

CHAPTER

5

**Ambulatory surgical
center services**

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

5-1 The Congress should eliminate the calendar year 2019 update to the Medicare payment rates for ambulatory surgical centers.

COMMISSIONER VOTES: YES 15 • NO 0 • NOT VOTING 0 • ABSENT 2

.....
5-2 The Secretary should require ambulatory surgical centers to report cost data.

COMMISSIONER VOTES: YES 15 • NO 0 • NOT VOTING 0 • ABSENT 2

Ambulatory surgical center services

Chapter summary

Ambulatory surgical centers (ASCs) provide outpatient procedures to patients who do not require an overnight stay after the procedure. In 2016, 3.4 million fee-for-service (FFS) Medicare beneficiaries were treated in the 5,532 ASCs certified to provide services to Medicare beneficiaries. Medicare program and beneficiary spending on ASC services was about \$4.3 billion.

Assessment of payment adequacy

Our results indicate that beneficiaries' access to ASC services is adequate. Most of the available indicators of payment adequacy for ASC services, discussed below, are positive.

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

- **Capacity and supply of providers**—From 2011 to 2015, the number of ASCs grew at an average annual rate of 1.3 percent. In 2016, the number of ASCs increased 1.4 percent. Most new ASCs in 2016 (92 percent) were for-profit facilities.
- **Volume of services**—From 2011 through 2015, the volume of services per beneficiary grew by an average annual rate of 0.7 percent. In 2016, volume decreased by 0.5 percent.

In this chapter

- Are Medicare payments adequate in 2018?
- How should Medicare payments change in 2019?

Quality of care—The first three years of ASC-reported quality data show improvements in performance but also identify opportunities for improvement in ASCs' quality of care and in CMS's ASC Quality Reporting (ASCQR) Program. Among the 10 quality measures for which data were available in 2015, the 4 adverse event measures reflect consistently low levels of adverse events, and the share of ASCs reporting no adverse events has increased each year since 2013. The data also show room for improvement in the share of ASC staff receiving flu shots and the share of patients surveilled following colonoscopy, but we note that these are process measures, and we prefer to have outcomes-based measures. CMS made improvements to the ASCQR Program for 2018, but the Commission remains concerned about the share of ASCs for which quality data are missing 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 subsequent hospital care and rates of surgical site infection.

Providers' access to capital—Because the number of ASCs has continued to increase, access to capital appears to be adequate.

Medicare payments and providers' costs—Medicare payments per FFS beneficiary increased by an average of 3.6 percent per year from 2011 through 2015 and by 3.5 percent in 2016. However, Medicare payment rates are 92 percent higher in hospital outpatient departments than in ASCs. 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.

On the basis of these indicators, the Commission concludes that ASCs can continue to provide Medicare beneficiaries with access to ASC services with no update to the payment rates for 2019. In addition, the Commission recommends that the Secretary of Health and Human Services collect cost data from ASCs without further delay. ■

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 after the procedure. In addition to ASCs, hospital outpatient departments (HOPDs) and, in some cases, physicians' offices perform outpatient surgical procedures.

Since 1982, Medicare has covered and paid for surgical procedures provided in ASCs. Medicare covers surgical procedures represented by about 3,500 codes in the Healthcare Common Procedure Coding System (HCPCS) in 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 2016, 27 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, also known as the physician fee schedule (PFS). According to surveys, most ASCs have partial or complete physician ownership (Ambulatory Surgery Center Association 2011, Medical Group Management Association 2009). Physicians who perform surgeries in ASCs they own receive a share of the ASC's facility payment 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—such as nursing, recovery care, anesthetics, and supplies—through a system that is primarily linked to the outpatient prospective payment system (OPPS), which Medicare uses to set payment rates for most services provided in HOPDs (a more detailed description of the ASC payment system can be found online at http://www.medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_17_asc_finaldba211adfa9c665e80adff00009edf9c.pdf?sfvrsn=0). The ASC payment system is also partly linked to the PFS. In 2008, the ASC system underwent substantial revisions (see online Appendix 2C-A from Chapter 2C of our March 2010 report to the Congress, available at http://www.medpac.gov/docs/default-source/reports/Mar10_Ch02C_APPENDIX.pdf?sfvrsn=0). The

most significant changes included a substantial increase in the number of surgical procedures covered, permission for ASCs to bill separately (that is, outside the ASC payment bundle) for certain ancillary services, and large changes in payment rates for many procedures.

For most covered procedures, 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 the ASC payment system is linked to the OPPS, payment rates for all services covered under both systems are lower in the ASC payment system for two reasons. First, relative weights are lower under the ASC system compared with the OPPS system. CMS makes proportional adjustments to the relative weights from the OPPS to maintain budget neutrality in the ASC system. In 2018, this adjustment has reduced the ASC relative weights by 10.1 percent below 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 a conversion factor, set at \$45.58 for 2018, which is lower than the OPPS conversion factor (\$78.64 for 2018).

The ASC conversion factor is lower than the OPPS conversion factor because it started at a lower level in 2008 and has been updated since then at a lower rate than the OPPS conversion factor. CMS set the initial ASC conversion factor in 2008 such that total ASC payments under the revised payment system would equal what they would have been under the previous ASC payment system. The resulting ASC conversion factor for 2008 was lower than the OPPS conversion factor in 2008. In addition, since 2008, CMS has updated the ASC conversion factor based on the consumer price index for all urban consumers (CPI-U), whereas it has used the hospital market basket to update the OPPS conversion factor. The CPI-U has generally been lower than the hospital market basket, so the ASC conversion factor has been updated by smaller percentages than the OPPS conversion factor.

We are concerned that the CPI-U may not reflect ASCs' cost structure (see text box, p. 145). The Commission has recommended that CMS collect cost data from ASCs to identify an alternative price index that would be an appropriate proxy for ASC costs (Medicare Payment Advisory Commission 2010b). However, the ASC industry has opposed the collection of cost data for this purpose, and CMS does not yet collect these data (Ambulatory Surgery Center Association 2012). Recently, CMS has requested comments 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 policy that would require ASCs to submit formal cost reports, but were willing 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, and some of these are small entities such as hospices and home health agencies.

CMS uses a different method from the one described above to determine payment rates for procedures that are predominantly performed in physicians' offices and were first covered under the ASC payment system in 2008 or later. Payment for these "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). 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.¹ The Commission has investigated payment rate differences across multiple ambulatory settings, including ASCs, HOPDs, and physicians' offices (Medicare Payment Advisory Commission 2014, Medicare Payment Advisory Commission 2013a, Medicare Payment Advisory Commission 2012).

The ASC payment system generally parallels the OPPS in terms of which ancillary services are paid separately and which are packaged into the payment of the associated surgical procedure. In 2015, however, the connection between the ASC payment system and the OPPS weakened slightly when CMS implemented comprehensive ambulatory payment classifications (C-APCs) for the OPPS but not for the ASC system. C-APCs largely 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 chose not to implement C-APCs in the ASC system because the ASC claims processing system does not allow for the type of packaging of ancillary items necessary for creating C-APCs. Therefore, the payment bundle for services that are defined as C-APCs in the OPPS have greater packaging of ancillary items than the ASC payment system.

CMS requested comments on whether ASCs should bill on the institutional claim form (UB-04) rather than the

professional claim form (CMS-1500). Billing on the institutional claim form would allow CMS to implement C-APCs in the ASC payment system. CMS received comments from ASCs that supported this policy (Centers for Medicare & Medicaid Services 2017).² However, the ASC Association provided comments that were generally against this policy.

