

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 2014. The Congress should also require ambulatory surgical centers to submit cost data.

COMMISSIONER VOTES: YES 16 • NO 0 • NOT VOTING 0 • ABSENT 1

Ambulatory surgical center services

Chapter summary

Ambulatory surgical centers (ASCs) provide outpatient surgical services to patients who do not require an overnight stay after surgery. In 2011,

- ASCs served 3.4 million fee-for-service (FFS) Medicare beneficiaries, an increase of 0.9 percent from 2010;
- there were 5,344 Medicare-certified ASCs, an increase of 1.8 percent (92 ASCs) from 2010; and
- Medicare combined program and beneficiary spending on ASC services was \$3.4 billion, an increase of 2.2 percent per FFS beneficiary from 2010.

Assessment of payment adequacy

Our results indicate that beneficiaries' access to ASC services is at least adequate, as most of the available indicators of payment adequacy for ASC services, discussed below, are positive. However, our results also indicate slower growth in the number of ASCs and volume of services in 2011 than in previous years.

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

In this chapter

- Are Medicare payments adequate in 2013?
.....
- How should Medicare payments change in 2014?
.....

- **Capacity and supply of providers**—From 2006 through 2010, the number of Medicare-certified ASCs grew by an average annual rate of 3.6 percent. However, the growth slowed to 1.8 percent in 2011. The relatively slow growth may reflect the substantial revision of the ASC payment system in 2008 (see online Appendix A from Chapter 2C of our March 2010 report at http://www.medpac.gov/chapters/Mar10_Ch02C_APPENDIX.pdf), and investors may have been responding to the large changes in payment rates that occurred under that revision. In addition, Medicare payment rates for most ambulatory surgical services have become much higher in hospital outpatient departments (HOPDs) than in ASCs—for 2013, the Medicare rates are 78 percent higher in HOPDs than in ASCs. This payment difference may have led some ASC owners to sell their facilities to hospitals. Finally, physicians have increasingly been selling their practices to hospitals and becoming hospital employees. Physicians who are hospital employees may be more inclined to provide surgical services at hospitals than at ASCs.
- **Volume of services**—From 2006 through 2010, the volume of services per beneficiary grew by an average annual rate of 5.7 percent; in 2011, volume increased by 1.9 percent.

Quality of care—Although CMS has established a program for ASCs to submit quality data, ASCs did not begin doing so until October 2012. Consequently, we do not have sufficient data to assess ASCs’ quality of care.

Providers’ access to capital—Because the number of ASCs has continued to increase, they appear to have adequate access to capital.

Medicare payments and providers’ costs—From 2006 through 2010, Medicare payments per FFS beneficiary increased at an average annual rate of 5.1 percent but slowed to 2.2 percent in 2011. 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 assist in assessing payment adequacy. ■

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. Most ASCs are freestanding facilities rather than part of a larger facility, such as a hospital. About one-quarter of ASCs in 2008 were jointly owned by physicians and hospitals (Medical Group Management Association 2009). 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 about 3,600 surgical procedures under the ASC payment system. Physicians who perform procedures in ASCs or other facilities receive separate payment for their professional services under the physician fee schedule (PFS). About 90 percent of ASCs have at least one physician owner (Medical Group Management Association 2009). Physicians who perform surgeries in ASCs they own receive a share of the ASC's facility fees in addition to their professional fees. 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 areas.

Medicare pays for a bundle of facility services provided by ASCs—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 payments for most services provided in HOPDs (a more detailed description of the ASC payment system can be found online at http://www.medpac.gov/documents/MedPAC_Payment_Basics_12_ASC.pdf). The ASC payment system is also partially linked to the PFS. The ASC system underwent substantial revisions in 2008 (see online Appendix A from Chapter 2C of our March 2010 report at http://www.medpac.gov/chapters/Mar10_Ch02C_APPENDIX.pdf). The most significant changes included a substantial increase in the number of surgical procedures covered under the ASC payment system, allowing ASCs to bill separately for certain ancillary services, and large changes in payment rates for many procedures.

