addition to the adverse events measures, other ASCQR measures demonstrated improvement. For example, from 2014 to 2018, measures of the surveillance and follow-up of patients treated for certain gastroenterology procedures and the hospitalization rate within seven days of colonoscopy improved and had generally high levels of performance. However, performance on two of these

TABLE 5-7

ASC quality measure levels, 2013-2018

Mean percent among ASCs

	Mean percent among ASCs					
ASC quality measure	2013	2014	2015	2016	2017	2018
ASC–1: Share of patients suffering burns	0.36%	0.25%	0.18%	0.18%	0.18%	0.17%
ASC-2: Share of patients suffering falls	0.15	0.10	0.11	0.08	0.08	0.09
ASC-3: Share of patients suffering a "wrong" event	0.03	0.03	0.03	0.02	0.02	0.02
ASC-4: Share of patients transferred to a hospital	0.51	0.45	0.39	0.36	0.35	0.33
ASC–9: Share of average risk patients with appropriate endoscopy/polyp surveillance		76	80	81	83	83
ASC–10: Share of patients with polyp history with appropriate endoscopy/polyp surveillance		79	79	80	81	80
ASC–11: Share of patients with vision improvement 90 days after cataract surgery			96	96	96	94
ASC–12: 7-day risk standardized hospital visit rate after outpatient colonoscopy*				1.3	1.2	1.2

Note: ASC (ambulatory surgical center). For measures ASC-1, ASC-2, ASC-3, and ASC-4, we removed from this analysis ASCs that reported that more than 30 percent of patients had one of these events.

*CMS reports this measure as the rate per 1,000 colonoscopies, but we report this measure as a percentage (the rate per 100 colonoscopies).

Source: Medicare Hospital Compare data for ASCs, 2013–2018.

measures declined slightly from 2017 to 2018, share of patients with polyp history with appropriate endoscopy/ polyp surveillance (ASC–10) and share of patients with vision improvement 90 days after cataract surgery (ASC–11). Finally, room for improvement exists for measures ASC–9, ASC–10, ASC–11, and ASC–12.

We also compared the performance of ASCs with the performance of HOPDs in 2018 on the four measures from the ASCQR (ASC–9, ASC–10, ASC–11, and ASC–12) that match with measures in the Hospital Outpatient Quality Reporting (OQR) Program (OP–29, OP–30, OP–31, and OP–32) (the data from the OQR are not shown). The data indicate that ASCs performed better, on average, on one measure: 7-day risk standardized hospital visit rate after outpatient colonoscopy (1.2 percent in ASCs and 1.6 percent in HOPDs). Conversely, HOPDs performed better than ASCs on three measures: share of average risk patients with appropriate endoscopy/polyp surveillance

(89 percent vs. 83 percent in ASCs); share of patients with polyp history with appropriate endoscopy/polyp surveillance (92 percent vs. 80 percent in ASCs); and share of patients with vision improvement 90 days after cataract surgery (98 percent vs. 94 percent in ASCs).

CMS should continue to refine ASC quality measures

The Commission asserts CMS should continue to improve the ASCQR by moving toward more CMS-calculated claims-based outcome measures that apply to all ASCs. In addition, CMS should synchronize ASCQR measures with measures included in the Hospital OQR Program to facilitate comparisons between ASCs and HOPDs. The Commission commends CMS on its decisions to discontinue a measure in 2021 (ASC–10: Endoscopy/ polyp surveillance, colonoscopy interval for patients with a history of adenomatous polyps) because cost of collection exceeds the benefit and to add the three claims-based unplanned hospitalization measures by 2024. However, the Commission maintains concern about three issues related to the ASCQR:

- The four ASCQR measures that are claims based and measure clinical outcomes (ASC-12, ASC-17, ASC-18, and ASC-19) exclude many services provided at ASCs, such as eye procedures and pain management. Therefore, CMS could improve the ASCQR Program by including more claims-based measures that assess clinical outcomes that apply to the various specialties practiced at ASCs. CMS has made an improvement on this issue by adding a measure for payment determination in 2024, ASC-19: facility-level hospital visits within 7 days after general surgery procedures performed at ambulatory surgical centers. The general surgery procedures included in this measure are abdominal, alimentary tract, skin/soft tissue, wound, and varicose vein stripping. We applaud CMS's decision to add this measure to the ASCQR. However, the procedures included in this measure accounted for just 3.3 percent of ASC surgical procedures provided to FFS Medicare patients in 2019, so CMS may need to add more measures to further address this issue.
- CMS's delay of the Consumer Assessment of Healthcare Providers and Systems[®] (CAHPS[®]) patient experience survey quality data excludes an important part of assessing quality of care.⁸ Among the Commission's quality measurement principles is that quality programs include patient experience measures (Medicare Payment Advisory Commission 2018b).
 CAHPS is the only survey in the ASCQR Program that asks patients about their experience.
- ASCQR measures should be further synchronized with OQR measures to facilitate comparison across ASCs and HOPDs. For 2021, the ASCQR and the OQR possess four common quality measures that pertain to cataract procedures, colonoscopy procedures, and patient assessments. CMS should consider further expanding the overlap of the ASCQR and OQR, relying on either measures of general surgical procedures or measures of specific surgical procedures common to both settings. For example, CMS could consider implementing OQR measure OP–36 (the number of hospital visits after any outpatient surgery) within the ASCQR,