Although we do not have recent ASC cost data that would allow us to quantify cost differences between settings, some evidence suggests that ASCs are a lower cost setting than HOPDs. The Government Accountability Office (GAO) compared ASC cost data from 2004 with HOPD costs and found that costs were, on average, lower in ASCs than in HOPDs (Government Accountability Office 2006).³ In addition, 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 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). Trentman and colleagues and Munnich and Parente estimated less time savings in ASCs than did Hair and colleagues, likely because Trentman and colleagues and Munnich and Parente accounted for differences in health status between patients treated in ASCs and those treated in HOPDs, while Hair and colleagues did not. Beneficiaries who are sicker may require more time to treat. We have 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 category risk adjustment model.

Are Medicare payments adequate in 2018?

To address whether payments for the current year (2018) are adequate to cover the costs of efficient providers and how much payments should change in the coming year (2019), 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.

**TABLE
5-1**

Number of ASCs grew by 23 percent, 2006–2016

Average annual percent change

| Type of ASC | 2006 | 2010 | 2011 | 2015 | 2016 | 2006–2010 | 2011–2015 | 2015–2016 |
|------------------|-------|-------|-------|-------|-------|-----------|-----------|-----------|
| Total | 4,490 | 5,105 | 5,180 | 5,453 | 5,532 | 2.4% | 1.3% | 1.4% |
| New | 320 | 192 | 197 | 158 | 142 | N/A | N/A | N/A |
| Closed or merged | 92 | 111 | 122 | 91 | 63 | N/A | N/A | N/A |

Note: ASC (ambulatory surgical center), N/A (not applicable). 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.

Source: MedPAC analysis of Provider of Services file from CMS, 2017.

In addition, ASCs began submitting quality data (another measure of payment adequacy) to CMS in October 2012. Data for 10 quality measures for calendar year 2015 are now available. Because data are relatively new and either missing or not reported for many ASCs, the data reported may not be fully representative of the actual quality of care provided in ASCs. Putting these gaps aside, however, reported quality data and claims data suggest areas for quality improvement for certain types of ASCs.

Most of our available indicators of payment adequacy are positive. Beneficiaries have adequate access to care in ASCs, although some groups—such as beneficiaries dually eligible for Medicare and Medicaid, African Americans, and beneficiaries under age 65—are less likely than the average beneficiary to receive care in ASCs than in HOPDs (see text box on the differences in types of patients treated in ASCs and HOPDs, pp. 132–133). Also, the number of ASCs has increased, which indicates that ASCs have adequate access to capital, and Medicare payments to ASCs have continued to grow.

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

Increases in the number of facilities and fairly stable volume of services provided to Medicare beneficiaries suggest that beneficiaries have adequate access to care in ASCs. Access to ASCs may be beneficial to patients and physicians because ASCs can offer them greater convenience and efficiency 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. For physicians, ASCs offer more control over their work environment

and specialized staff. In addition, Medicare’s payment rates and beneficiaries’ cost sharing are lower in ASCs than in HOPDs. However, the fact that most ASCs have some degree of physician ownership raises a concern that providing surgical services in ASCs may lead to more surgical volume than if the same patients were treated in HOPDs.

Capacity and supply of providers: Number of ASCs is increasing

From 2015 through 2016, the number of ASCs increased 1.4 percent to 5,532 (Table 5-1). This annual growth rate was similar to the period 2011 through 2015, but slower than the prior period. From 2006 to 2010, the number of ASCs increased about 2.4 percent per year, compared with 1.3 percent per year from 2011 to 2015. In 2016, the number of new ASCs increased by 142, while 63 ASCs closed or merged with other facilities. Since 2006, the number of new ASCs has outnumbered ASCs that closed or merged, leading to a 23 percent increase in the number of ASCs from 2006 to 2016.

Factors that explain the relatively slower growth of ASCs since 2011:

- To expand their outpatient surgery capacity, many hospitals have acquired and integrated ASCs into the hospital or developed new surgery centers that are part of the hospital, which may limit the market for new freestanding ASCs (Hirst 2010, Jacobson 2014, Kochman 2014, Levingston 2014, Moody 2014, North Carolina Department of Health and Human Services 2011, Sowa 2014, State of Connecticut 2011). Hospitals’ decisions to increase their outpatient surgery capacity may be influenced by the higher

Differences in types of patients treated in ambulatory surgical centers and hospital outpatient departments

There is evidence that patients treated in ambulatory surgical centers (ASCs) are different in several ways from those in hospital outpatient departments (HOPDs). Our analysis of Medicare claims from 2016 revealed that the following groups represented a smaller share of ASC patients compared with HOPD patients: Medicare beneficiaries who also have Medicaid coverage (dual eligibles), African Americans (who are more likely to be dually eligible), beneficiaries who are eligible for Medicare because of disability (under age 65), and beneficiaries who are age 85 or older (Table 5-2).⁴ The smaller share of disabled and older beneficiaries treated in ASCs may reflect the healthier average profile of ASC patients relative to HOPD patients. In addition, the smaller share of African American patients in ASCs relative to HOPDs may be linked to differences in the geographic locations of ASCs and hospitals, the lower rate of supplemental coverage among African Americans, the higher proportion of African Americans who are dually eligible, and the relatively high share of African Americans who use HOPDs or emergency departments (EDs) as their usual source of care (Centers for Medicare & Medicaid Services 2015).

In a separate analysis, we found that patients in HOPDs in 2014 were, on average, more medically complex than patients treated in ASCs, as measured by differences in average patient risk scores. We used risk scores from the CMS–hierarchical condition category (CMS–HCC) risk adjustment model used in Medicare Advantage to measure patient severity. CMS–HCC risk scores predict beneficiaries’ relative costliness based on their age and sex, their diagnoses from the prior year, whether they are dually eligible, and whether they are currently age 65 or older but were originally eligible for Medicare because of disability. The average risk score for HOPD patients across all procedures in 2014 was 1.57 compared with 1.13 for ASC patients. This difference is statistically significant ($p < 0.05$). The lower risk scores of ASC patients are consistent with the findings that ASC patients have shorter surgical visits than HOPD patients (Hair et al. 2012, Munnich and Parente 2014, Trentman et al. 2010).

TABLE 5-2

Medicare patients treated in ASCs differed from patients treated in HOPDs, 2016

| Characteristic | Percent of beneficiaries | |
|---------------------|--------------------------|-------|
| | ASC | HOPD |
| Medicaid status | | |
| Not dually eligible | 87.0% | 78.8% |
| Dually eligible | 13.0 | 21.2 |
| Race/ethnicity | | |
| White | 86.6 | 83.1 |
| African American | 6.8 | 10.1 |
| Other | 6.6 | 6.8 |
| Age | | |
| Under 65 | 14.0 | 21.2 |
| 65 to 84 | 80.2 | 70.2 |
| 85 or older | 5.9 | 8.6 |
| Sex | | |
| Male | 42.8 | 44.8 |
| Female | 57.2 | 55.2 |

Note: ASC (ambulatory surgical center), HOPD (hospital outpatient department). All of the differences between ASC and HOPD beneficiaries are statistically significant ($p < 0.05$). The analysis excludes beneficiaries who received services that are not covered in the ASC payment system. Percentages for the age category in the ASC column do not sum to 100 because of rounding.

Source: MedPAC analysis of physician/supplier and outpatient standard analytic files, 2016.

Beneficiaries who have higher risk scores are likely to be sicker and may require more time and resources to treat. For example, analysis of surgery time for procedures performed in ASCs and HOPDs indicates that surgery time increases as patients’ risk scores increase (Munnich and Parente 2014). Moreover, sicker patients may be referred to HOPDs that have emergency services, inpatient care, and onsite specialists readily available instead of ASCs.

(continued next page)

Differences in types of patients treated in ambulatory surgical centers and hospital outpatient departments (cont.)

We also compared average patient risk scores for each of the 137 services that made up 90 percent of ASC volume in 2014. For 112 (82 percent) of these services, the average HOPD risk score was higher by a statistically significant amount compared with the average ASC risk score ($p < 0.05$). These 112 services constituted 90 percent of the volume of ASC surgical services in 2014. For the remaining 25 services, the severity of patients in HOPDs was similar to or less than the severity of patients in ASCs.

