

CHAPTER

5

**Ambulatory surgical
center services**

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

- 5** The Congress should eliminate the update to the payment rates for ambulatory surgical centers for calendar year 2018. The Congress should also require ambulatory surgical centers to submit cost data.

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

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 2015, nearly 5,500 ASCs treated 3.4 million fee-for-service (FFS) Medicare beneficiaries. Medicare program and beneficiary spending on ASC services was about \$4.1 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 2010 to 2014, the number of Medicare-certified ASCs grew at an average annual rate of 1.1 percent. In 2015, the number of ASCs increased 1.4 percent. Most new ASCs in 2015 (96 percent) were for-profit facilities.
- **Volume of services**—From 2010 through 2014, the volume of services per beneficiary grew by an average annual rate of 0.5 percent. In 2015, volume increased by 1.8 percent, which is higher than in recent years.

In this chapter

- Are Medicare payments adequate in 2017?
- How should Medicare payments change in 2018?

Quality of care—ASCs began submitting data on quality measures to CMS in October 2012. CMS has made data from 2013 and 2014 publicly available for five of these measures. Among the ASCs that submitted data on these measures, quality appears to have improved from 2013 to 2014. However, CMS allowed ASCs to suppress their data on these measures, and some ASCs chose that option. Therefore, the data from the ASCs that did not have their data suppressed may not necessarily represent the quality performance of the sector in general. For 2014, CMS has released quality data on four other measures. We have concerns about ASCs' performance on some of these measures. For example, only 10 percent of reporting ASCs indicated all of their personnel had a flu vaccine, and 14 percent of reporting ASCs indicated that less than 50 percent of the personnel had a flu vaccine. Further, reported quality data and claims analysis suggest possible areas of improvement for certain types of ASCs.

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 2.8 percent per year from 2010 through 2014 and by 5.2 percent in 2015. ASCs do not submit data on the cost of services they provide to Medicare beneficiaries. Therefore, we cannot calculate a Medicare margin like 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 2018. In addition, the Commission again recommends that CMS collect cost data from ASCs without further delay. ■

Background

An ambulatory surgical center (ASC) is a distinct entity that primarily provides outpatient 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 provides separate payments for 3,400 surgical procedures under the ASC payment system. However, the volume of ASC services is concentrated on a relatively small number of services: 70 percent of the volume occurs in only 20 services. Physicians who perform procedures in ASCs or other facilities receive a separate payment for their professional services under 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://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_16_asc_final.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 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 ASCs for two reasons. First, relative weights have been 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 2017, this adjustment has reduced the ASC relative weights by 10 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 \$45.02 for 2017, which is lower than the OPPS conversion factor (\$75.00 for 2017).

The ASC conversion factor is lower than the OPPS conversion factor because the ASC conversion factor started at a lower level in 2008 and has been updated at a lower rate than the OPPS conversion factor since then. 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 updates to the ASC conversion factor have been smaller than the updates to the OPPS conversion factor.

We are concerned that the CPI-U may not reflect ASCs' cost structure (see text box on the ASC market basket, p. 149). However, CMS does not collect ASC cost data, which we could use to determine whether an alternative input price index would be an appropriate proxy for ASC costs. The ASC industry has opposed the collection of cost information for this purpose (Ambulatory Surgery Center Association 2012). Nevertheless, the Commission has recommended that CMS collect cost data from ASCs to identify an alternative price index (Medicare Payment Advisory Commission 2010b).

CMS uses a method different 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, CMS implemented comprehensive ambulatory payment classifications (C-APCs) for the OPPS but not for the ASC system. C-APCs largely combine all hospital 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 into the ASC system because the ASC claims processing system does not allow for the type of packaging of ancillaries necessary for creating C-APCs.

In 2008, Medicare began making separate payments to ASCs for the following ancillary items and services:

- radiology services that are integral to a covered surgical procedure if separate payment is made for the radiology service in the OPPS;
- brachytherapy sources implanted during a surgical procedure;
- all drugs that are paid for separately under the OPPS when provided as part of a covered surgical procedure (pass-through and non-pass-through drugs); and
- devices with pass-through status under the OPPS.²

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.

Are Medicare payments adequate in 2017?

To address whether payments for the current year (2017) are adequate to cover the costs of efficient providers and how much payments should change in the coming year (2018), 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.

ASCs began submitting quality data to CMS in October 2012. Data from 2013 and 2014 for five quality measures are now publicly available. However, CMS gave ASCs the option to suppress these data. For ASCs that chose that option, their data from 2013, 2014, or both are not publicly available. CMS allowed ASCs to suppress these data out of concern that some ASCs had difficulty implementing systems changes that were necessary for submission of the data (Quality Reporting Center 2015). Suppressing data from some ASCs has the potential to distort the overall picture presented by available data on ASCs’ performance on these quality measures, which could diminish the usefulness of these data. On four of these measures, data are not reported for 6 percent of the ASCs because the ASC elected not to submit the data, the ASC had no claims data for the measure, or the ASC elected to have its data suppressed. Data are not reported for the fifth measure for 57 percent of ASCs. Because data are missing or not reported for a meaningful share of ASCs, the data that are 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 possible areas of quality improvement for certain types of ASCs.

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 2015 found that the following groups represent a smaller share of ASC patients than of 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 ages 85 and older (Table 5-1).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 2015a).

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.