For most covered procedures, the ASC relative weight, which indicates the relative resource intensity of the

procedure, is based on its relative weight under the OPPS (the standard ASC method). This link to the OPPS is consistent with a previous Commission recommendation to align the relative weights in the OPPS with the ASC payment system (Medicare Payment Advisory Commission 2004).

Although the ASC payment system is linked to the OPPS, payment rates for all services covered under both systems are lower in the ASC system for two reasons. First, the relative weights have been lower in the ASC system because CMS makes proportional adjustments to the relative weights from the OPPS to maintain budget neutrality in the ASC system. Thus, ASC spending does not change over time because of changes in the OPPS relative weights. In 2013, this adjustment reduced the ASC relative weights by 6.8 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 \$42.92 in 2013. The ASC conversion factor is lower than the OPPS conversion factor (\$71.31 in 2013).

The ASC conversion factor is less than the OPPS conversion factor for two reasons. First, CMS set the initial ASC conversion factor for 2008 so that total ASC payments under the revised payment system would equal what they would have been under the previous payment system. By comparison, the initial OPPS conversion factor was based on total payments for hospital outpatient services in 2000. Second, CMS updates the ASC conversion factor based on the consumer price index for all urban consumers (CPI-U), whereas it uses the hospital market basket as the basis for updating the OPPS conversion factor. We are concerned that the CPI-U may not reflect ASCs' cost structure, and the Commission has recommended that CMS collect ASC cost data. These data should be used to examine whether an alternative input price index would be an appropriate proxy for ASC costs or an ASC-specific market basket should be developed (Medicare Payment Advisory Commission 2010b).

CMS uses a method different from the standard ASC method to determine payment rates for procedures that are predominantly performed in physicians' offices and that were first covered under the ASC payment system in 2008 or later (under the standard ASC method, ASC rates are based on OPPS relative weights). 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 (this amount covers the equipment, supplies, nonphysician staff, and overhead costs of a service). CMS set this limit on the rate for certain office-based procedures to prevent migration of these services from physicians' offices to ASCs for financial reasons.¹ The Commission has been investigating payment rate differences across multiple ambulatory settings, including ASCs, HOPDs, and physicians' offices (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. Starting in 2008, ASCs receive separate payment for the following ancillary 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 pass-through and non-pass-through drugs that are paid for separately under the OPPS when provided as part of a covered surgical procedure, and
- devices with pass-through status under the OPPS.²

Because Medicare pays ASCs less than HOPDs for procedures, movement of surgical services from HOPDs to ASCs can reduce aggregate program spending and beneficiary cost sharing. If, however, the growth of ASCs results in an increase in the overall number of surgical services, this increase could partially offset reduced spending and cost sharing.

Although we do not have recent ASC cost data that would allow us to quantify the cost difference 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 ASC costs are, on average, lower than HOPD costs (Government Accountability Office 2006).³ In addition, data from the National Survey of Ambulatory Surgery indicate that the average time for ambulatory surgical visits was 50 percent higher in HOPDs than ASCs (147 minutes vs. 98 minutes) (Cullen et al. 2009).⁴ Average times were also higher in HOPDs than in ASCs for specific diagnoses, such as cataract, benign neoplasm of the colon, and intervertebral disc disorders.

Are Medicare payments adequate in 2013?

To address whether payments for the current year (2013) are adequate to cover the costs of efficient providers and how much payments should change in the coming year (2014), we examine several measures of payment adequacy. We assess 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 revenue from the Medicare program. Unlike our assessments of other provider types, we could not use quality data in our analysis because ASCs have only recently begun to submit information on quality measures. Moreover, we cannot examine Medicare payments relative to providers' costs because CMS does not require ASCs to submit cost data.⁵ Finally, we caution that the effect of Medicare payments on the financial health of ASCs is limited because, on average, Medicare spending accounts for only about 17 percent of an ASC's overall revenue (Medical Group Management Association 2009).⁶

Our results show that beneficiaries have at least adequate access to care in ASCs, although there is some variation among subgroups of beneficiaries (see text box). In addition, ASCs have adequate access to capital, and Medicare payments to ASCs have continued to grow. Together, these measures suggest that payment rates are at least adequate.