According to data from Pennsylvania on Medicare and non-Medicare patients, ASCs are less likely than HOPDs to serve Medicaid patients (Pennsylvania Health Care Cost Containment Council 2017). In Pennsylvania in 2016, Medicaid patients accounted for 6.5 percent of ASCs' diagnostic and surgical procedures, compared with 14.0 percent of HOPDs' procedures.⁵ Commercially insured and Medicare patients represented a higher share of ASC procedures compared with HOPD procedures (85.7 percent vs. 77.5 percent, respectively). Although Pennsylvania data may not be nationally representative, national estimates from the National Hospital Ambulatory Medical Care Survey (NHAMCS), conducted by the Centers for Disease Control and Prevention, show that ASCs treated a smaller share of Medicaid patients than did HOPDs in 2010. According to the NHAMCS data, ambulatory surgery visits by Medicaid patients accounted for 5.0 percent of total visits to freestanding ASCs, compared with 10.5 percent of total visits to hospital-based surgery centers.

Several factors could be responsible for ASCs treating a smaller share of Medicaid patients (including dually eligible beneficiaries) than HOPDs. A study by Gabel and colleagues suggests that insurance coverage influences a physician's decision to refer a patient to

an ASC or to a hospital (Gabel et al. 2008). This study found that physicians in Pennsylvania were much more likely to refer their commercially insured and Medicare patients than their Medicaid patients to a physician-owned ASC.

The location of ASCs may also lead to a smaller share of Medicaid patients. A study by Strobe and colleagues found that people living in areas with relatively low socioeconomic status are less likely to receive surgical services in ASCs than people living in areas with high socioeconomic status (Strobe et al. 2009b).⁶ Further, ASCs are most likely to enter markets that did not previously have an ASC if a market has relatively high per capita income (Suskind et al. 2015).⁷

In addition, many state Medicaid programs do not pay Medicare's cost sharing for dually eligible beneficiaries if the amount Medicare pays for a service (Medicare payment rate minus the cost sharing) is higher than the Medicaid rate for the service (Medicare Payment Advisory Commission 2010a). In states that do not pay the cost sharing for ASC services used by dually eligible beneficiaries, ASCs could be discouraged from treating these patients. Finally, dual-eligible beneficiaries are more likely to report that their usual source of care is an HOPD or ED than are Medicare beneficiaries who have other types of supplemental coverage (Centers for Medicare & Medicaid Services 2015). If a patient's usual source of care is an HOPD or ED, physicians may be more likely to refer the patient to an HOPD for surgery than to another setting. The relatively low rate of ASC use among dual-eligible beneficiaries may partly explain the relatively low rate of ASC use among African Americans, who have a relatively high rate of dual-eligible status (Table 5-2). ■

rates Medicare pays for ambulatory surgical services provided in HOPDs relative to ASCs. In 2018, Medicare's rates are 92 percent higher in HOPDs than in ASCs.

- Physicians are increasingly choosing to be employed by hospitals rather than work in an independent practice (Berenson et al. 2012, Mathews 2012,

Medicare Payment Advisory Commission 2013a, Merritt Hawkins 2014, Physicians Advocacy Institute 2016). These physicians are more likely to provide ambulatory procedures in the hospitals that employ them than in freestanding ASCs.

The number of operating rooms (ORs) in ASCs is also growing. In 2016, there were nearly 16,500 ORs in ASCs,

**TABLE
5-3****Most ASCs are urban and for profit**

ASCs that were:

| Type of ASC | Open in 2010 | Open in 2016 | New in 2016 |
|-------------|--------------|--------------|-------------|
| Urban | 92.0% | 92.9% | 94.4% |
| Rural | 8.0 | 7.0 | 5.6 |
| For profit | 94.0 | 93.8 | 92.3 |
| Nonprofit | 3.4 | 3.5 | 6.3 |
| Government | 2.5 | 2.8 | 1.4 |

Note: ASC (ambulatory surgical center). Totals may not sum to 100 percent because of rounding.

Source: MedPAC analysis of Provider of Services file from CMS, 2017.

or an average of 3.0 per facility. From 2011 through 2015, the total number of ASC ORs increased 0.7 percent per year, a slightly slower rate than the growth in the number of ASCs over the same period (1.3 percent per year). From 2015 to 2016, the number of ORs in ASCs increased by about 0.8 percent. ASCs that entered the market in 2016 were smaller than average. Among this group, 69 percent had just one or two ORs. By contrast, in 2011, 55 percent of all ASCs had one or two ORs.

ASCs are concentrated geographically. In 2016, Maryland had the most ASCs per fee-for-service (FFS) Part B beneficiary (5 ASCs per 10,000 beneficiaries), followed by Georgia and Idaho (approximately 3 ASCs per 10,000 beneficiaries). Vermont, West Virginia, Alabama, and the District of Columbia had the fewest ASCs per beneficiary (fewer than 0.5 ASCs per 10,000 beneficiaries).⁸

Consistent with previous years, most ASCs in 2016 were for profit (about 94 percent) and urban (almost 93 percent) (Table 5-3). The characteristics of ASCs in 2016 are similar to those of ASCs operating in 2010. However, ASCs that were new in 2016 were slightly more likely to be urban (including urban and suburban areas) and nonprofit compared with existing ASCs. 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. In addition, most ASCs are located off a hospital campus (99 percent) (data not shown).

The majority of ASCs that billed Medicare in 2016 specialized in a single clinical area, with gastroenterology

and ophthalmology being the most common. Overall, 61 percent of ASCs in 2016 were single-specialty facilities (Table 5-4).⁹ Twenty-two percent of ASCs specialized in gastroenterology and another 21 percent specialized in ophthalmology. By contrast, 39 percent of ASCs were multispecialty facilities, providing services in more than one clinical area. The most common combinations of clinical services offered by multispecialty ASCs were pain management and either neurology or orthopedic services (6 percent of all ASCs) or gastroenterology and ophthalmology services (4 percent of all ASCs). The remaining multispecialty ASCs had more than two clinical specialties. From 2014 to 2016, the proportion of multispecialty ASCs increased by 1 percentage point relative to single-specialty ASCs (data not shown). ASCs specializing in pain management and neurology or orthopedics account for much of the growth in multispecialty ASCs over this period.

Continued growth in the number of ASCs suggests that Medicare's payment rates have been adequate. Other factors have also 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. CMS requested comments on whether knee and hip arthroplasty should be covered under the ASC payment system. After receiving comments, CMS indicated that some commenters supported such a policy while others opposed it. CMS did not indicate whether the number of supporters was greater than the number of opponents (or vice versa), nor did CMS indicate who were the supporters or the opponents (Centers for Medicare & Medicaid Services 2017).
- ASCs may 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.¹⁰
- Physicians have greater autonomy in ASCs than in HOPDs, which enables them to design customized surgical environments and hire specialized staff.

**TABLE
5-4****Specialization of ASCs billing Medicare in 2016**

| Type of ASC | Number of ASCs | Share of all ASCs |
|---|----------------|-------------------|
| Single specialty | 2,876 | 61% |
| Gastroenterology | 1,025 | 22 |
| Ophthalmology | 1,015 | 21 |
| Pain management | 356 | 8 |
| Dermatology | 180 | 4 |
| Urology | 123 | 3 |
| Podiatry | 90 | 2 |
| Orthopedics/musculoskeletal | 29 | <1 |
| Respiratory | 20 | <1 |
| OB/GYN | 15 | <1 |
| Cardiology | 13 | <1 |
| Other | 10 | <1 |
| Multispecialty | 1,855 | 39 |
| More than 2 specialties | 1,403 | 30 |
| Pain management and either neurology or orthopedics | 273 | 6 |
| Gastroenterology and ophthalmology | 179 | 4 |
| Total | 4,731 | 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 2016. The percentages for the specific specialties under the "multispecialty" section do not sum to the total because of rounding.