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). ASCs also have

TABLE 5-1

Medicare patients treated in ASCs differ from patients treated in HOPDs, 2015

Characteristic	Percent of beneficiaries	
	ASC	HOPD
Medicaid status*		
Not Medicaid	86.7%	78.4%
Medicaid	13.3	21.6
Race/ethnicity		
White	86.7	83.2
African American	6.9	10.2
Other	6.3	6.5
Age		
Under 65	12.0	19.5
65 to 84	81.0	70.7
85 or older	7.0	9.8
Sex		
Male	42.9	44.8
Female	57.1	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. *"Medicaid status" refers to whether a beneficiary has dual eligibility. "Not Medicaid" indicates a beneficiary does not have dual eligibility, and "Medicaid" indicates a beneficiary has dual eligibility.

Source: MedPAC analysis of physician/supplier and outpatient standard analytic files, 2015.

(continued next page)

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 Medicare-certified facilities and fairly stable volume of services provided to Medicare

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

This difference is statistically significant ($p < 0.05$). 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).⁵ Moreover, sicker patients may be referred to HOPDs instead of ASCs because hospitals offer emergency services and access to onsite specialists if complications arise.

A caveat about this comparison is that patient risk scores tend to be higher in some regions than in others. To the extent that the regions where ASCs are relatively common have risk scores that are different from the overall average, the differences in risk scores that we estimated may be affected. However, our estimated difference in risk scores between ASC patients and HOPD patients is so large that regional differences in risk scores are very unlikely to affect the conclusion that HOPD patients have higher average risk scores than ASC patients.

We also compared average patient risk scores for each of the 137 services that composed 90 percent of ASC volume in 2014. For 112 of these services, the average HOPD risk score was statistically higher than the average ASC risk score ($p < 0.05$). For the remaining 25 services, the severity of patients in HOPDs was similar to or less than the severity of patients in ASCs.

There is evidence that ASCs treat fewer Medicaid patients than HOPDs. 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 2016). In Pennsylvania in 2015, Medicaid patients accounted for 5.9 percent of ASCs' diagnostic and surgical procedures, compared with 12.5 percent of HOPDs' procedures.⁶ Commercially insured and Medicare patients represented a higher share of ASC procedures than HOPD procedures (86.2 percent vs. 77.7 percent, respectively). Although Pennsylvania data may not be nationally representative, national estimates from the National Survey of Ambulatory Surgery (NSAS), conducted by the Centers for Disease Control and Prevention, show that ASCs treated a smaller share of Medicaid patients than did HOPDs in 2006. According to the NSAS data, ambulatory surgery visits by Medicaid

patients accounted for 3.9 percent of total visits to freestanding ASCs compared with 8.1 percent of total visits to hospital-based surgery centers.⁷

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 (2008) suggests that insurance coverage influences a physician's decision to refer a patient to an ASC or to a hospital. 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 indicates that people living in areas that have relatively low socioeconomic status (measured by median household income; value of owner-occupied housing; share of households with dividend or rental income; educational attainment; and share of residents employed in managerial, professional, and related occupations) are less likely to receive surgical services in ASCs than are people living in areas that have high socioeconomic status (Strobe et al. 2009b). Also, research indicates that 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).⁸

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 2015a). 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 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 (Table 5-1, p. 135). ■

**TABLE
5-2**

Number of Medicare-certified ASCs grew by 7 percent, 2010-2015

Average annual percent change

Type of ASC	2000	2010	2014	2015	2000-2010	2010-2014	2014-2015
Total	3,028	5,111	5,402	5,475	5.4%	1.1%	1.4%
New	295	192	180	149	N/A	N/A	N/A
Closed or merged	53	110	94	76	N/A	N/A	N/A

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

Source: MedPAC analysis of Provider of Services file from CMS, 2016.

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. The Office of Inspector General estimated that from 2007 through 2011 the Medicare program spent \$7 billion less on services provided in ASCs than Medicare would have spent if those services had been provided in HOPDs (Office of Inspector General 2014). However, most ASCs have some degree of physician ownership. These physician owners may have an incentive to provide more services in the facilities where they have an ownership stake than they would in HOPDs where they have no stake. Therefore, having surgical services provided in ASCs rather than HOPDs could lead to an increase in overall surgical volume.

Capacity and supply of providers: Number of ASCs is increasing

From 2014 through 2015, the number of Medicare-certified ASCs increased 1.4 percent to nearly 5,500 ASCs (Table 5-2). This annual growth rate was similar to the years between 2010 and 2014, but slower than roughly a decade earlier. From 2000 to 2010, the number of ASCs increased about 5.4 percent per year, while from 2010 to 2014, the number of ASCs increased 1.1 percent per year. In 2015, 149 ASCs entered the market and 76 ASCs either closed or merged with other facilities. Since 2000, the number of new ASCs has outnumbered ASCs that have

closed or merged, leading to an 81 percent increase in the number of ASCs from 2000 to 2015 (data not shown).

Several factors might explain the relatively slower growth of ASCs since 2009:

- 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 rates Medicare pays for ambulatory surgical services provided in HOPDs relative to ASCs (in 2017, Medicare’s rates are 85 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 2015, there were more than 16,000 ORs in ASCs, or an average of 3.0 per facility. From 2010 through 2014, the total number of ASC ORs increased 0.9 percent per year, a slightly slower rate than the growth in the number of ASCs overall (1.4 percent per year). From 2014 to 2015, the number of ORs in ASCs increased by about 2 percent, a slightly faster rate than the number of ASCs overall (1.4 percent). This growth was due to existing

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

Type of ASC	Open in 2010	Open in 2015	New in 2015
Urban	92.0%	92.8%	93.2%
Rural	8.0	7.2	6.8
For profit	94.0	94.2	95.9
Nonprofit	3.4	3.3	2.0
Government	2.5	2.6	2.0

Note: ASC (ambulatory surgical center).

Source: MedPAC analysis of Provider of Services file from CMS, 2016.