or implementing ASCQR measures ASC–17 and ASC–18 (the number of hospital visits following orthopedic and urology procedures, respectively) within the OQR. In addition, the previously mentioned delay in implementing the CAHPS patient experience measures affects both the ASCQR and OQR and impedes the comparison of ASCs and HOPDs.

CMS should develop other quality measures

Because of the concerns cited above and the potential value of clinical outcome measures that apply to all ASCs, we believe CMS could consider developing new ASC quality measures covering any or all three following areas:

- The share of Medicare beneficiaries discharged from ASCs who have subsequent unplanned hospital visits. CMS has already begun to implement these measures for certain specialties through ASC-12, ASC-17, ASC-18, and ASC-19, but CMS has not developed these measures for some specialty areas or individual procedures that are common to ASCs, such as pain management.
- Surgical site infections (SSIs) occurring at ASCs for the ASCOR Program. Researchers have found that lapses in infection control were common among a sample of ASCs in three states (Schaefer et al. 2010). The Hospital Inpatient Quality Reporting Program includes an SSI measure that applies primarily to inpatient procedures. Although CMS has considered an SSI measure for ASCs in the past (Centers for Medicare & Medicaid Services 2011), it is not currently working to develop one (Centers for Medicare & Medicaid Services 2016). In general, an SSI measure could be used to track infection rates for ASCs and identify quality improvement opportunities for ambulatory surgeries conducted in HOPDs and ASCs. In addition, measuring SSI rates could encourage providers to collaborate and better coordinate care for ambulatory surgery patients.
- Specialty-specific clinical guidelines to assess the appropriateness of specific services provided in ASCs. While the ASCQR currently includes two ASC-reported colonoscopy measures that assess appropriate follow-up care, CMS could consider claims-based measures that assess appropriateness. For example, current American Cancer Society guidelines state that patients over the age of 85 should no longer

Creating a value-based purchasing program for ambulatory surgical centers

In 2012, the Commission recommended that the Congress authorize and CMS implement a value-based purchasing (VBP) program for ambulatory surgical centers (ASCs). We restate the recommendation:

The Congress should direct the Secretary to implement a value-based purchasing program for ambulatory surgical center services no later than 2016.

A VBP would reward high-performing providers and penalize low-performing providers (Medicare Payment Advisory Commission 2012).⁹

CMS established a quality reporting program for ASCs in 2012. However, Medicare payments to ASCs are not adjusted based on how they perform on quality measures, only on whether they report the measures. The Commission believes that high-performing ASCs should be rewarded and low-performing facilities should be penalized through the payment system.

Consistent with the Commission's overall position on Medicare quality measurement, an ASC VBP program should incorporate measures that are patient-oriented, encourage coordination across providers and time, and promote change in the delivery system. The ASC VBP should include outcomes, patient experience, and value measures (a value measure would address services that are costly but of low value). Also, quality measurement should not be burdensome for providers. ASCs can choose to use more granular measures to manage their own quality improvement.

An ASC VBP should give rewards based on clear, absolute, and prospectively set performance targets (as opposed to "tournament models," which require that some providers gain while others lose). The Medicare program should account for differences in a provider's population, including social risk factors. Because adjusting results for social risk factors can mask disparities in clinical performance, Medicare should account for social risk factors by directly adjusting payment through peer grouping, under which benchmarks for achievement are group specific, and each provider is compared with its peers (defined as providers whose patient populations are similar in terms of their social risk factors). In addition, funding for VBP incentive payments should come from existing Medicare spending for ASC services. Initially, funding for the incentive payments should be set at 1 percent to 2 percent of aggregate ASC payments. The size of this pool should be expanded gradually as more measures are developed and ASCs become more familiar with the program. (The Commission's March 2016 report to the Congress provides more detail about our recommendation to CMS about an ASC VBP program (Medicare Payment Advisory Commission 2016)). ■

receive colorectal cancer screening (American Cancer Society 2018). Using these guidelines, a new measure could identify ASCs' share of colonoscopy cases for beneficiaries over age 85. CMS could consider similar appropriateness measures for certain procedures that have become more common in ASCs in recent years or for which concerns about appropriate use have been suggested, such as spinal injections or certain orthopedic procedures.