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

Increases in the number of Medicare-certified facilities and volume of services provided to Medicare beneficiaries suggest growing access to ASCs. This growth may be beneficial to patients and providers because ASCs can offer them convenience and efficiency relative to HOPDs—the provider type with the greatest overlap of services with ASCs. For patients, ASCs can offer more convenient locations, shorter waiting times, and easier scheduling relative to HOPDs; for physicians, ASCs may offer more control over their work environment, customized surgical environments, and specialized staff. In addition, Medicare has lower payment rates and beneficiaries generally have lower copayments in ASCs than in HOPDs. However, the growth in ASCs may lead to an increase in the overall volume of surgical procedures (see discussion on pp. 113–115).

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

There is evidence that ambulatory surgical centers (ASCs) treat different types of patients than hospital outpatient departments (HOPDs). Our analysis of Medicare claims from 2011 found that the following groups are less likely to receive care in ASCs than in HOPDs: Medicare beneficiaries who also have Medicaid coverage (dual eligibles), African Americans (who are more likely to be dual eligible), beneficiaries who are eligible because of disability (under age 65), and beneficiaries who are age 85 or older (Table 5-1).⁷ 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, and the relatively high percentage of African Americans who have HOPDs or emergency departments as their usual source of care (Centers for Medicare & Medicaid Services 2012a).

In addition, we found that patients treated in HOPDs 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 categories (CMS-HCC) risk-adjustment model used in Medicare Advantage to measure patient severity.⁸ CMS-HCC risk scores predict beneficiaries' relative costliness based on their diagnoses from the prior year and their demographic information (e.g., age and sex). We used 100 percent of Medicare claims from 2010 to maximize the number of cases and combined services into ambulatory payment classification (APC) groups. The average risk score for HOPD patients across all procedures in 2010 was 1.64, compared with 1.23 for ASC patients. 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. Sicker patients may be referred to HOPDs instead of ASCs because hospitals offer emergency services and access to onsite specialists if complications arise.

TABLE 5-1

Medicare patients treated in ASCs differ from patients treated in HOPDs, 2011

Characteristic	Percent of beneficiaries	
	ASC	HOPD
Medicaid status		
Not Medicaid	85.8%	76.6%
Medicaid	14.2	23.4
Race/ethnicity		
White	87.9	83.9
African American	6.9	10.4
Other	5.2	5.7
Age		
Under 65	14.5	22.0
65 to 84	78.4	67.3
85 or older	7.1	10.7
Sex		
Male	42.3	44.0
Female	57.7	56.0

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.

Source: MedPAC analysis of 5 percent carrier and outpatient standard analytic files, 2011.

We also compared average patient risk scores within each APC.⁹ For 46 percent of the APCs in our analysis (representing 30 percent of ASC volume), the average HOPD risk score was significantly higher than the average ASC risk score ($p < 0.05$). However, for the remaining 54 percent of APCs (representing 70 percent of ASC volume), the severity of patients in HOPDs was similar to or less than the severity of patients in ASCs. Table 5-2 (p. 110) shows the average risk scores in each setting for the 10 APCs with the highest ASC volume in

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

2011. Risk scores were significantly higher in HOPDs than in ASCs for 3 of the top 10 APCs (Table 5-2).

There is a limitation to using risk scores to predict the relative cost of providing a specific service: Risk scores predict patients' relative costliness across the full range of health care services, but they do not necessarily indicate that a patient who has a high risk score will be more costly for a specific service. Despite this limitation, we use CMS-HCC risk scores as a proxy for patient severity because we do not have comparable cost data for HOPDs and ASCs that would allow us to directly evaluate the impact of patient severity on the cost of individual services. In prior work, the Commission has used risk scores from the full HCC model to compare patient severity in HOPDs and ASCs (Medicare Payment Advisory Commission 2003).