Source: MedPAC analysis of Medicare carrier file claims, 2016.

- 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.

Even though the number of ASCs increased in 2016, the volume of ASC services per FFS Part B beneficiary decreased slightly in 2016. This decline may be a one-year occurrence, but the Commission will closely monitor growth of ASC services among Medicare beneficiaries.

Number of beneficiaries treated and volume of services per beneficiary declined from 2015 to 2016

We found that the number of FFS beneficiaries treated in ASCs and the volume of ASC surgical services per FFS beneficiary declined slightly from 2015 to 2016. Because ASC services are covered under Part B, we limited our analysis to FFS beneficiaries who have Part B coverage. We estimate that the number of FFS beneficiaries who received ASC services grew by an average of 0.6 percent per year from 2011 through 2015 and decreased by 0.4 percent in 2016. The volume of services per FFS beneficiary increased by an average of 0.7 percent per year from 2011 through 2015 and decreased by 0.5 percent in 2016 (Table 5-5, p. 136). On average, the number of services per beneficiary who received services in ASCs increased at an average annual rate of 0.6 percent from 2011 through 2015 and 1.3 percent in 2016 (data not shown). The decrease in volume per beneficiary that occurred in 2016 despite an increase in the number of

**TABLE
5-5**

Volume of ASC services per FFS beneficiary decreased in 2016

| | 2011 | 2012 | 2013 (actual) | 2013* (adjusted) | 2014 | 2015 | 2016 |
|---|-------|-------|------------------|---------------------|-------|-------|-------|
| Volume of services (in millions) | 6.7 | 6.9 | 6.9 | 6.3* | 6.2 | 6.3 | 6.4 |
| Volume per 1,000 FFS beneficiaries | 206.1 | 209.2 | 210.3 | 189.6* | 187.8 | 191.2 | 189.9 |
| Percent change in volume per FFS beneficiary from previous year | 1.7% | 1.5% | 0.5% | N/A | -0.9% | 1.8% | -0.5% |

Note: ASC (ambulatory surgical center), FFS (fee-for-service), N/A (not applicable). There is a disconnect between amounts in the row "Volume per 1,000 FFS beneficiaries" and "Percent change in volume per FFS beneficiary from previous year." The volume per 1,000 beneficiaries reflects the volume of services that are separately payable in each year. The "percent change in volume" reflects the percentage change over the previous year, assuming that the year in question and the previous year had the same definition of *separately payable*. For example, to arrive at the -0.5 percent change in 2016, we assumed that 2015 and 2016 had the same definition of separately payable. In reality, 2016 had fewer separately payable services than 2015.

*The adjusted 2013 values reflect adjustments we made to the larger actual values for 2013. The adjusted 2013 values reflect policies established in 2014 that changed the status of many services that had been separately payable in 2013 to packaged with another service in 2014. The purpose is to make the method for counting volume in 2013 consistent with how it is counted in 2014 and subsequent years.

Source: MedPAC analysis of physician/supplier standard analytic files, 2011–2016.

ASCs may have been due to ASC providers using a relatively small number of high-cost pain management services to replace a high number of low-cost pain management services that had been provided in 2015.

Services that have historically contributed the most to overall ASC volume continued to be a large share of the total in 2016. For example, the HCPCS code for cataract removal with intraocular lens insertion (HCPCS 66984) had the highest volume in both 2011 and 2016, accounting for 18.7 percent of the total in both years. Moreover, 19 of the 20 most frequently provided HCPCS codes in 2011 were among the 20 most frequently provided in 2016 (Table 5-6). These services made up about 71 percent of ASC Medicare volume in 2011 and about 70 percent in 2016. A potential concern about the services most frequently provided in ASCs is the extent to which they may be unnecessary or low value, such as spinal injections and other pain management services. CMS could consider policies such as requiring prior authorization or strengthening auditing practices to limit the provision of these services in all settings, not just ASCs.

Outpatient surgical procedures decreased in ASCs and increased in HOPDs in 2016

From 2011 through 2015, average annual growth in volume per FFS beneficiary of surgical services covered by the ASC payment system was 0.7 percent in ASCs and 1.4 percent in HOPDs. In 2016, volume per FFS beneficiary decreased by 0.5 percent in ASCs and increased by 3.2 percent in HOPDs.

A reason for the higher growth of surgical services in HOPDs relative to ASCs over the 2011 through 2016 period may be that Medicare payment rates have become much higher in HOPDs than in ASCs, which might make it less financially attractive to provide surgical services for Medicare patients in ASCs. For example, in 2018, Medicare payment rates for most surgical services are 92 percent higher in HOPDs than in ASCs. Another reason for the slower growth in ASC volume relative to growth in HOPD volume is that physicians continue to move away from working in private practices toward working for hospitals or medical groups (Merritt Hawkins 2014, Physicians Advocacy Institute 2016). Physicians working for hospitals may be more inclined to perform procedures at the hospitals that employ them than at freestanding ASCs.

Maintaining or expanding access to ASCs

Maintaining beneficiaries' access to ASCs is beneficial because services provided in this setting are less costly to Medicare and beneficiaries than services delivered in HOPDs.¹¹ Medicare payment rates for surgical services performed in HOPDs are almost twice as high as the same surgical services provided in ASCs. For example, the payment rate in 2018 for cataract surgery with intraocular lens insertion (the service most frequently provided in ASCs) is \$992 in ASCs compared with \$1,921 in HOPDs. The lower payment rate in ASCs for this service has been financially beneficial to Medicare and beneficiaries. Other recent studies similarly find that ASCs are less costly than HOPDs in the Medicare and non-Medicare context

**TABLE
5-6**

The 20 most frequently provided ASC services in 2016 were similar to those provided in 2011

| Surgical service | 2011 | | 2016 | |
|---|-------------------|------|-------------------|------|
| | Percent of volume | Rank | Percent of volume | Rank |
| Cataract surgery w/ IOL insert, 1 stage | 18.7% | 1 | 18.7% | 1 |
| Upper GI endoscopy, biopsy | 8.8 | 2 | 8.2 | 2 |
| Colonoscopy and biopsy | 6.3 | 3 | 6.8 | 3 |
| Lesion removal colonoscopy (snare technique) | 4.9 | 4 | 5.8 | 4 |
| Inject foramen epidural: lumbar, sacral | 4.5 | 5 | 4.7 | 5 |
| Diagnostic colonoscopy | 4.3 | 6 | 4.4 | 6 |
| After cataract laser surgery | 3.9 | 7 | 3.2 | 7 |
| Injection spine: lumbar, sacral (caudal) | 3.9 | 8 | 2.1 | 9 |
| Inject paravertebral: lumbar, sacral | 2.5 | 9 | 3.2 | 8 |
| Colorectal screen, high-risk individual | 2.0 | 10 | 2.0 | 10 |
| Colorectal screen, not high-risk individual | 1.6 | 11 | 1.9 | 11 |
| Cataract surgery, complex | 1.5 | 12 | 1.5 | 12 |
| Upper GI endoscopy, diagnosis | 1.3 | 13 | 1.0 | 15 |
| Cystoscopy | 1.2 | 14 | 1.0 | 17 |
| Lesion removal colonoscopy (hot biopsy forceps) | 1.2 | 15 | 0.7 | 22 |
| Revision of upper eyelid | 1.0 | 16 | 0.9 | 18 |
| Inject spine, cervical or thoracic | 1.0 | 17 | 1.0 | 14 |
| Injection procedure for sacroiliac joint, anesthetic | 1.0 | 18 | 1.3 | 13 |
| Upper GI endoscopy, insertion of guide wire | 0.8 | 19 | 0.8 | 19 |
| Injection procedure for paravertebral joint, cervical or thoracic | 0.8 | 20 | 1.0 | 16 |
| Total | 71.2 | | 70.2 | |

Note: ASC (ambulatory surgical center), IOL (intraocular lens), GI (gastrointestinal).