ASCs expanding their OR capacity. ASCs entering the market in recent years tend to be smaller. Among the ASCs that entered the market in 2014 and 2015, 66 percent had just one or two ORs. By contrast, in 2010, 53 percent of all ASCs had one or two ORs.

ASCs are concentrated geographically. In 2015, Maryland had the most ASCs per 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 (less than 0.5 ASCs per 10,000 beneficiaries).⁹

Consistent with previous years, most Medicare-certified ASCs in 2015 were for profit (94 percent), urban (93 percent) (Table 5-3), and located off a hospital campus (99 percent) (data not shown). The characteristics of ASCs in 2015 are similar to those of ASCs operating in 2010. However, ASCs that were new in 2015 were slightly more likely to be urban (including urban and suburban areas) and for profit 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. In addition, beneficiaries who live in rural areas can travel to urban areas to receive care in ASCs.

**TABLE
5-4****Specialization of ASCs, 2015**

Type of ASC	Number of ASCs	Share of all ASCs
Single specialty	2,878	61%
Gastroenterology	1,027	22
Ophthalmology	1,020	22
Pain management	355	8
Dermatology	191	4
Urology	124	3
Podiatry	95	2
Orthopedics/musculoskeletal	23	0
Respiratory	16	0
Cardiology	10	0
OB/GYN	9	0
Neurology	5	0
Other	3	0
Multispecialty	1,802	39
More than 2 specialties	1,421	30
Pain management and neurology/orthopedics	221	5
Gastroenterology and ophthalmology	160	3
Total	4,680	100

Note: ASC (ambulatory surgery centers), OB/GYN (obstetrics and gynecology). "Single-specialty ASCs" are defined as those with more than 67 percent of their Medicare claims in one clinical specialty. "Multispecialty ASCs" are defined as those with more than 67 percent of their 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 2015.

Source: MedPAC analysis of Medicare carrier file claims, 2015.

**TABLE
5-5**

Volume of ASC services per FFS beneficiary increased in 2015

	2010	2011	2012	2013 (actual)	2013* (adjusted)	2014	2015
Volume of services (in millions)	6.5	6.7	6.9	6.9	6.3*	6.2	6.4
Volume per 1,000 FFS beneficiaries	202.6	206.1	209.2	210.3	189.6*	187.8	191.2
Percent change in volume per FFS beneficiary from previous year	1.7%	1.7%	1.5%	0.5%	N/A	-0.9%	1.8%

Note: ASC (ambulatory surgical center), FFS (fee-for-service), N/A (not applicable).

*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 services in 2013 consistent with the method for counting services in 2014 and 2015.

Source: MedPAC analysis of physician/supplier standard analytic files, 2010–2015.

The majority of ASCs specialize in a single clinical area, with gastroenterology and ophthalmology being the most common. Overall, 61 percent of ASCs in 2015 were single-specialty facilities (Table 5-4).¹⁰ Twenty-two percent of ASCs specialized in gastroenterology and another 22 percent specialized in ophthalmology. Smaller shares specialized in pain management (8 percent), dermatology (4 percent), urology (3 percent), and podiatry (2 percent). 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 (5 percent of all ASCs) or gastroenterology and ophthalmology services (3 percent of all ASCs). The remaining multispecialty ASCs had more than two clinical specialties. From 2014 to 2015, the proportion of multispecialty ASCs increased by 1 percentage point relative to single-specialty ASCs (data not shown).

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

- Changes in clinical practice and health care technology have expanded the provision of surgical procedures in ambulatory settings.
- 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.¹¹
- 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 there 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.

Number of beneficiaries treated and volume of services grew from 2014 to 2015

We found that the number of FFS beneficiaries treated in ASCs and the volume of ASC surgical services per FFS beneficiary grew from 2014 to 2015. 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 0.5 percent per year from 2010 through 2014 and increased by 1.2 percent in 2015 (data not shown). The volume of services per FFS beneficiary increased by an average of 0.5 percent per year from 2010 through 2014 and by 1.8 percent in 2015 (Table 5-5). On average, the number of services per

**TABLE
5-6**

The 20 most frequently provided ASC services in 2015 were similar to those provided in 2010

Surgical service	2010		2015	
	Percent of volume	Rank	Percent of volume	Rank
Cataract surgery w/ IOL insert, 1 stage	19.2%	1	18.6%	1
Upper GI endoscopy, biopsy	8.9	2	8.2	2
Colonoscopy and biopsy	6.2	3	6.8	3
Lesion removal colonoscopy (snare technique)	4.7	4	5.6	4
Diagnostic colonoscopy	4.7	5	2.3	9
After cataract laser surgery	4.4	6	4.4	6
Inject foramen epidural: lumbar, sacral	4.2	7	4.8	5
Injection spine: lumbar, sacral (caudal)	3.9	8	3.3	7
Inject paravertebral: lumbar, sacral	2.3	9	3.1	8
Colorectal screen, high-risk individual	1.8	10	2.0	10
Cataract surgery, complex	1.4	11	1.6	12
Colorectal screen, not high-risk individual	1.4	12	1.9	11
Upper GI endoscopy, diagnosis	1.4	13	1.0	17
Lesion removal colonoscopy (hot biopsy forceps)	1.2	14	0.8	21
Cystoscopy	1.2	15	1.2	15
Revision of upper eyelid	1.0	16	0.9	19
Inject spine, cervical or thoracic	0.9	17	1.0	16
Upper GI endoscopy, insertion of guide wire	0.8	18	0.8	20
Injection procedure for sacroiliac joint, anesthetic	0.8	19	1.3	14
Carpal tunnel surgery	0.7	20	0.7	22
Total	71.3		70.4	

Note: ASC (ambulatory surgical center), IOL (intraocular lens), GI (gastrointestinal). The numbers listed in the "Percent of volume" columns do not sum to stated totals because of rounding.