Other data sources also suggest that ASCs treat patients who are different from those treated by 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 2012). In Pennsylvania, Medicaid patients accounted for 4.7 percent of ASCs' diagnostic and surgical procedures in 2011, compared with 12.0 percent of HOPDs' procedures.¹⁰ Commercially insured and Medicare patients represented a higher share of ASC procedures than HOPD procedures (87.3 percent vs. 78.2 percent). 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, also show that ASCs treat a smaller share of Medicaid patients than hospitals. According to the NSAS data, ambulatory surgery visits by Medicaid patients accounted for 3.9 percent of total visits to freestanding ASCs in 2006, compared with 8.1 percent of total visits to hospital-based surgery centers.¹¹

(continued next page)

**TABLE
5-2**

Comparison of average patient risk scores in HOPDs and ASCs for 10 most frequently provided ASC procedure groups, 2010

Procedure group (APC)	Average patient risk score		Percent of total ASC volume
	HOPD	ASC	
Cataract procedure with IOL insert	1.24	1.19	19.8%
Lower GI endoscopy	1.22*	1.08	15.7
Level III nerve injections	1.34	1.33	13.9
Level I upper GI procedures	1.54	1.36	11.0
Laser eye procedures	1.33	1.28	5.5
Level I nerve injections	1.37	1.35	4.8
Colorectal cancer screening: Colonoscopy	1.00*	0.90	2.7
Level II nerve injections	1.37	1.28	2.2
Level I arthroscopy	1.00*	0.89	1.5
Level III repair and plastic eye procedures	1.37	1.30	1.5
Total			78.7

Note: HOPD (hospital outpatient department), ASC (ambulatory surgical center), APC (ambulatory payment classification), IOL (intraocular lens), GI (gastrointestinal). Services are combined into APC groups.

*Difference between average HOPD risk score and average ASC risk score is statistically significant ($p < 0.05$). Risk scores were calculated using the CMS-hierarchical condition categories risk-adjustment model used in Medicare Advantage to measure patient severity. These risk scores predict beneficiaries' relative costliness based on diagnoses from the prior year and demographic information.

Source: MedPAC analysis of 100 percent carrier standard analytic file, 2010.

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

Several factors could explain why ASCs treat a smaller share of Medicaid patients (including dual eligibles) 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 examined referral patterns for physicians in Pennsylvania who sent most of their patients to physician-owned ASCs rather than HOPDs. These physicians were much more likely to refer their commercially insured and Medicare patients than their Medicaid patients to a physician-owned ASC. They sent more than 90 percent of their commercial and Medicare patients—but only 55 percent of their Medicaid patients—to an ASC instead of a hospital.

The location of ASCs may also lead to a smaller share of Medicaid patients; for example, ASC owners may choose to locate in areas with a high proportion of

commercially insured patients. In addition, many state Medicaid programs do not pay Medicare's cost sharing for dual eligibles if the Medicare rate for a service 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 dual eligibles, 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 hospital emergency department (ED) than are Medicare beneficiaries who have other types of supplemental coverage (Centers for Medicare & Medicaid Services 2012a). If a patient has an HOPD or ED as his usual source of care, physicians may be more likely to refer the patient to an HOPD for surgical care than they would patients who have a usual source of care in another setting. ■

Capacity and supply of providers: Number of ASCs has increased, but growth has slowed

The number of Medicare-certified ASCs increased substantially from 2006 through 2008 but has grown more slowly since then. From 2006 through 2008, the number of Medicare-certified ASCs increased by 5.1 percent per year on average. During this period, an average of 318 new facilities entered the program each year, while an average of 79 closed or merged with other facilities. However, the growth rate decelerated to 2.2 percent in 2009 and 1.8

percent in both 2010 and 2011 (Table 5-3). This slower growth continued into 2012, as the number of ASCs increased by 0.3 percent to 5,359 during the first three quarters of 2012 (an annual growth rate of 0.4 percent).