Source: MedPAC analysis of physician/supplier standard analytic files, 2011 and 2016.

and that the recent price growth at ASCs has been slower than price growth at HOPDs (Carey 2015, Robinson et al. 2015). In 2016, we estimate that beneficiaries' cost sharing was about \$580 million lower for the surgical services they received in ASCs relative to what their cost sharing would have been if those services had been provided in HOPDs.

Medicare program spending and overall beneficiary cost sharing could be reduced if more surgical services were provided in ASCs than HOPDs or if HOPD payment rates were reduced to the level that Medicare sets for ASCs. This issue is pertinent to the ASC sector because among even the most frequently provided services in ASCs, a substantial volume is provided in HOPDs. For example, 443,000 Medicare-covered cataract surgeries with intraocular lens insertion occurred in HOPDs in 2016, which was 27 percent of the total volume for this service.

Concern remains, however, about services provided in ASCs rather than HOPDs because most ASCs have some degree of physician ownership. Studies offer some evidence that physicians who have an ownership stake in an ASC perform a higher volume of certain procedures than physicians who do not (Hollingsworth et al. 2010, Mitchell 2010, Strobe et al. 2009a). 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. 2014, Hollingsworth et al. 2011, Koenig and Gu 2013). The most recent study may be the most convincing because it is based on a nationwide sample of Medicare beneficiaries and includes all surgical procedures (Hollenbeck et al. 2014). This study found that introducing ASCs into service areas that previously

**TABLE
5-7**

Quality measures used by CMS in the ASC Quality Reporting Program

| Description of quality measure | First year measure used for payment determination and status |
|--|--|
| ASC-1: Patient burn | 2014 |
| ASC-2: Patient fall | 2014 |
| ASC-3: Wrong site, wrong side, wrong patient, wrong procedure, wrong implant | 2014 |
| ASC-4: Hospital transfer/admission | 2014 |
| ASC-5: Prophylactic intravenous antibiotic timing | 2014 (discontinued 2018) |
| ASC-6: Safe-surgery checklist use | 2015 (discontinued 2018) |
| ASC-7: ASC facility volume data on selected ASC surgical procedures | 2015 (discontinued 2018) |
| ASC-8: Influenza vaccination coverage among health care personnel | 2016 |
| ASC-9: Endoscopy/polyp surveillance: Appropriate follow-up interval for normal colonoscopy in average-risk patients | 2016 |
| ASC-10: Endoscopy/polyp surveillance: Colonoscopy interval for patients with a history of adenomatous polyps—avoid inappropriate use | 2016 |
| ASC-11: Cataracts: Improvement in patient’s visual function within 90 days following cataract surgery | Voluntary |
| ASC-12: Facility seven-day risk standardized hospital visit rate after outpatient colonoscopy | 2018 |
| ASC-13: Normothermia outcome: Percentage of patients under anesthesia who are normothermic within 15 minutes of arrival in the post-anesthesia care unit | 2020 |
| ASC-14: Unplanned anterior vitrectomy: Percentage of cataract surgery patients who have an unplanned removal of the vitreous | 2020 |
| ASC-15: Five patient experience measures from the Consumer Assessment of Healthcare Providers and Systems® survey measures: | |
| 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 | Delayed |
| ASC-16: Toxic anterior segment syndrome (TASS) | Delayed |
| ASC-17: Hospital visits after orthopedic ASC procedures | 2022 |
| ASC-18: Hospital visits after urology ASC procedures | 2022 |

Note: ASC (ambulatory surgical center). ASC-16: Toxic anterior segment syndrome (TASS) has not been finalized by CMS through the regulatory process.

Source: Final rule for outpatient prospective payment system and ambulatory surgical center payment system, 2018.

did not have any resulted in a larger rate of increase in surgical procedures than in areas that already had at least one ASC or did not have any (but could have had HOPDs and doctor’s offices as places for ambulatory surgeries). However, this study found a smaller effect of ASCs on

surgical volume than did the earlier studies. Although none of these studies assessed the appropriateness of the additional procedures, they suggest that the presence of ASCs might increase overall surgical volume.

**TABLE
5-8**

ASC quality measure levels, 2013-2015

| ASC quality measure | Mean percent among ASCs | | | Estimated number of events in 2015* |
|---|-------------------------|-------|-------|-------------------------------------|
| | 2013 | 2014 | 2015 | |
| ASC-1: Share of patients suffering burns | 0.36% | 0.43% | 0.49% | 23,500 |
| ASC-2: Share of patients suffering falls | 0.18 | 0.10 | 0.14 | 6,700 |
| ASC-3: Share of patients suffering a "wrong" event | 0.07 | 0.03 | 0.03 | 1,400 |
| ASC-4: Share of patients transferred to a hospital | 0.51 | 0.45 | 0.42 | 20,200 |
| ASC-5: Share of patients receiving prophylactic intravenous antibiotics at appropriate time | 95 | 96 | 95 | |
| ASC-6: Share of ASCs using the safe-surgery checklist | | 99 | 100 | |
| ASC-8: Share of ASC staff receiving a flu shot | | 74 | 75 | |
| ASC-9: Share of average risk patients with appropriate endoscopy/polyp surveillance | | 77 | 80 | |
| ASC-10: Share of patients with polyp history with appropriate endoscopy/polyp surveillance | | 79 | 79 | |
| ASC-11: Share of patients with vision improvement 90 days after cataract surgery | | | 97 | |

Note: ASC (ambulatory surgery center).

*The number of events was estimated using the average reported rate of occurrence and the total number of ASC claims in 2015 (4.8 million). The estimated number of events is not calculated for measures that do not pertain to adverse events.

Source: Medicare Hospital Compare data for ASCs, 2013-2015.

Quality of care: Quality data demonstrate improvement, but CMS should implement additional measures

ASC-reported quality data show improvement, but opportunities for continued improvement remain both in terms of ASC performance and the measures used by CMS. CMS established the ASC Quality Reporting (ASCQR) Program in 2012 (Centers for Medicare & Medicaid Services 2011). Under this relatively new system, ASCs that do not successfully submit quality data have their payment update reduced by 2 percentage points. Performance on these quality measures does not affect an ASC’s payments; ASCs are required only to submit the data to receive a full update. The Commission has recommended a value-based purchasing program for ASCs that would reward high-performing providers (see text box, p. 140).

The quality measures for which ASCs submit data continue to evolve. For 2018, CMS requires ASCs to submit data for eight measures, and an additional measure is voluntary (Table 5-7). For payment determination beginning in 2022, CMS has two claims-based measures (ASC-17 and ASC-18) of beneficiaries’ visits to a

hospital subsequent to an ASC orthopedic or urology procedure, respectively. CMS has discontinued three measures in 2018 (ASC-5, ASC-6, and ASC-7) that are “topped out” (meaning full or nearly full compliance with these measures has been reached) and have shown less utility. CMS has delayed the implementation of two other ASC measures (ASC-15 and ASC-16).