ASCs' access to capital: Growth in number of ASCs suggests adequate access

Owners of ASCs require capital to establish new facilities and upgrade existing ones. The change in the number of ASCs is the best available indicator of ASCs' ability to obtain capital. The number of ASCs increased in 2019 by 2.5 percent, faster than in previous years (Table 5-1, p. 142). However, Medicare accounts for a small share—perhaps 20 percent—of ASCs' overall revenue, so factors other than Medicare payments could have a larger

Medicare payments to ASCs grew, 2014–2019 Average annual change 2014 2018 2019 2014-2018 2018-2019 Medicare payments (in billions of dollars) \$3.7 \$4.9 \$5.2 7.3% 6.1% Medicare payments per FFS beneficiary \$116 \$145 \$157 5.8 8.3

ASC (ambulatory surgical center), FFS (fee-for-service). "Medicare payments" includes program spending and beneficiary cost sharing for ASC facility services. Note: Payments include spending for new-technology intraocular lenses

Source: MedPAC analysis of data from the Office of the Actuary at CMS and data from physician/supplier standard analytic files.

effect on access to capital for this sector (Medical Group Management Association 2009).

From 2015 through 2017, hospital systems, private equity firms, and insurers were involved in vertical integration efforts that included acquisitions of and investments in businesses that own and operate ASCs. More recently, these acquisitions and investments have slowed. Indeed, no large-scale transactions occurred in the ASC industry in 2019. However, the ASC industry continued to consolidate in 2019, largely through small horizontal transactions such as Gastro Health LLC acquiring Puget Sound Gastroenterology on September 23, 2019. Gastro Health made two other acquisitions in 2019 (Park 2020).

Large health care management companies also continued to acquire ASCs in 2019. The six largest of these organizations (United Surgical Partners International, AmSurg, Surgical Care Affiliates, SurgCenter Development, HCA, and Surgery Partners Holding) increased the number of ASCs they held from 1,092 to 1,152-a 5.5 percent increase (Park 2020). Smaller organizations are also involved in increasing the number of ASCs, such as the University Hospitals in Cleveland partnering with ValueHealth (a digital health company) to develop an ASC network (Dyrda 2020).

Finally, data from the annual analysis of Pennsylvania's ASCs, conducted by the Pennsylvania Health Care Cost Containment Council (PHC4), indicate that ASCs are very profitable. PHC4 found that ASCs in Pennsylvania had an average total margin (an all-payer margin that includes Medicare) of 25 percent in 2019 (Pennsylvania Health Care Cost Containment Council 2020).¹⁰

Although the various entities noted above appear to have adequate access to capital, we caution that these companies have ownership in less than 20 percent of the more than 5,800 ASCs. Consequently, the experience of these entities collectively may not reflect that of the entire ASC sector.

During the coronavirus PHE, acquisition of ASCs has continued. In December 2020, Tenet Healthcare announced that it will acquire up to 45 ASCs from SurgCenter Development for \$1.1 billion (Oliver 2020).

Medicare payments: Payments have steadily increased

In 2019, ASCs received \$5.2 billion in Medicare payments and beneficiaries' cost sharing (Table 5-8). We estimate that spending by the Medicare program was \$4.2 billion and beneficiary cost sharing was \$1.0 billion (data not shown).

Spending per FFS beneficiary increased by an average annual rate of 5.8 percent from 2014 through 2018 and by 8.3 percent in 2019 (Table 5-8). The increase in 2019 reflects a 2.1 percent increase in the ASC conversion factor, a 2.7 percent increase in per capita volume, a 2.3 percent increase in the average relative weight of ASC services, and a 1.2 percent effect from an increase in spending from 2018 to 2019 on separately paid drugs provided to Medicare beneficiaries treated in ASCs.

The effects of the coronavirus PHE on Medicare revenue in ASCs are not reflected in this analysis. The pandemic undoubtedly reduced ASCs' Medicare revenue in 2020, but how much is uncertain. Our limited information

suggests that ASC volume and revenue substantially declined in March and April of 2020, rebounded strongly in May and June of 2020, but were still below prepandemic levels. We do not yet have data that provide a reasonable estimate of the effect of the PHE on ASC volume and revenue after June 2020, but we intend to determine the effects when data become available.

How should Medicare payments change in 2022?

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Our analysis indicates that the number of ASCs has increased, beneficiaries' use of ASCs has increased, and access to capital has been adequate. Measures of ASC quality indicate that quality had been improving, but that improvement may have plateaued. Also, we have identified areas for improvement in ASC quality measurement. Our information for assessing payment adequacy, however, is limited because Medicare does not require ASCs to submit cost data, unlike other types of facilities. Since 2010, the Commission has recommended that the Congress require ASCs to submit cost data (Medicare Payment Advisory Commission 2010).