Several factors might explain the relatively slow growth from 2009 through the first three quarters of 2012:

- The economy is experiencing a sluggish recovery after the economic downturn that began in the fall of 2008, which has dampened demand for physicians' services

TABLE 5-3

Number of Medicare-certified ASCs grew by 17 percent, 2006–2011

	2006	2007	2008	2009	2010	2011
Number of centers	4,567	4,838	5,045	5,157	5,252	5,344
New centers	328	345	281	218	189	153
Exiting centers	89	74	74	106	94	61
Net percent growth in number of centers from previous year	5.5%	5.9%	4.3%	2.2%	1.8%	1.8%

Note: ASC (ambulatory surgical center).

Source: MedPAC analysis of Provider of Services file from CMS, 2011.

**TABLE
5-4****Most Medicare-certified ASCs
are urban and for profit**

ASC type	2006	2011
Urban	91%	91%
Rural	9	9
For profit	96	97
Nonprofit	4	3

Note: ASC (ambulatory surgical center).

Source: MedPAC analysis of Provider of Services file from CMS, 2011.

and elective surgeries (Deutsche Bank 2012b, Kaiser Family Foundation 2011, Keehan et al. 2012).

- The ASC payment system underwent a substantial revision in 2008, and investors may be responding to the large changes in payment rates that occurred under that revision.
- Payment rates for most ambulatory surgical services are 78 percent higher in the OPPS than in the ASC payment system, which has influenced some ASC owners to sell their facilities to hospitals and caused some health care systems to expand their HOPDs rather than establish new ASCs (North Carolina Department of Health and Human Services 2008, State of Connecticut 2011).
- There may be limited opportunities to develop new facilities because most physicians who perform procedures in ASCs are already affiliated with an ASC (Cain Brothers 2011).
- Physicians are increasingly choosing to be employed by hospitals rather than work in an independent practice (Berenson et al. 2012, Mathews 2012, Pettypiece 2012). Physicians employed by hospitals are more likely to provide ambulatory surgical services in their HOPDs than in a freestanding ASC.

To provide a more complete picture of capacity in ASCs, we also examined the change in the number of ASC operating rooms. From 2006 through 2011, the number of ASC operating rooms increased at almost the same rate as the number of ASCs (3.0 percent per year vs. 3.2 percent per year). The mean number of operating rooms per ASC decreased slightly from 2.8 to 2.7, although the median number of operating rooms per facility was 2 in both years.

ASCs are concentrated geographically. As of 2011, Maryland had the most ASCs per fee-for-service (FFS) beneficiary, followed by Idaho, Washington, and Georgia; each state had more than 30 ASCs per 100,000 FFS beneficiaries with Part B coverage. Vermont had the fewest ASCs per FFS beneficiary, followed by West Virginia, Kentucky, and New York; each state had fewer than 6 per 100,000 FFS beneficiaries.¹² In addition, in 2011, most Medicare-certified ASCs were for profit and located in urban areas, a pattern that has not changed over time (Table 5-4). 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 may travel to urban areas to receive care in ASCs.

Continued growth in the number of Medicare-certified ASCs suggests that Medicare's payment rates have been at least adequate. However, Medicare payments are not a substantial source of revenue for ASCs, on average (Medical Group Management Association 2009). 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 in terms of better locations, the ability to schedule surgery more quickly, and shorter waiting times.
- For most procedures covered under the ASC payment system, beneficiaries' copayments are lower in ASCs than in HOPDs.¹³
- Physicians have greater autonomy in ASCs than in HOPDs, which enables them to design customized surgical environments and hire specialized staff.
- Unlike physicians who perform surgery in HOPDs, physicians who invest in ASCs and perform surgery 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 surgical services in ASCs.
- Because physicians can probably perform more procedures in ASCs than in HOPDs in the same amount of time, they can earn more professional fees.