Results from reported ASC quality data

The first three years of ASC-reported quality data show modest increases in performance, but also identify opportunities for potential improvement. Among the 10 quality measures for which data were available in calendar year 2015, performance among the ASCs that reported data appears strong for 7 measures. For the four measures related to adverse events (ASC-1, ASC-2, ASC-3, and ASC-4), the data show consistently low levels of adverse events in each of the three years for which data are available (Table 5-8). In addition to the generally low levels of adverse events reported by ASCs, the data indicate that the share of ASCs reporting zero events for each of these measures has increased over time. For example, the share of ASCs without any patient

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). A VBP program would reward high-performing providers (Medicare Payment Advisory Commission 2012).¹²

CMS established a quality reporting program for ASCs in 2012. However, Medicare payments to ASCs are not adjusted based on how ASCs perform on quality measures, only on whether they report the measures. The Commission believes that high-performing ASCs should be rewarded 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 program should give rewards based on clear, absolute, and prospectively set performance targets (as opposed to "tournament models," in which providers are scored relative to one another rather than on their absolute performance). The Medicare program should take into account, as necessary, 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, where benchmarks for achievement are group specific and each provider is compared to its peers, defined as providers that have similar patient populations in terms of 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. (Our March 2016 report to the Congress provides more detail about our recommendation to CMS about an ASC VBP program (Medicare Payment Advisory Commission 2016)). ■

burns increased from 88 percent to 92 percent from 2013 to 2015, and the share of ASCs without any patient falls increased from 91 percent to 93 percent (data not shown).

Measures of the share of patients receiving on-time antibiotic treatment and the share of ASCs using the safe-surgery checklist (ASC-5 and ASC-6) showed such high compliance levels that CMS discontinued their use beginning in 2018. However, three of the measures (ASC-8, ASC-9, and ASC-10) indicate that ASCs' performance could be improved. For example, ASCs on average indicated that only 75 percent of their staff had flu shots in 2015. Finally, a measure new for 2015, the share of patients with vision improvement after cataract surgery (ASC-11) showed very good results, raising the question of whether this measure was topped out upon introduction.

ASC reporting and quality measures should continue to be refined

CMS made improvements to the ASCQR Program for 2018, but the Commission believes CMS should continue to improve this reporting program and move toward more CMS-calculated claims-based outcome measures that apply to all ASCs. The Commission commends CMS on deciding to discontinue three process measures in 2018 and adding the two claims-based unplanned hospitalization measures for 2022. However, the Commission has two concerns about the ASCQR Program.

- The relatively high share of missing data adds uncertainty to the interpretation of the data. For example, in 2015, 6 percent of ASCs had missing data for the 4 wrong-event measures, 20 percent had missing data for the flu vaccine measure, and roughly

**TABLE
5-9**

Share of ASC cases with subsequent hospital visits, 2014 and 2016

Subsequent hospital visit within 7 days of discharge from ASC

| Type of ASC | 2014 | | 2016 | |
|------------------|--|------------------------|--|------------------------|
| | Number of ASC cases with subsequent hospital visit | Share of all ASC cases | Number of ASC cases with subsequent hospital visit | Share of all ASC cases |
| All ASCs | 96,740 | 2.0% | 99,021 | 2.0% |
| Multispecialty | 41,242 | 2.4 | 43,047 | 2.5 |
| Single specialty | 55,498 | 1.8 | 55,979 | 1.8 |
| Ophthalmology | 16,827 | 1.2 | 17,528 | 1.2 |
| Gastroenterology | 25,333 | 2.1 | 24,196 | 2.0 |
| Pain management | 7,316 | 2.4 | 7,670 | 2.4 |
| Urology | 4,416 | 4.0 | 4,841 | 4.1 |
| Cardiology | 259 | 7.9 | 372 | 8.1 |

Note: ASC (ambulatory surgical center). "Subsequent hospital visit" includes inpatient admissions, observation services, and emergency department visits, but excludes cases related to trauma or mental health services. To determine the number of cases in each row, divide the number of subsequent hospital visits by the share of all ASC cases.

Source: MedPAC analysis of Medicare physician, hospital outpatient, and hospital inpatient claims.

90 percent of ASCs specializing in ophthalmology had missing data for the measure of improvement in patient’s visual function within 90 days following cataract surgery.¹³ The Commission believes all reported quality data should be publicly available.

- The ASCQR Program does not include enough measures assessing claims-based clinical outcomes that apply to either all ASCs or all of the various specialties for which ASCs submit Medicare claims. For example, among the measures slated for implementation by 2022, six apply to all ASCs (ASC-1, ASC-2, ASC-3, ASC-4, ASC-8, ASC-13). Seven other measures apply to certain ASC specialties (e.g., gastroenterology, ophthalmology, orthopedics, or urology). CMS has not included speciality-specific quality measures that apply to common ASC specialties such as pain management, dermatology, podiatry, cardiology, and several other specialties (Table 5-4, p. 135).

Hospital visits following discharge from the ASC

Because of the concerns cited above and the potential value of clinical outcome measures that apply to all ASCs, we believe new ASC quality measures should be developed that apply either to all ASCs or to all the common ASC specialties. We have identified two measures that might

allow for better assessment of the quality of care provided in ASCs. The first of these measures is the number of Medicare beneficiaries discharged from ASCs who had a subsequent unplanned hospital visit. We developed a version of this measure by estimating the rate of subsequent hospital visits for the 5.1 million ASC claims in 2016. Although our measure is not risk adjusted, it should be if it were used in the ASCQR Program. We found that in 2016, 2.0 percent (about 99,000 claims) of ASC claims indicated that the patient had a subsequent hospital visit within 7 days after discharge from an ASC (Table 5-9).¹⁴ Across all ASCs, the share of patients with a subsequent hospital visit within seven days did not change from 2014 to 2016. However, the share of subsequent unplanned hospital visits increased slightly during this period for multispecialty ASCs (from 2.4 percent in 2014 to 2.5 percent in 2016), urology ASCs (4.0 percent to 4.1 percent, respectively), and cardiology ASCs (7.9 percent to 8.1 percent, respectively).

The second outcome measure CMS could consider for the ASCQR Program is the rate of surgical site infections (SSIs) occurring at ASCs. CMS could calculate this measure from claims, rather than require ASCs to report. Researchers have found that lapses in infection control were common among a sample of ASCs in three

**TABLE
5-10**

Medicare payments to ASCs grew, 2011-2016

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|-------|-------|-------|-------|-------|-------|
| Medicare payments (in billions of dollars) | \$3.4 | \$3.6 | \$3.7 | \$3.8 | \$4.1 | \$4.3 |
| Medicare payments per FFS beneficiary | \$106 | \$110 | \$113 | \$116 | \$122 | \$126 |
| Percent change per FFS beneficiary from previous year | 2.0% | 4.2% | 2.1% | 3.1% | 5.2% | 3.5% |

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

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, it is not currently working to develop one (Centers for Medicare & Medicaid Services 2016, Centers for Medicare & Medicaid Services 2011). 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.

Providers' 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 2016 by 1.4 percent, a rate consistent with the previous four years (Table 5-1, p. 131). However, Medicare accounts for a small share—perhaps 20 percent—of ASCs' overall revenue, so factors other than Medicare payments may have a larger effect on access to capital for this sector (Medical Group Management Association 2009).

Financial data suggest the industry is growing and profitable. In December 2016, the AmSurg Corporation—which owned and operated the largest number of ASCs in the country—was acquired by Envision Healthcare, which now operates 263 ASCs. A merger of this magnitude requires substantial capital assets. Moreover, in the first six months of 2017, Envision Healthcare had \$576 million in acquisition and capital expenditures, including \$33 million

to acquire controlling interest in four ASCs and \$91 million for new or replacement property. In January 2017, Surgical Care Associates—which owned approximately 200 ASCs in 33 states—was acquired by UnitedHealth Group's Optum for \$2.3 billion. This acquisition is part of a larger stated effort by the insurer to provide primary care and ambulatory services (Mathews 2017). In addition, large hospital corporations such as Hospital Corporation of America, Tenet Healthcare, and Community Health Systems all stated in 2017 financial reports that they have acquired ASCs or partnered with entities that own ASCs to increase their revenues (Community Health Systems 2017, Morningstar Document Research 2017a, Morningstar Document Research 2017b). Although they represent a small share of total ASCs, hospital-owned facilities appear to be a growing segment of the industry.