Source: MedPAC analysis of physician/supplier standard analytic files, 2010 and 2015.

beneficiary who received services in ASCs increased at an average annual rate of 0.7 percent from 2010 through 2014 and 0.8 percent in 2015.

Services that have historically contributed the most to overall volume continued to constitute a large share of the total in 2015. For example, the Healthcare Common Procedure Coding System (HCPCS) code for cataract removal with intraocular lens insertion (HCPCS 66984) had the highest volume in both 2010 and 2015, accounting for 19.2 percent of volume in 2010 and 18.6 percent in 2015. Moreover, 18 of the 20 most frequently provided HCPCS codes in 2010 were among the 20 most frequently provided in 2015 (Table 5-6). These services constituted about 71 percent of ASC Medicare volume in 2010 and

70 percent in 2015. 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 certain spinal injections. CMS could consider policies such as requiring prior authorization or strengthening auditing practices to limit the provision of these types of services.

Services that were outside the 20 most frequently provided HCPCS codes accounted for 29 percent of ASC volume in 2010 and 30 percent in 2015. We grouped the HCPCS codes for these services into broader service categories and found that eye procedures, nerve injections (for pain management), arthroscopy, and skin repair had the highest volume. These four categories accounted for 15 percent of ASC volume in 2010 and 14 percent in 2015.

Outpatient surgical procedures grew in HOPDs and ASCs in 2015

From 2010 through 2014, average annual growth in volume per FFS beneficiary of surgical services covered by the ASC payment system was 0.5 percent in ASCs and 1.5 percent in HOPDs. In 2015, volume per FFS beneficiary increased by 1.8 percent in ASCs and by 2.5 percent in HOPDs.

A reason for the higher growth of surgical services in HOPDs relative to ASCs over the 2010 through 2015 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 2017, Medicare payment rates for most surgical services are 85 percent higher in HOPDs than in ASCs. Another reason for the slower growth in ASC volume is that physicians continue to move away from working in private practices and toward working for hospitals or medical groups (Merritt Hawkins 2014, Physicians Advocacy Institute 2016). It is likely that physicians working for hospitals are more inclined to perform procedures at or refer patients to the hospitals that employ them rather than freestanding ASCs.

Maintaining or expanding access to ASCs

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. Medicare payment rates for surgical services performed in HOPDs are about 85 percent higher than if the same surgical services are provided in ASCs. For example, the most frequently provided service in ASCs is cataract surgery with intraocular lens insertion, HCPCS 66984. The payment rate for this procedure in 2017 is \$977 in ASCs compared with \$1,824 in HOPDs. The lower payment rate in ASCs for this service has been financially beneficial to Medicare and beneficiaries, given that the share of these procedures provided in ASCs rose from 70 percent in 2010 to 73 percent in 2015. Other recent studies similarly find that ASCs are less costly than HOPDs in the Medicare and non-Medicare context and that the recent price growth at ASCs has been slower than price growth at HOPDs (Carey 2015, Robinson et al. 2015).

Medicare program spending and beneficiary cost sharing could be reduced if more surgical services were provided in ASCs rather 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, 27 percent of the total volume of cataract surgery with intraocular lens insertion (the service that has the largest volume in ASCs) occurred in HOPDs in 2015, and the overall HOPD volume among Medicare beneficiaries was 439,000 units. We provide a description of a method that could be used to adjust HOPD payment rates for select services to the level of ASC payment rates (see text box, p. 142).

A concern remains, however, about services provided in ASCs rather than HOPDs because most ASCs have some degree of physician ownership. 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 own a stake (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 did not have any resulted in a larger rate of increase in ambulatory surgical procedures than in areas that already had at least one ASC or did not have any. However, this study found a smaller effect of ASCs on outpatient surgical volume than did the earlier studies. Although none of these studies assessed whether the additional procedures were inappropriate, they suggest that the presence of ASCs might increase overall surgical volume.

Quality of care: Newly reported quality data demonstrate room for improvement in ASC performance and measure development

ASC-reported quality data that CMS made available to the public for the first time in 2016 represent a positive first step in measuring ASC performance. However, CMS should work to improve the existing measures and to add new measures that better represent ASCs' performance.

CMS established the ASC Quality Reporting (ASCQR) Program in 2012 (Centers for Medicare & Medicaid Services 2011). Under this system, ASCs must submit data on quality measures to receive the full update to the ASC payment rates each year. ASCs that do not successfully

Aligning hospital outpatient payment rates with ambulatory surgical center payment rates for select services

In previous work, we investigated the idea of aligning payment rates in the outpatient prospective payment system (OPPS) for select services with rates in the ambulatory surgical center (ASC) payment system. For these services, the result would be that Medicare payment rates would be “site neutral,” meaning payment rates would be the same whether the service were provided in a hospital outpatient department (HOPD) or an ASC (Medicare Payment Advisory Commission 2013a).

In that analysis, we used three criteria to identify services for which we determined it is reasonable to have equal payment rates in HOPDs and ASCs:

- The service is performed in ASCs more than 50 percent of the time, which indicates it is likely safe and appropriate to provide in ASCs.
- The service is provided with an emergency department (ED) visit less than 10 percent of the time when it is furnished in an HOPD. Infrequent use of ED visits indicates the service is unlikely to have costs associated with operating an ED.
- The severity of patients who receive the service is no greater when it is provided in an HOPD than in an ASC. We used patients’ risk scores from the CMS hierarchical condition category (CMS–HCC) risk adjustment model to measure patient severity. For a given service, we determined that patient severity is not greater among patients receiving that service in HOPDs if their mean risk score is not statistically greater than the mean risk score for the patients receiving that service in ASCs.