Number of services grew from 2006 to 2011

We examined growth in the number of ASC surgical services provided per FFS beneficiary. From 2006 through 2010, the volume of surgical services per FFS beneficiary increased by an average of 5.7 percent per year and by 1.9 percent in 2011 (Table 5-5).

The 2008 revision of the ASC payment system substantially increased the number of covered services. We evaluated the effect of the increase by breaking down the growth in service volume from 2010 through 2011 into two parts: the portion due to surgical services newly covered after 2007 and the portion due to surgical services covered in both 2007 and 2011. Our analysis indicates that services newly covered after 2007 grew by 3.9 percent in 2011, and services covered in both 2007 and 2011 grew by 1.7 percent in 2011 (Table 5-5).¹⁴ The most commonly provided services that were newly covered after 2007—which also showed strong growth in other ambulatory settings—include trabeculectomy by laser eye surgery, arthrocentesis by aspiration or injection of a major joint or bursa, and intravitreal injection of a pharmacological agent.

Although newly covered services had strong growth in 2011, the services that have historically contributed the most to overall volume continued to constitute a large share of the total in 2011. For example, cataract removal with intraocular lens insertion had the highest volume in both 2007 and 2011, accounting for 20 percent of volume in 2007 and 18 percent in 2011. Moreover, 19 of the 20 most frequently provided services in 2007 were among the 20 most frequently provided in 2011 (Table 5-6, p. 114). For these 20 services, volume per FFS beneficiary increased by an average of 1.7 percent per year from 2007 through 2011. However, these 20 services accounted for a smaller share of total ASC volume in 2011 than in 2007 (67.8 percent vs. 74.6 percent), which indicates that ASCs are providing an increasingly diverse set of procedures.

Surgical services migrated from HOPDs to ASCs between 2006 and 2010, but trend has stalled

Although the growth of services provided in ASCs from 2006 to 2010 may reflect the migration of procedures from HOPDs to ASCs, this trend appears to have stalled. We compared volume growth from 2006 through 2011 for services provided in ASCs with the growth of ASC-covered services provided in HOPDs. We limited this analysis to services that were covered in the ASC payment system in 2006, as the inclusion of services covered in the OPSS in 2006 that became covered in the ASC payment system after 2006 would have biased the results.

**TABLE
5-5**

Volume of ASC services per FFS beneficiary has continued to grow

Time period	Average annual volume growth per FFS beneficiary
2006 through 2010	5.7%
2010 through 2011	1.9
Services covered in both 2007 and 2011	1.7
Services newly covered after 2007	3.9

Note: ASC (ambulatory surgical center), FFS (fee-for-service).

Source: MedPAC analysis of 5 percent carrier standard analytic files, 2006, 2007, 2010, and 2011.

From 2006 through 2010, the number of ASC-covered surgical services per FFS beneficiary grew by 5.8 percent per year in ASCs and by 0.1 percent in HOPDs, which suggests that these surgical services may have migrated from HOPDs to ASCs during that period. In 2011, however, surgical services increased at a lower rate in ASCs than in HOPDs (1.8 percent vs. 3.8 percent).

Although surgical volume growth was higher in HOPDs than ASCs in 2011, there is no strong evidence of a shift of services from ASCs to HOPDs. For example, the 22 most frequently provided ASC services—represented by Healthcare Procedure Coding System codes—constitute about 70 percent of ASC volume. None of these services shows strong evidence of a shift from ASCs to HOPDs in 2011, such as a large decline in the volume provided in ASCs and a large increase in HOPDs. Outside of the 22 most frequently provided ASC services, some services have declined in ASCs but increased in HOPDs. For example, nerve procedures decreased by 3.7 percent in ASCs in 2011 and increased by 10.1 percent in HOPDs.¹⁵ However, other types of procedures increased in ASCs and decreased in HOPDs. For example, the category of services that includes Level II through Level V repair and plastic eye surgeries increased by 5.1 percent in ASCs in 2011 and decreased by 7.0 percent in HOPDs.¹⁶ A factor that may have contributed to the higher volume growth of procedures in HOPDs in 2011 is a shift of services from physicians' offices to HOPDs, as hospital employment of physicians has increased.