Cost data would enable the Commission to examine the growth of ASCs' costs over time and analyze Medicare payments relative to the costs of efficient providers, which would help inform our decisions about the ASC update. Cost data also are needed to examine whether an alternative input price index would be an appropriate proxy for ASC costs. As discussed in the text box about revisiting the ASC market basket index, the Commission has previously expressed concern that the price index CMS used to update the ASC conversion factor from 2010 through 2018 (the CPI–U) likely does not reflect ASCs' cost structure (Medicare Payment Advisory Commission 2010). Also, the price index that CMS is using to update the ASC conversion factor from 2019 through 2023-the hospital market basket-does not reflect ASCs' cost structure.

CMS has concluded that it needs data on ASC input costs, but to date has not required ASCs to submit cost data (Centers for Medicare & Medicaid Services 2012). CMS has requested public comment on whether the agency should collect cost data from ASCs for use in determining ASC payment rates. ASC representatives commented that they oppose a requirement for ASCs to submit formal cost reports but expressed willingness to complete surveys if doing so is not administratively burdensome (Centers for Medicare & Medicaid Services 2017).

We contend it is feasible for ASCs to provide cost information. All other facility providers submit cost data to CMS. Indeed, ASCs in Pennsylvania submit cost and revenue data annually to a state agency that uses the data to estimate margins for those ASCs (Pennsylvania Health Care Cost Containment Council 2020). We recognize that ASCs are generally small facilities that may have limited resources for collecting cost data. However, such businesses typically keep records of their costs for filing taxes and other purposes, and other facility providers that are typically small, such as home health agencies and hospices, furnish cost data to CMS.

To minimize the burden on CMS and ASCs, CMS should create a streamlined process for ASCs to track and submit a limited amount of cost data. CMS has conducted surveys of random samples of ASCs (1986 and 1994), and we believe CMS could do these surveys annually, with mandatory response. CMS could also streamline ASC cost reporting by annually collecting a set of cost variables from all ASCs that is more limited than what is collected through formal cost reports, which would require less time for ASCs to complete. Alternatively, CMS could require ASCs to submit cost data from their existing cost accounting systems, provided the definitions of their reported cost variables are consistent with CMS's definitions. The Commission does not believe that a streamlined process for collecting cost data would place a large burden on ASCs. After all, individual taxpayers complete and submit lengthy income tax forms. Therefore, the Commission sees no reason why ASCs cannot submit at least minimal cost data.

For the Commission to determine the relationship between Medicare payments and the costs of efficient ASCs, ASCs would optimally submit the following information:

- total costs for the facility;
- Medicare unallowable costs, such as entertainment, promotion, and bad debt;
- the costs of clinical staff who bill Medicare separately, such as anesthesiologists and clinical nurse anesthetists (these costs would be excluded from the facility's costs because these clinicians are paid separately under Medicare);

Revisiting the ASC market basket index

rom 2010 through 2018, CMS used the consumer price index for all urban consumers (CPI–U) as the market basket to update the conversion factor in the ambulatory surgical center (ASC) payment system. Because of our concern that the CPI-U likely does not reflect ASCs' cost structure, the Commission examined in 2010 whether an alternative market basket index would better measure changes in ASCs' input costs (Medicare Payment Advisory Commission 2010). Using data from a Government Accountability Office (GAO) survey of ASC costs in 2004, we compared the distribution of ASC costs with the distribution of hospital and physician practice costs. We found that ASCs' cost structure is different from that of hospitals and physician offices. ASCs have a much higher share of expenses for medical supplies and drugs than the other two settings, a much smaller share of employee compensation costs than hospitals, and a smaller share of all other costs (such as rent and capital costs) than physician offices. For more detail about our methods and findings, see Chapter 2C of our March 2010 report to the Congress (Medicare Payment Advisory Commission 2010).

Since our 2010 analysis, CMS has considered whether the hospital market basket (MB) or the practice expense component of the Medicare Economic Index (MEI) is a better proxy for ASC costs than the CPI–U (Centers for Medicare & Medicaid Services 2012). Both the hospital MB and the MEI reflect a different mix of inputs and, therefore, a different mix of costs from what is typical in ASCs. Most recently, CMS has decided to use the hospital MB as the basis for updating ASC payment rates from 2019 through 2023 (Centers for Medicare & Medicaid Services 2018). However, because of differences between the ASC and hospital cost structures, we find that the hospital MB is not an appropriate market basket for ASCs.