It is possible that two of these criteria could be relaxed and still meet their intended purpose. First, the 50 percent requirement in the first criterion may not be necessary. The purpose of this criterion was to provide assurance that the services are safe to provide in ASCs. However, the fact that a service is covered under the ASC payment system indicates that CMS believes that providing the service in an ASC does not

pose a significant risk to patient safety. Nevertheless, a minimum threshold that ASCs provide at least 1,000 units of a service per year is reasonable to ensure that the service has been safely provided in ASCs.

Additionally, the criterion for patient severity could be relaxed. Many services are frequently provided in both HOPDs and ASCs. In these cases, even small differences between mean risk scores in HOPDs and ASCs can be statistically significant because of the large number of patients. This criterion could be adjusted so that site-neutral payments are appropriate if the average risk score for patients in HOPDs is no greater than the average risk score for patients in ASCs by a difference of 0.10.

A summary of the criteria that could replace the criteria from our previous work for identifying services that are viable for site-neutral payments between HOPDs and ASCs include:

- the service is a covered service under the ASC payment system and provided in ASCs at least 1,000 times per year;
- the service is provided with an ED visit less than 10 percent of the time when it is furnished in an HOPD; and
- the service has an average risk score for patients in HOPDs that does not exceed the average risk score for patients in ASCs by more than 0.1.

Eighty-nine of the 3,400 Healthcare Common Procedure Coding System coded services that are paid separately under the ASC payment system would meet these revised criteria. Combined program spending and beneficiary cost sharing for these services in 2014 was about \$3.1 billion in HOPDs. If OPPS payment rates for these services had been set equal to the rates in the ASC payment system, combined program spending and beneficiary cost sharing would have been lower by about \$1.4 billion. Medicare program spending would have been lower by \$1.2 billion and beneficiary cost sharing by \$200 million. ■

**TABLE
5-7**

Quality measures that CMS uses in the ASC Quality Reporting Program

Description of quality measure	First year measure used for payment determination
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
ASC-6: Safe-surgery checklist use	2015
ASC-7: ASC facility volume data on selected ASC surgical procedures	2015
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	2020

Note: ASC (ambulatory surgical center).

Source: Final rule for outpatient prospective payment system and ambulatory surgical center payment system, 2017.

submit the 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 and penalize low-performing providers (see text box, p. 145).

CMS has identified 19 quality measures for which ASCs submit data (Table 5-7). Five measures began affecting

payment in 2014; two measures began in 2015; three measures began in 2016; one measure will begin in 2018; and seven measures will begin in 2020. One measure is voluntary and does not affect payment updates (Centers for Medicare & Medicaid Services 2015b).

Results from reported 2013 and 2014 ASC quality data

In 2016, CMS made ASC-reported data on five quality measures from calendar years 2013 and 2014 available to the public. The five measures affecting payment beginning

**TABLE
5-8**

Modest improvement in ASC quality from 2013 to 2014

Percent meeting threshold*

Description of quality measure	Percent meeting threshold*		
	2013	2014	Percentage point change
Patient burn	88.3%	90.6%	2.3
Patient fall	91.1	92.5	1.4
Wrong site, wrong side, wrong patient, wrong procedure, wrong implant	97.9	98.0	0.1
Hospital transfer/admission	74.9	77.1	2.2
Prophylactic intravenous antibiotic timing	59.2	64.6	5.4

Note: ASC (ambulatory surgical center).

*We established thresholds of zero events for the first four measures listed. We used a threshold of 99 percent of patients for prophylactic antibiotic timing, which we derived from the ASC Quality Collaboration.

Source: MedPAC analysis of CMS dataset of ASC 2013 and 2014 quality data.

in 2014 demonstrate modest improvement from 2013 to 2014 (Table 5-8). For example, the share of ASCs without any patient burns increased from about 88 percent to almost 91 percent, and the share of ASCs that provided on-time prophylactic antibiotics to at least 99 percent of their patients increased from about 59 percent to almost 65 percent. However, these signs of improvement are tempered by the fact that they are based on the first two years of reported data and gaps in reporting remain.

In addition to these five measures, data on four more measures are also publicly available from 2014. Among these nine quality measures, the performance among the

ASCs that reported data appears to be strong on six of the measures. For example, of the 4.7 million ASC claims from 2014, we found that only 0.1 percent of these claims (4,700 claims) indicated a patient fall in 2014 (Table 5-9). Rates were also low for the other adverse event measures (patient burns, “wrong” events, and patient transfers), but we acknowledge that the occurrence of any of these events represents an area of possible improvement. Measures of the share of patients receiving on-time antibiotic treatment and the share of ASCs using the safe-surgery checklist also showed strong performance. However, the three other measures reported in 2014 indicate that

**TABLE
5-9**

ASC quality measure levels for 2014

ASC quality measure	Mean percent	Estimated number of events*
Share of patients suffering burns	0.43%	20,400
Share of patients suffering falls	0.10	4,700
Share of patients suffering a “wrong” event	0.03	1,400
Share of patients transferred to a hospital	0.45	21,300
Share of patients receiving prophylactic intravenous antibiotics at appropriate time	96	
Share of ASCs using the safe-surgery checklist	99	
Flu vaccine for ASC staff	74	
Share of average risk patients with appropriate endoscopy/polyp surveillance	77	
Share of patients with polyp history with appropriate endoscopy/polyp surveillance	79	

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 2014 (4.7 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, 2014. MedPAC analysis of Medicare carrier file claims, 2015.

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 would reward high-performing providers and penalize low-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 they perform on quality measures, only on whether they report the measures. The Commission supports the ASC Quality Reporting (ASCQR) Program but believes that, eventually, high-performing ASCs should be rewarded and low-performing facilities should be penalized through the payment system.