Strong financial positions of this magnitude suggest that ASCs are attractive to investors. Securities and Exchange Commission filings from Surgery Partners Inc. (operator of 98 ASCs) indicate revenues in their surgical facility services increased from the first six months of 2016 to the first six months of 2017 by nearly 20 percent (Surgery Partners Inc. 2017). Also, data from the Pennsylvania Health Care Cost Containment Council's annual analysis of the state's ASCs show that ASCs in Pennsylvania had an average total margin of 25 percent in 2016 (Pennsylvania Health Care Cost Containment Council 2017).¹⁵

Although Envision Healthcare, Surgery Partners Inc., and Surgical Care Associates appear to have adequate access to capital, we caution that these companies have ownership in a small share of the more than 5,000 ASCs. Consequently, the experience of these three companies may not represent the entire ASC sector.

Medicare payments: Payments have steadily increased

In 2016, ASCs received \$4.3 billion in Medicare payments and beneficiaries' cost sharing (Table 5-10). We estimate that spending by the Medicare program was \$3.4 billion and beneficiary cost sharing was \$850 million (data not shown).

Spending per FFS beneficiary increased by an average annual rate of 3.6 percent from 2011 through 2015 and by 3.5 percent in 2016 (Table 5-10). The increase in payments per capita in 2016 reflects a 0.3 percent increase in the ASC conversion factor, a 0.5 percent decrease in per capita volume, a 3.2 percent increase in the average relative weight of ASC services, and a 0.5 percentage point increase from higher use of separately payable drugs. Despite the small update to the conversion factor in 2016 and a decline in volume per beneficiary, spending per FFS beneficiary in 2016 increased at a rate that was similar to the previous four years, indicating that the increase in average relative weights in 2016 was large relative to changes in previous years. This result may have been driven by increased volume for high-cost procedures such as implantation of spinal neurostimulators, which may have resulted in lower volume for relatively low-cost injections for pain management.

How should Medicare payments change in 2019?

Our analysis indicates that the number of ASCs has increased, beneficiaries' use of ASCs has been stable, and access to capital has been adequate. In addition, 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.

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 decisions about the ASC update. Cost data are also needed to examine whether an alternative input price index would be an appropriate proxy for ASC costs. As discussed in the text box on the ASC market basket (p. 145), the Commission has previously expressed concern that the price index CMS uses to update ASC

payments (the CPI-U) likely does not reflect ASCs' cost structure (Medicare Payment Advisory Commission 2010b). CMS has also concluded that it needs data on ASC input costs (Centers for Medicare & Medicaid Services 2012). To date, however, CMS has not required ASCs to submit cost data. However, CMS 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 believe it is feasible for ASCs to provide cost information. All other facility providers provide cost data to CMS. Even though ASCs are generally small facilities that may have limited resources for collecting cost data, 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. Moreover, a Pennsylvania state agency is able to collect the cost and revenue data from ASCs in Pennsylvania and is able to estimate the margins for those ASCs. The cost and revenue data are for all ASC patients, not just those that are Medicare beneficiaries (Pennsylvania Health Care Cost Containment Council 2017).

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. As it did in 1986 and 1994, CMS could annually conduct a survey of a random sample of ASCs, with mandatory response. The Government Accountability Office conducted a similar random sample survey of ASC costs in 2004. 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 cost-collection process would place a large burden on ASCs. After all, individual taxpayers are able to 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);
- 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 the cost structure of ASCs and determine whether an existing Medicare price index is an appropriate proxy for ASC costs or an ASC-specific market basket should be developed.

CMS increased the ASC conversion factor by 1.4 percent in 2015, 0.3 percent in 2016, 1.9 percent in 2017, and 1.2 percent in 2018. The update for 2018 is based on a projected 1.7 percent increase in the CPI-U minus a 0.5 percent reduction for multifactor productivity growth, as mandated by the Patient Protection and Affordable Care Act of 2010 (PPACA).¹⁶

Recommendations

In recommending an update to the ASC conversion factor for 2019, the Commission balanced the following objectives:

- maintain beneficiaries' access to ASC services;
- pay providers adequately;
- hold down the burden on the beneficiaries and taxpayers who finance Medicare;

- 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 2019 should be eliminated and that the Secretary should collect cost data from ASCs.

RECOMMENDATION 5 - 1

The Congress should eliminate the calendar year 2019 update to the Medicare payment rates 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 and the importance of maintaining financial pressure on providers to constrain costs, we believe that ASC payment rates should not be increased for 2019. That is, the 2019 base payment rate under the ASC payment system should be the same as the base rate in 2018. The indicators of payment adequacy for which we have information are stable: The volume of services per beneficiary declined slightly in 2016, the complexity of services provided increased, and the number of ASCs increased. Also, ASCs appear to have adequate access to capital, and Medicare payments to ASCs have continued to grow. Moreover, even though we do not have cost data and we have reservations about the quality data, the indicators we have suggest that payments have been adequate.

For many years, we have stated that it is vital that ASCs submit cost data to CMS without further delay. 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.

The Commission asserts that collecting cost data is a reasonable requirement for ASCs. CMS collects cost data

Revisiting the ambulatory surgical center market basket

CMS uses the consumer price index for all urban consumers (CPI-U) as the market basket to update ambulatory surgical center (ASC) payment rates. 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 2010b). 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 2010b).

Since our 2010 analysis, CMS has considered whether the hospital market basket 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).

The ASC cost data from GAO used in our comparative analysis are 14 years old and do not contain information on several types of costs. Therefore, the Commission has recommended several times that the Congress require ASCs to submit new cost data to CMS (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 2010b). In each of the last five years, the Commission recommended eliminating the update to the ASC payment rates, meaning the ASC payment rates 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 market basket could include the same types of costs that appear in the hospital market basket or MEI but with different cost weights that reflect ASCs' unique cost structure. ■

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. Moreover, individual taxpayers are able to complete income tax forms of considerable length. Therefore, any ASC should be able to compile and submit a minimum set of cost data. Also, while the majority of the ASC industry consists of freestanding facilities, more corporate interests, such as hospital corporations and other large health care entities, have entered the ASC industry in recent years and have the capacity and expertise to complete cost reports. In light of the industry's concern, CMS could limit the

scope of the cost reporting system in order 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 select an update mechanism for ASC payment rates and has decided to use the CPI-U as the basis for updating payments (Centers for Medicare & Medicaid Services 2007). PPACA requires that the update factor be reduced by a multifactor productivity measure. The currently