The ASC cost data from GAO used in our comparative analysis are 17 years old and do not contain information on several types of costs. Therefore, the Commission has recommended many times that the Congress require ASCs to submit new cost data to CMS (Medicare Payment Advisory Commission 2020, Medicare Payment Advisory Commission 2019, Medicare Payment Advisory Commission 2018c, Medicare Payment Advisory Commission 2015, Medicare Payment Advisory Commission 2014, Medicare Payment Advisory Commission 2013b, Medicare Payment Advisory Commission 2012, Medicare Payment Advisory Commission 2011b, Medicare Payment Advisory Commission 2010). In each of the last eight years, the Commission recommended eliminating the update to the ASC conversion factor, meaning the ASC conversion factor would not change from the previous year. CMS should use cost data to examine whether an existing Medicare price index is an appropriate proxy for ASC costs or an ASC-specific market basket should be developed. A new ASC MB could include the same types of costs that appear in the hospital MB or MEI but with different cost weights that reflect ASCs' unique cost structure.

- total charges across all payers and charges for Medicare patients (CMS could allocate total facility costs to Medicare based on Medicare's proportion of total charges); and
- total Medicare payments.

In addition, CMS would need to collect data on specific cost categories to determine an appropriate input price index for ASCs. For example, CMS would need

data on the share of ASCs' costs related to employee compensation, medical supplies, medical equipment, building expenses, and other professional expenses (such as legal, accounting, and billing services). CMS could use this information to examine ASCs' cost structure and determine whether an existing Medicare price index is an appropriate proxy for ASC costs or whether an ASCspecific market basket should be developed. CMS used the CPI-U to update the ASC conversion factor from 2010 through 2018. However, CMS has indicated that the CPI-U does not reflect ASCs' input costs. CMS made a significant regulatory change and decided to use the hospital market basket (MB) as the basis for updating the ASC conversion factor for a five-year period—2019 through 2023. CMS used the hospital MB to increase the ASC conversion factor by 2.1 percent in 2019 and by 2.6 percent in 2020. For 2021, the update to the ASC conversion factor is 2.4 percent, which is based on a projected percent increase in the hospital MB minus a 0.0 percent reduction for multifactor productivity growth, as mandated by the Affordable Care Act. CMS based its decision to use the hospital MB in place of the CPI-U on concerns that the differences in payment rates between the ASC payment system and the OPPS have caused a shift of care from ASCs to HOPDs. CMS believes that using the same update mechanism for both ASCs and HOPDs could "encourage the migration of services from the hospital setting to the ASC setting and increase the presence of ASCs in health care markets or geographic areas where previously there were none or few, thus promoting better beneficiary access to care" (Centers for Medicare & Medicaid Services 2018). However, the growth in surgical volume per FFS beneficiary was higher in ASCs than in HOPDs in both 2017 and 2018, which suggests that services may have been shifting from HOPDs to ASCs without use of the hospital MB to update payments. Also, the growth in surgical volume was similar in ASCs and HOPDs in 2019, the first year that CMS used the hospital MB to update ASC payment rates. The increase in the rate of growth in ASCs relative to HOPDs may have been due to the provision in Section 603 of the Bipartisan Budget Act of 2015, which largely requires that ASCs acquired by hospitals will be paid at the relatively low payment rates in the PFS if the hospitals convert them to off-campus outpatient departments, while they would continue to be paid at the ASC rates if the hospitals keep them as ASCs.

During the five-year period of using the hospital MB, CMS states that it will:

- Assess whether there is a migration of services from hospitals to ASCs.
- Assess the possibility of working with stakeholders to collect cost data from ASCs in a minimally burdensome manner and possibly propose a plan to collect cost data (Centers for Medicare & Medicaid Services 2018).

Beginning with the Commission's March 2010 report to the Congress, the Commission has stated for several years in comment letters and in published reports that the CPI-U does not likely reflect the current input costs of ASCs (Medicare Payment Advisory Commission 2010). However, the Commission does not support using the hospital MB index as an interim method for updating the ASC conversion factor because this index also does not accurately reflect ASCs' costs (Medicare Payment Advisory Commission 2018a). CMS acknowledges that the ASC and hospital cost structures are not identical because ASCs tend to be single specialty and for profit and are not required to comply with the Emergency Medical Treatment and Labor Act. The Commission concurs with these observations and adds that, relative to hospitals, ASCs are more urban, serve a different mix of patients, have a much higher share of expenses related to medical supplies and drugs, and have a smaller share of employee compensation costs.

The Commission asserts that CMS should forgo the five-year period to assess the feasibility of ASC cost reporting and instead use its authority and resources to act quickly in gathering ASC cost data. ASCs are profitable organizations, and the number of ASCs and the volume of services continue to grow. Therefore, we believe it is unnecessary for CMS to spend five years assessing the feasibility of collecting cost data from ASCs.