The ASCQR Program could lay the foundation for a VBP program. Consistent with the Commission's overall position on VBP (also known as pay-for-performance) programs in Medicare, an ASC VBP program should include a relatively small set of

measures to minimize the administrative burden on ASCs and CMS. These measures should focus on clinical outcomes because Medicare's central concern should be improving patient outcomes across all ASCs. The program should also minimize the use of measures that require providers to extract data from patients' medical records. Several indicators reported through the ASCQR Program could be used for an ASC VBP program.

An ASC VBP program should reward ASCs for improving their prior year performance and for exceeding quality benchmarks. In addition, funding for the 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)). ■

ASCs' performance could be substantially improved. For example, ASCs on average indicated that only 74 percent of their staff had flu shots in 2014. In addition, the share of patients receiving follow-up care after endoscopy/polyp procedures was lower than expected.

ASC reporting and quality measures should be improved

The Commission has several concerns with the ASC quality reporting program. Overall, the Commission believes the existing set of measures is insufficient for assessing the quality of care in ASCs. Specifically, CMS should address three concerns:

- The measure for appropriate timing of prophylactic intravenous antibiotics and use of a safe-surgery checklist are nearly "topped out," meaning that nearly 100 percent of ASCs reported that they follow these practices (Table 5-9). Consequently, these measures do little to differentiate performance among ASCs.
- The lack of publicly available quality data from many ASCs adds uncertainty to the interpretation of the data. The overall value of the data was diminished by CMS's decision in late 2015 to allow ASCs to choose to have 2013 and 2014 data they reported to CMS suppressed from public view (Quality Reporting Center 2015). Among the five measures ASCs were permitted to suppress, in 2014, 6 percent of ASCs had missing or suppressed data for four of the measures, and 57 percent of ASCs had missing or suppressed data for the fifth measure. In addition, other measures that could not be suppressed demonstrated poor levels of reporting. For example, 2014 data were not publicly available on the measures for staff flu vaccination and the use of a safe-surgery checklist for 15 percent and 17 percent of ASCs, respectively. The Commission believes all reported quality data should be publicly available and Medicare should not give providers the option of suppressing data from public reporting.

**TABLE
5-10**

Share of ASC cases with subsequent hospital visits, 2014

Type of ASC and procedure	Subsequent hospital visit within 3 days of discharge from ASC		Subsequent hospital visit within 7 days of discharge from ASC	
	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	51,146	1.1%	96,740	2.0%
Multispecialty	22,348	1.3	41,242	2.4
Single specialty	28,798	1.0	55,498	1.8
Ophthalmology	8,082	0.6	16,827	1.2
Gastroenterology	13,821	1.2	25,333	2.1
Pain management	3,365	1.1	7,316	2.4
Urology	2,654	2.4	4,416	4.0
Cardiology	133	4.0	259	7.9

Note: ASC (ambulatory surgical center). Subsequent hospital visits include inpatient admissions, observation services, and emergency department visits, but exclude 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: Medicare physician, hospital outpatient, and hospital inpatient claims, 2014.

- The ASCQR Program lacks measures that apply to all ASCs and that assess claims-based clinical outcomes. For example, more than half of ASCs did not report data for the appropriate timing of antibiotic administration and appropriate endoscopy/polyp surveillance because these measures apply only to a subset of ASCs. Overall, two of the nine measures for which data from 2014 are publicly available do not apply to all ASCs. In addition, none of the current or future measures are claims-based clinical outcome measures that apply to all ASCs. While the four existing adverse event measures do assess outcomes to a certain degree, they are self-reported claims-based measures and do not assess whether the procedures being performed were successful for all ASC patients.

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. 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 a count or rate of the number of Medicare beneficiaries discharged from ASCs who had a subsequent hospital visit. We developed a version of this measure by evaluating 4.7 million ASC claims in 2014 and estimating the rate at which the surgical procedures on these claims resulted in subsequent

hospital visits. If such a measure were to be used for the ASCQR Program, it should be risk adjusted and any subsequent hospital visit should be related to the original procedure that was performed at the ASC. Our initial estimate of subsequent hospitalizations is not risk adjusted but does exclude unrelated hospital visits to a certain degree. We found that 1.1 percent (about 51,000 claims) of the 4.7 million claims indicate that the patient had a subsequent hospital visit within 3 days after discharge from an ASC, and 2.0 percent (almost 97,000 claims) indicate a subsequent hospital visit within 7 days after discharge (Table 5-10).¹³

Certain types of ASCs had higher than average rates of subsequent hospital visits within seven days of an ASC discharge. Approximately 2.4 percent of patients discharged from multispecialty ASCs had a subsequent hospital visit. Of patients discharged from ASCs specializing in urology and cardiology, 4.0 percent and 7.9 percent had a subsequent hospital visit, respectively. We also found that 164 ASCs had subsequent hospital visits within 7 days of discharge on at least 5 percent of their claims (data not shown). These ASCs were more likely to have been multispecialty ASCs or ASCs specializing in urology or podiatry.