projected CPI-U increase for 2019 is 2.1 percent, and the forecast of productivity growth for 2019 is 0.8 percent, resulting in a projected update of 1.3 percent to the base payment rates for 2019. Relative to current Medicare law, our recommendation would decrease federal spending by less than \$50 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 this recommendation 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 Because CMS updates payment rates in the OPPS and the PFS independently of each other, it is possible for the ASC payment rate for an office-based procedure to be based on the OPPS rate in one year and the PFS rate the next year or vice versa.
- 2 CMS stated that responders said that they currently bill on a UB-04 for commercial payers and would benefit from a consistent claim form across payers, especially for Medicare crossover claims.
- 3 GAO surveyed a random sample of 600 ASCs to obtain cost data from 2004. They received reliable cost data from 290 facilities.
- 4 Because some states (such as Georgia, Idaho, and Maryland) have a disproportionately high number of ASCs per beneficiary, we weighted beneficiaries such that the share in each state who received care in ASCs matched the national percentage. This process prevented idiosyncrasies in states that have high concentrations of ASCs from biasing the results. The analysis excluded beneficiaries who received services that Medicare does not cover in ASCs.
- 5 These data are based on 273 ASCs and 169 hospitals.
- 6 Strobe and colleagues measured areas' socioeconomic status using household income; value of owner-occupied housing; percent of households with dividend or rental income; educational attainment; and percent of residents employed in managerial, professional, and related occupations.
- 7 The study by Suskind and colleagues also found that ASCs are more likely to enter a market that did not previously have an ASC if the outpatient procedures in that market are concentrated among a relatively small number of providers, which implies relatively low competition in that market.
- 8 Whether a state has certificate-of-need (CON) laws for ASCs appears to affect the number of ASCs in the state. Twenty-seven states and the District of Columbia have CON laws for ASCs. Nine of the 10 states with the fewest ASCs per capita have a CON law in place, while only 4 of the 10 states that have the most ASCs per capita have CON laws. Among these four states, Maryland and Georgia have exceptions in their CON requirements that make it easier to establish new ASCs.
- 9 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 more than 67 percent of their Medicare claims in more than one clinical specialty.
- 10 By statute, coinsurance for a service paid under the OPPS cannot exceed the hospital inpatient deductible (\$1,340 in 2018). The ASC payment system does not have the same limitation on coinsurance; for a few services, the ASC coinsurance exceeds the inpatient deductible. In these instances, the ASC coinsurance exceeds the OPPS coinsurance.
- 11 Having services provided in ASCs rather than HOPDs is less costly to beneficiaries despite the ASC cost sharing being higher than HOPD cost sharing for some services. Cost sharing is higher under the ASC payment system for only 84 of 3,456 HCPCS codes that are covered under the ASC payment system.
- 12 The Commission also described its principles for a VBP program for ASCs in a letter to the Congress commenting on the Secretary's report to the Congress on a VBP program for ASCs (Medicare Payment Advisory Commission 2011a).
- 13 ASCQR measure ASC-11 assesses the improvement in a patient's visual function within 90 days following cataract surgery. This measure is voluntary for ASCs, but less than 10 percent of the roughly 1,200 ASCs specializing in ophthalmology voluntarily reported data for this measure. In addition to the voluntary nature of this measure, reporting may also be low for this measure because ASCs with fewer than 240 Medicare cases per year are not required to report their quality data.
- 14 Subsequent hospital visits include emergency department services, outpatient observation services, and inpatient services.
- 15 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.
- 16 Unlike update factors for other providers, such as the hospital market basket, the CPI-U is an output price index that already accounts for productivity changes (Centers for Medicare & Medicaid Services 2012). Nevertheless, CMS is mandated to subtract multifactor productivity growth from the ASC update factor.

References

- Ambulatory Surgery Center Association. 2012. Letter from William Prentice, Chief Executive Officer, to Marilyn Tavenner, Acting Administrator of the Centers for Medicare & Medicaid Services, regarding CMS–1589–P: Medicare program; proposed changes to the ambulatory surgical center payment system and CY 2013 payment rates. September 4.
- Ambulatory Surgery Center Association. 2011. Benefits of physician ownership. <http://www.ascassociation.org/advancingsurgicalcare/whatisanasc/benefitsofphysicianownership>.
- Berenson, R. A., P. B. Ginsburg, J. B. Christianson, et al. 2012. The growing power of some providers to win steep payment increases from insurers suggests policy remedies may be needed. *Health Affairs* 31, no. 5 (May): 973–981.
- 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. 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. 2015. The characteristics and perceptions of the Medicare population: Data from the 2013 Medicare Current Beneficiary Survey. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Tables-Items/2013CNP.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=descending>.
- 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.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2007. Medicare program; revised payment system policies for services furnished in ambulatory surgical centers (ASCs) beginning in CY 2008. Final rule. *Federal Register* 72, no. 148 (August 2): 42469–42626.
- Community Health Systems. 2017. Form 10–K annual report to the Securities and Exchange Commission. February 26.
- Gabel, J. R., C. Fahlman, R. Kang, et al. 2008. Where do I send thee? Does physician-ownership affect referral patterns to ambulatory surgery centers? *Health Affairs* 27, no. 3 (May–June): w165–174.
- Government Accountability Office. 2006. *Medicare: Payment for ambulatory surgical centers should be based on the hospital outpatient payment system*. Washington, DC: GAO.
- 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.
- Hirst, E. J. 2010. Northwestern Memorial opening new outpatient center. *Chicago Tribune*, October 13.
- 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. Strobe, et al. 2010. Physician-ownership of ambulatory surgery centers linked to higher volume of surgeries. *Health Affairs* 29, no. 4 (April): 683–689.
- Jacobson, G. 2014. Tenet CEO Trevor Fetter sees big growth in outpatient centers. *Dallas Morning News*, November 4.
- Kochman, B. 2014. Montefiore Medical Center opens 12-story bedless outpatient center in the Bronx. *New York Daily News*, November 10.
- Koenig, L., and Q. Gu. 2013. Growth of ambulatory surgical centers, surgery volume, and savings to Medicare. *American Journal of Gastroenterology* 108: 10–15.
- Levingston, C. 2014. Premier Health buys Middletown surgery center. *Journal-News*, September 18.
- Mathews, A. W. 2017. UnitedHealth's Optum to acquire Surgical Care Affiliates for \$2.3 billion. *Wall Street Journal*, January 9.
- Mathews, A. W. 2012. Same doctor visit, double the cost: Insurers say rates can surge after hospitals buy private physician practices; Medicare spending rises, too. *Wall Street Journal*, August 27.
- 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. 2010a. *Report to the Congress: Aligning incentives in Medicare*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2010b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medical Group Management Association. 2009. *Ambulatory surgery center performance survey: 2009 report based on 2008 data*. Washington, DC: MGMA.
- Merritt Hawkins. 2014. *Survey of 20,000 U.S. physicians: 80% of doctors are over-extended or at full-capacity*. Dallas, TX: Merritt Hawkins. http://www.merrithawkins.com/uploadedFiles/MerrittHawkings/Clients/2014_Physicians_Foundation_MerrittHawkins_Release%282%29.pdf.
- 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.
- Moody, E. 2014. Beaufort Memorial Hospital becomes full owner of Surgery Center of Beaufort. *The State*, December 2.
- Morningstar Document Research. 2017a. HCA Holdings, for 10–K. February 22.
- Morningstar Document Research. 2017b. Tenet Healthcare Corporation, for 10–K. February 27.
- 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.
- North Carolina Department of Health and Human Services. 2011. Declaratory ruling to Wayne Memorial Hospital, Inc., and Wayne Ambulatory Surgery Center, LLC. November 29. <http://www.ncdhhs.gov/dhsr/declrule/2011/20111129Wayne.pdf>.
- Pennsylvania Health Care Cost Containment Council. 2017. *Financial analysis 2016. Volume two, ambulatory surgery centers*. Harrisburg, PA: PHC4.
- Physicians Advocacy Institute. 2016. Physician practice acquisition study: National and regional employment changes. <http://www.physiciansadvocacyinstitute.org/Portals/0/assets/docs/PAI-Physician-Employment-Study.pdf>.
- Robinson, J. C., T. Brown, and C. Whaley. 2015. Reference-based 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.

Sowa, T. 2014. Providence Medical Center in Spokane Valley nearly ready for patients. *The Spokesman-Review*, April 12.

State of Connecticut, Department of Public Health, Office of Health Care Access. 2011. Notice of final decision for an application for a certificate of need filed by Hartford Hospital & Constitution Eye Surgery Center, LLC. Change of ownership and control of Constitution Eye Surgery Center, LLC to Hartford Hospital. January 20.

Strope, S. A., S. Daignault, J. M. Hollingsworth, et al. 2009a. 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.

Strope, S. A., A. Sarma, Z. Ye, et al. 2009b. Disparities in the use of ambulatory surgical centers: A cross sectional study. *BMC Health Services Research* 9: 121.

Surgery Partners Inc. 2017. Quarterly report (Form 10–Q), period ended June 30. Filing submitted to the Securities and Exchange Commission.

Suskind, A. M., Y. Zhang, R. L. Dunn, et al. 2015. Understanding the diffusion of ambulatory surgery centers. *Surgical Innovation* 22, no. 3 (June): 257–265.

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.