Recommendation

In evaluating a need for an update to the ASC conversion factor for 2022, the Commission balanced the following objectives:

- maintain beneficiaries' access to ASC services;
- pay providers adequately;
- maintain the sustainability of the Medicare program by appropriately restraining spending on ASC services;
- keep providers under financial pressure to constrain costs; and
- require ASCs to submit cost data.

In balancing these goals, the Commission concludes that the ASC update for 2022 should be eliminated and that the Secretary should collect cost data from ASCs.

RECOMMENDATION 5-1

For calendar year 2022, the Congress should eliminate the update to the 2021 Medicare conversion factor for ambulatory surgical centers.

RECOMMENDATION 5-2

The Secretary should require ambulatory surgical centers to report cost data.

RATIONALE 5-1 AND 5-2

On the basis of our payment adequacy indicators, combined with the importance of maintaining financial pressure on providers to constrain costs, we believe that the ASC conversion factor should not be increased for 2022. That is, the 2022 conversion factor in the ASC payment system should be the same as the conversion factor in 2021. Though we do not have cost data, and we have reservations about the measures used within the ASCQR, the indicators of payment adequacy for which we have information are positive: The volume of ASC services per beneficiary increased in 2019, the complexity of ASC services provided increased, and the number of ASCs increased. Also, ASCs appear to have adequate access to capital, ASC quality of care data have trended positive, and Medicare payments to ASCs have continued to grow.

The Commission has persistently recommended that the Secretary collect cost data from ASCs. Cost data would enable CMS and the Commission to examine the growth of ASCs' costs over time and evaluate Medicare payments relative to the costs of an efficient provider, which would help inform decisions about the ASC payment update. Cost data are also needed to evaluate whether an alternative input price index would be an appropriate proxy for ASC costs.

We see no reason why ASCs should not be able to submit cost data. CMS collects cost data from all other institutional providers participating in the Medicare program. To date, the ASC industry has asserted that ASCs are small operations that lack the capacity and accounting expertise to enable them to complete cost reports. However, some of the sectors from which CMS collects cost data are predominantly small providers. Therefore, any ASC should be able to compile and submit a minimum set of cost data. Also, while the majority of ASCs consists of freestanding facilities, hospital corporations and other large health care entities have acquired more ASCs and have the capacity and expertise to complete cost reports. CMS could limit the scope of the cost reporting system to minimize administrative burden on ASCs and the program. In addition, to implement this change, CMS should make cost reporting a condition of ASC participation in the Medicare program.

IMPLICATIONS 5-1 AND 5-2

Spending

The Secretary has the authority to update the ASC conversion factor and has decided to use the hospital MB index as the basis for updating the conversion factor from 2019 through 2023 (Centers for Medicare & Medicaid Services 2018). The ACA requires that the update factor be reduced by a multifactor productivity measure. The currently projected hospital MB index increase for 2022 is 2.7 percent, and the forecast of productivity growth for 2022 is 0.3 percent, resulting in a projected update of 2.4 percent to the conversion factor for 2022. Relative to current Medicare law, our recommendation would decrease federal spending by between \$50 million to \$250 million in the first year and by less than \$1 billion over five years.

Beneficiary and provider

- Because of the growth in the number of ASCs and the increase in ASCs' revenue from Medicare, we do not anticipate that these recommendations will diminish beneficiaries' access to ASC services or providers' willingness or ability to provide those services.
- ASCs may incur some minimal administrative costs to track and submit cost data, but we believe cost accounting is standard practice in the ASC industry, and ASCs should be able to draw cost data from that source.

Endnotes

- 1 CMS determines the payment rates in the ASC system independently from the payment rates in the PFS. Therefore, it is possible for an office-based procedure to have its payment rate based on the standard method in one year and on the PFS nonfacility rate the next year, or vice versa.
- 2 Under Section 319 of the Public Health Services Act, the Secretary of Health and Human Services may determine that a disease or disorder presents a public health emergency (PHE) or that a PHE, including significant outbreaks of infectious disease or bioterrorist attacks, otherwise exists. The Secretary first determined the existence of the coronavirus PHE, based on confirmed cases of COVID-19 in the U.S., on January 31, 2020. At the time of publication, the coronavirus PHE had been renewed four times, most recently on January 7, 2021.
- 3 State certificate-of-need (CON) laws appear to affect the number of ASCs in a state. Twenty-five states and the District of Columbia have CON laws for ASCs. Nine of the 10 states with the fewest ASCs per capita have CON laws for ASCs, while only 5 of the 10 states that have the most ASCs per capita have CON laws. Among these five states, Georgia has an exception in its CON requirements that makes it easier to establish new ASCs, and the large number of ASCs in Maryland relative to other states is likely a response to a Medicare waiver under which Maryland hospitals operate under global budgets. Under this system, hospital budgets are capped, and they receive no additional revenue if they exceed their budgets. However, medical care received in ASCs falls outside the budgets, so there is an incentive for hospitals to shift outpatient surgical care to ASCs.
- 4 We define *single-specialty* ASCs as those with more than 67 percent of their Medicare claims in one clinical specialty. We define *multispecialty* ASCs as those with less than 67 percent of their Medicare claims in one clinical specialty.