The second outcome measure CMS could consider for the ASCQR Program is the rate of surgical site

infections (SSIs) occurring at ASCs. 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 an SSI measure (Centers for Medicare & Medicaid Services 2016). In general, an SSI measure could be used to track infection rates for ASCs or compare infection rates for ambulatory surgeries conducted in HOPDs and ASCs. In addition, measuring SSI rates could be a way to 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 2015 by 1.4 percent, a rate consistent with the previous seven years (Table 5-2, p. 137). 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 profiting. Securities and Exchange Commission filings from Surgical Partners Inc. and AMSURG Corp. indicate revenues in their surgical facility services increased from the first six months of 2015 to the first six months of 2016 by nearly 20 percent (AMSURG Corp. 2016b, Surgical Partners 2016). This growth is largely the result of acquisitions. Data from the Pennsylvania Health Care Cost Containment Council's annual analysis of the state's ASCs indicate that ASCs in Pennsylvania had an average total margin of 25 percent in 2015 (Pennsylvania Health Care Cost Containment Council 2016).¹⁴

AMSURG Corp., which owns and operates the largest number of ASCs in the country, appears to have adequate access to capital.¹⁵ In 2015, AMSURG made about \$1 billion in acquisitions, including ASC facilities and physician practices (Barkholz 2016). This expansion included practices of emergency physicians, radiologists, neonatologists, and anesthesiologists (Rechtorsis 2015). In 2016, AMSURG acquired another five anesthesia practices and merged with Envision Healthcare Holdings

Incorporated (Barkholz 2016, Cohen 2016). We caution, however, that AMSURG comprises only 5 percent of all Medicare-certified ASCs, so its experience may not represent the entire ASC sector.

Other recent activity in the ASC marketplace showed general signs of growth in 2016 and other large transactions in prior years. In 2016, Healthcrest Surgical Partners purchased seven ASCs from Foundation HealthCare for \$2.5 million (Dyrda 2016). In 2014, H.I.G. Capital, owner of the 50 ASCs associated with Surgery Partners, acquired another 50 ASCs associated with Symbion Holdings Corporation and owned by Crestview Partners LP (Rizzo 2014). Surgery Partners made the acquisition for \$792 million, which made it the second largest independent ASC operator in the United States, with 100 ASCs in 26 states. In 2014, Surgery Partners borrowed over \$1 billion from Jeffries Group LLC, an investment banking firm, to complete this acquisition (Tan 2014).

Medicare payments: Payments have increased steadily

In 2015, ASCs received \$4.1 billion in Medicare payments and beneficiaries' cost sharing (Table 5-11, p. 148). Spending per FFS beneficiary increased by an average annual rate of 2.8 percent from 2010 through 2014 and by 5.2 percent in 2015. The increase in payments per capita in 2015 reflects a 1.4 percent increase in the ASC conversion factor, a 1.8 percent increase in per capita volume, a 1.6 percent increase in the average relative weight of the ASC services provided to FFS beneficiaries, and a 0.2 percentage point increase from higher use of separately payable drugs.

How should Medicare payments change in 2018?

Our payment adequacy analysis indicates that the number of Medicare-certified ASCs has increased, beneficiaries' use of ASCs has increased, and access to capital has been adequate. In addition, enough quality data are available to assess ASC quality. ASCs made improvements from 2013 to 2014 in five measures that assess patient safety, but we identified several areas for ASC quality improvement. 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

**TABLE
5-11**

Medicare payments to ASCs have grown, 2010-2015

	2010	2011	2012	2013	2014	2015
Medicare payments (in billions of dollars)	\$3.3	\$3.4	\$3.6	\$3.7	\$3.8	\$4.1
Medicare payments per FFS beneficiary	\$104	\$106	\$110	\$113	\$116	\$122
Percent change per FFS beneficiary from previous year	2.0%	2.0%	4.2%	2.1%	3.1%	5.2%

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.

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 market basket would be an appropriate proxy for ASC costs. As discussed in the text box, the Commission has previously expressed concern that the market basket that CMS uses to update ASC payments (the CPI-U) likely does not reflect ASCs' cost structure (Medicare Payment Advisory Commission 2010b). CMS also has 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.

We believe it is feasible for ASCs to provide a limited amount of cost information, despite their and CMS's concern that requiring cost data may impose a burden on these facilities (Centers for Medicare & Medicaid Services 2011). 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. 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 from all sources (Pennsylvania Health Care Cost Containment Council 2016). 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 collecting a smaller set of cost variables from all ASCs annually, which might 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.

To enable 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 to this information, CMS would need to collect data on specific cost categories to determine an appropriate market basket 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 should use this information to examine the cost structure of ASCs and determine whether an existing Medicare market basket is

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 related to 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). CMS contends that the hospital market basket does not align with the cost structure of ASCs because hospitals provide a much wider range of services than ASCs, such as room and board, emergency care, and inpatient care.

Therefore, the agency concluded that it needs data on the cost inputs of ASCs to determine whether there is a better alternative than the CPI-U to measure changes in ASCs' input costs. CMS asked for public comment on the feasibility of collecting cost information from ASCs but did not propose a plan to collect cost data.

The ASC cost data from GAO used in our comparative analysis are 13 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 2016, 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 four years, the Commission recommended eliminating the update to the ASC payment rates, meaning the ASC payment rates would not change from the previous year. In the future, the Commission may consider reductions in ASC payment rates from the previous year to motivate the collection of cost data. CMS should use cost data to examine whether an existing Medicare market basket 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. ■

an appropriate proxy for ASC costs or whether an ASC-specific market basket should be developed.

CMS increased the ASC conversion factor by 1.3 percent in 2014, 1.4 percent in 2015, 0.3 percent in 2016, and 1.9 percent in 2017. The update for 2017 is based on a projected 2.2 percent increase in the CPI-U minus a 0.3 percent reduction for multifactor productivity growth, as mandated by the Patient Protection and Affordable Care Act of 2010 (PPACA).¹⁶

Update recommendation

In recommending an update to the ASC conversion factor for 2018, 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 2018 should be eliminated and that the Congress should require ASCs to submit cost data.

RECOMMENDATION 5

The Congress should eliminate the update to the payment rates for ambulatory surgical centers for calendar year 2018. The Congress should also require ambulatory surgical centers to submit cost data.