- 5 By statute, coinsurance for a service paid under the OPPS cannot exceed the hospital inpatient deductible (\$1,484 in 2021). The ASC payment system does not have the same limitation on coinsurance; for a small percentage of HCPCS codes covered under the ASC payment system, the ASC coinsurance exceeds the inpatient deductible. In these instances, the ASC coinsurance exceeds the OPPS coinsurance.
- 6 Cost sharing is lower under the ASC payment system for 96.1 percent of HCPCS codes that are covered under the ASC payment system.
- 7 Rather than enact a full discontinuation of measures ASC-1 through ASC-4, CMS has decided to suspend data collection of these four measures. Suspension means that ASCs are no longer required to report data on these measures, but CMS will retain them in the ASCQR Program for possible future use. Patient experience will be assessed using the Consumer Assessment of Healthcare Providers and Systems[®] (CAHPS[®]) survey measures but implementation of CAHPS measures has been delayed.
- 8 CAHPS is a registered trademark of the Agency for Healthcare Research and Quality, a U.S. government agency.
- 9 The Commission also described its principles for a VBP program for ASCs in a letter to the Congress that commented on the Secretary's report to the Congress about a VBP program for ASCs (Medicare Payment Advisory Commission 2011a).
- 10 The margins for ASCs have important differences from the margins in other sectors such as hospitals. In particular, the cost data used to determine margins for most ASCs do not include compensation for physician owners or the taxes paid on that compensation.

References

Ambulatory Surgery Center Association. 2017. Benefits of physician ownership. http://www.ascassociation.org/ advancingsurgicalcare/asc/benefitsofphysicianownership.

American Cancer Society, Department of Health and Human Services. 2018. American Cancer Society guideline for colorectal cancer screening. https://www.cancer.org/cancer/colon-rectalcancer/detection-diagnosis-staging/acs-recommendations. html#written_by.

Barclays. 2018. *Health care services: Initiating coverage of hospital sector*. August 14.

Carey, K. 2015. Price increases were much lower in ambulatory surgery centers than hospital outpatient departments in 2007-12. *Health Affairs* 34, no. 10 (October 1): 1738–1744.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2018. Medicare program: Changes to hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs. Final rule. *Federal Register* 83, no. 225 (November 21): 58818–59179.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2017. Medicare program: Hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs. Final rule. *Federal Register* 82, no. 217 (November 13): 52356–52637.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2016. Medicare program: hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs; organ procurement organization reporting and communication; transplant outcome measures and documentation requirements; electronic health record (EHR) incentive programs; payment to nonexcepted off-campus provider-based department of a hospital; hospital value-based purchasing (VBP) program; establishment of payment rates under the Medicare physician fee schedule for nonexcepted items and services furnished by an off-campus provider-based department of a hospital. Final rule. *Federal Register* 81, no. 219 (November 14): 79562–79892.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2012. Medicare and Medicaid programs: hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs; electronic reporting pilot; Inpatient Rehabilitation Facilities Quality Reporting Program; revision to quality improvement organization regulations. Final rule. *Federal Register* 77, no. 221 (November 15): 68210–68565. Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2011. Medicare and Medicaid programs: hospital outpatient prospective payment; ambulatory surgical center payment; hospital value-based purchasing program; physician self-referral; and patient notification requirements in provider agreements. Final rule. *Federal Register* 76, no. 230 (November 30): 74122–74584.

Dyrda, L. 2020. University Hospitals in Cleveland inks partnership to develop ASC network: 4 details. *Becker's ASC Review*, October 13.

Hair, B., P. Hussey, and B. Wynn. 2012. A comparison of ambulatory perioperative times in hospitals and freestanding centers. *American Journal of Surgery* 204, no. 1 (July): 23–27.

Hollenbeck, B. K., R. L. Dunn, A. M. Suskind, et al. 2015. Ambulatory surgery centers and their intended effects on outpatient surgery. *Health Services Research* 50, no. 5 (October): 1491–1507.

Hollenbeck, B. K., R. L. Dunn, A. M. Suskind, et al. 2014. Ambulatory surgery centers and outpatient procedure use among Medicare beneficiaries. *Medical Care* 52, no. 10 (October): 926–931.

Hollingsworth, J. M., S. L. Krein, Z. Ye, et al. 2011. Opening of ambulatory surgery centers and procedure use in elderly patients: Data from Florida. *Archives of Surgery* 146, no. 2 (February): 187–193.