RATIONALE 5

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 2018. That is, the 2018 base payment rate under the ASC payment system should be the same as the base rate in 2017. The indicators of payment adequacy for which we have information are stable: The volume of services increased in 2015, and the number of Medicare-certified ASCs increased. Also, ASCs 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.

As we have stated in prior reports, it is vital that CMS begin collecting cost data from ASCs without further delay. Cost data would enable 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 market basket would be an appropriate proxy for ASC costs.

IMPLICATIONS 5

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 2018 is 2.4 percent, and the forecast of productivity growth for 2018 is 0.4 percent, resulting in a projected update of 2.0 percent to the base payment rates for 2018 (IHS Markit LTD 2016). 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 Medicare-certified 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 ASCs and HOPDs receive the same amount for drugs that are paid for separately under the OPPS and for devices that have pass-through status.
- 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 (Maryland, Idaho, and Georgia) have a disproportionately high number of ASCs per beneficiary, we weighted beneficiaries such that the share of beneficiaries in each state receiving 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 Munnich and Parente used risk scores derived from the Adjusted Clinical Groups System.
- 6 These data are based on 273 ASCs and 170 hospitals.
- 7 The sample of freestanding ASCs in the NSAS includes facilities listed in the 2005 Verispan Freestanding Outpatient Surgery Center Database and Medicare-certified ASCs from CMS's Provider of Services file (Cullen et al. 2009).
- 8 The study by Suskind and colleagues (2015) 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.
- 9 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. Each of the 10 states with the fewest ASCs per capita has 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, Georgia and Maryland have exceptions in their CON requirements that make it easier to establish new ASCs.
- 10 *Single-specialty ASCs* are defined as those with more than 67 percent of their Medicare claims in one clinical specialty. *Multispecialty ASCs* are defined as those with more than 67 percent of their Medicare claims in more than one clinical specialty.
- 11 By statute, coinsurance for a service paid under the OPPS cannot exceed the hospital inpatient deductible (\$1,316 in 2017). 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.
- 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 Subsequent hospital visits include emergency department services, outpatient observation services, and inpatient services.
- 14 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.
- 15 AMSURG Corp. owns 260 ASCs in 34 states and the District of Columbia in partnership with approximately 2,000 physicians. About 26 percent of AMSURG's ambulatory net revenue is from government health care programs, primarily Medicare and managed Medicare programs (AMSURG Corp. 2016a).
- 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>.
- AMSURG Corp. 2016a. *Annual report, 2015*. Nashville, TN: AMSURG Corp.
- AMSURG Corp. 2016b. Quarterly report (Form 10–Q), period ended September 30. Filing submitted to the Securities and Exchange Commission.
- Barkholz, D. 2016. AMSURG, Envision Healthcare merge. *Modern Healthcare*, June 15.
- 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. 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. 2015a. 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. 2015b. Medicare program: Hospital outpatient prospective payment and ambulatory surgical center payment systems and quality reporting programs; short inpatient hospital stays; transition for certain Medicare-dependent, small rural hospitals under the hospital inpatient prospective payment system. Final rule. *Federal Register* 80, no. 219 (November 13): 70298–70607.
- 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.
- Cohen, J. K. 2016. AMSURG acquires Ambulatory Anesthesia Associates, Genesis Anesthesia Services. *Becker's ASC Review*, September 8.
- Cullen, K. A., M. J. Hall, and A. Golosinskiy. 2009. *Ambulatory surgery in the United States, 2006*. National Health Statistics Reports, no. 11. National Center for Health Statistics, Centers for Disease Control and Prevention, Department of Health and Human Services. Hyattsville, MD: NCHS. September 4.
- Dyrda, L. 2016. Foundation HealthCare sells ASC business to Healthcrest Surgical Partners. *Becker's ASC Review*, October 27.
- 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. Strope, et al. 2010. Physician-ownership of ambulatory surgery centers linked to higher volume of surgeries. *Health Affairs* 29, no. 4 (April): 683–689.
- IHS Markit LTD. 2016. IHS Markit LTD 2016q3 forecast. Released to the Medicare Payment Advisory Commission by the Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.
- Jacobson, G. 2014. Tenet CEO Trevor Fetter sees big growth in outpatient centers. *Dallas 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. 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.
- Medical Group Management Association. 2009. *Ambulatory surgery center performance survey: 2009 report based on 2008 data*. Washington, DC: MGMA.
- 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.
- 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/MerrittHawkins/Clients/2014_Physicians_Foundation_Merritt_Hawkins_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.
- 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>.

Office of Inspector General, Department of Health and Human Services. 2014. *Medicare and beneficiaries could save billions if CMS reduces hospital outpatient department payment rates for ambulatory surgical center–approved procedures to ambulatory surgical center payment rates*. A–05–12–0020. Washington, DC: OIG.

Pennsylvania Health Care Cost Containment Council. 2016. *Financial analysis 2015. 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/PAI-Physician-Employment-Study.pdf>.

Quality Reporting Center. 2015. Ambulatory surgical centers have option to suppress quality data code-based measures from public release. E-mail announcement. October 23.

Rechtors, M. 2015. Actively acquiring: 7 things to know about AMSURG’s diversification. *Becker’s ASC Review*, December 9.

Rizzo, E. 2014. Surgery partners’ \$792M Symbion deal. *Becker’s ASC Review*, June 16.

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.

Surgical Partners, I. 2016. Quarterly report (Form 10–Q), period ended September 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.

Tan, G. 2014. Jefferies leads \$1.4 billion buyout financing as banks stand down. *Wall Street Journal*, June 19. <http://www.wsj.com/articles/jefferies-leads-1-4-billion-buyout-financing-as-banks-stand-down-1403198975>.

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.