Hollingsworth, J. M., Z. Ye, S. A. Strope, et al. 2010. Physicianownership of ambulatory surgery centers linked to higher volume of surgeries. *Health Affairs* 29, no. 4 (April): 683–689.

Hughes, D. R., M. Bhargavan, and J. H. Sunshine. 2010. Imaging self-referral associated with higher costs and limited impact on duration of illness. *Health Affairs* 29, no. 12 (December): 2244–2251.

Japsen, B. 2018. Tenet Healthcare signals outpatient acquisitions ahead amid value-based care push. *Modern Healthcare*, February 27.

Koenig, L., and Q. Gu. 2013. Growth of ambulatory surgical centers, surgery volume, and savings to Medicare. *American Journal of Gastroenterology* 108: 10–15.

Leapfrog. 2019. Same-day surgery in the U.S.: Findings of two inaugural Leapfrog surveys, 2019. Washington, DC: Leapfrog. https://www.leapfroggroup.org/sites/default/files/Files/ NationalReport_Final.pdf. Medical Group Management Association. 2009. *Ambulatory* surgery center performance survey: 2009 report based on 2008 data. Washington, DC: MGMA.

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

Medicare Payment Advisory Commission. 2018a. Comment letter on CMS's 2019 proposed rule for the hospital outpatient and ambulatory surgical center payment systems, September 21. http://www.medpac.gov/docs/default-source/commentletters/09212018_opps_asc_2019_medpac_comment_v2_sec. pdf?sfvrsn=0.

Medicare Payment Advisory Commission. 2018b. *Report to the Congress: Medicare and the health care delivery system.* Washington, DC: MedPAC.

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

Medicare Payment Advisory Commission. 2017. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2016. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2015. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2014. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2013a. *Report to the Congress: Medicare and the health care delivery system*. Washington, DC: MedPAC.

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

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

Medicare Payment Advisory Commission. 2011a. MedPAC comment letter on the Department of Health and Human Services' Report to the Congress: Medicare Ambulatory Surgical Center Value-Based Purchasing Implementation Plan, August 30.

Medicare Payment Advisory Commission. 2011b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2010. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Mitchell, J. M. 2010. Effect of physician ownership of specialty hospitals and ambulatory surgery centers on frequency of use of outpatient orthopedic surgery. *Archives of Surgery* 145, no. 8 (August): 732–738.

Munnich, E. L., and S. T. Parente. 2014. Procedures take less time at ambulatory surgery centers, keeping costs down and ability to meet demand up. *Health Affairs* 33, no. 5 (May): 764–769.

Ohsfeldt, R. L., P. Li, and J. E. Schneider. 2015. In-office magnetic resonance imaging (MRI) equipment ownership and MRI volume among medicare patients in orthopedic practices. *Health Economics Review* 5, no. 1 (December): 31.

Oliver, E. 2020. \$1.1B deal will give Tenet 45 SurgCenter ASCs. *Becker's ASC Review*, December 10.

Park, C. 2020. ASCs in 2019: A year in review. https://vmghealth. com/blog/ascs-in-2019-a-year-in-review/.

Pennsylvania Health Care Cost Containment Council. 2020. *Financial analysis 2019: Volume 2, ambulatory surgery centers.* Harrisburg, PA: PHC4.

Pinto, R. Z., C. G. Maher, M. L. Ferreira, et al. 2012. Epidural corticosteroid injections in the management of sciatica: A systematic review and meta-analysis. *Annals of Internal Medicine* 157, no. 12 (December 18): 865–877.

Robinson, J. C., T. Brown, and C. Whaley. 2015. Referencebased benefit design changes consumers' choices and employers' payments for ambulatory surgery. *Health Affairs* 34, no. 3 (March 1): 415–422.

Schaefer, M. K., M. Jhung, M. Dahl, et al. 2010. Infection control assessment of ambulatory surgical centers. *Journal of the American Medical Association* 303, no. 22 (June 9): 2273–2279.

Shreibati, J. B., and L. C. Baker. 2011. The relationship between low back magnetic resonance imaging, surgery, and spending: Impact of physician self-referral status. *Health Services Research* 46, no. 5 (October): 1362–1381.

Stensland, J., and A. Winter. 2006. Do physician-owned cardiac hospitals increase utilization? *Health Affairs* 25, no. 1 (January–February): 119–129.

Strope, S. A., S. Daignault, J. M. Hollingsworth, et al. 2009. Physician ownership of ambulatory surgery centers and practice patterns for urological surgery: Evidence from the state of Florida. *Medical Care* 47, no. 4 (April): 403–410.

Trentman, T. L., J. T. Mueller, R. J. Gray, et al. 2010. Outpatient surgery performed in an ambulatory surgery center versus a hospital: Comparison of perioperative time intervals. *American Journal of Surgery* 200, no. 1 (July): 64–67.