Other data also suggest that the migration of services from HOPDs to ASCs has stalled. In Pennsylvania, ASCs' share

**TABLE
5-6**

Most frequently provided ASC services in 2011 were similar in 2007

Surgical service	2007		2011	
	Percent of volume	Rank	Percent of volume	Rank
Cataract surgery w/ IOL insert, 1 stage	19.9%	1	17.0%	1
Upper GI endoscopy, biopsy	7.9	2	8.0	2
Diagnostic colonoscopy	5.9	3	3.6	8
Colonoscopy and biopsy	5.5	4	5.7	3
After cataract laser surgery	5.4	5	3.9	6
Lesion removal colonoscopy, snare technique	4.8	6	4.4	4
Injection spine: lumbar, sacral (caudal)	4.3	7	3.6	7
Injection foramen epidural: lumbar, sacral	3.1	8	4.1	5
Injection paravertebral: lumbar, sacral add on*	2.9	9	1.9	11
Injection paravertebral: lumbar, sacral*	1.9	10	2.2	9
Lesion removal colonoscopy, biopsy forceps or bipolar cautery	1.7	11	1.0	19
Colon cancer screen, not high-risk individual	1.7	12	1.4	14
Injection foramen epidural add on	1.6	13	2.1	10
Upper GI endoscopy, diagnosis	1.5	14	1.2	16
Colorectal screen, high-risk individual	1.4	15	1.8	12
Cystoscopy	1.3	16	1.1	18
Destruction paravertebral nerve, add on	1.1	17	1.6	13
Revision of upper eyelid	0.9	18	0.9	20
Cataract surgery, complex	0.9	19	1.3	15
Injection spine: cervical or thoracic	0.9	20	0.9	21
Total	74.6		67.8	

Note: ASC (ambulatory surgical center), IOL (intraocular lens), GI (gastrointestinal).
*The description of these services changed in 2010 to include imaging guidance.

Source: MedPAC analysis of 5 percent carrier standard analytic claims files, 2007 and 2011.

of outpatient diagnostic and surgical procedures performed on all patients increased dramatically between 2000 and 2009, from 10.2 percent to 32.5 percent, but did not change between 2009 and 2011 (Pennsylvania Health Care Cost Containment Council 2012).

We believe it is desirable to maintain beneficiaries' access to ASCs because services provided there are less costly to Medicare and beneficiaries than services delivered in HOPDs. Our comparison of the number of cataract surgeries with intraocular lens insertion provided in ASCs with those in HOPDs illustrates this point. We found that, from 2006 through 2011, the proportion of these procedures provided in ASCs increased from 65 percent to 71 percent. Meanwhile, the payment rate for these procedures in 2011 was \$951 in ASCs compared with \$1,691 in HOPDs. Medicare's portion of this payment was \$761 in ASCs and \$1,195 in HOPDs, while the beneficiary's copayment was

\$190 in ASCs and \$496 in HOPDs. Moreover, ASCs offer patients additional advantages over HOPDs, such as more convenient locations and shorter waiting times.

However, we must be attentive to the fact that most ASCs have some degree of physician ownership, and this ownership could give physicians an incentive to perform more surgical services than they would if they provided outpatient surgery only in HOPDs. This additional volume could partially offset the effect of lower rates in ASCs on Medicare spending. Recent studies offer limited evidence that physicians with an ownership stake in an ASC perform a higher volume of certain procedures than nonowning physicians (Hollingsworth et al. 2010, Mitchell 2010, Strobe et al. 2009). One study, using a proxy measure of physician ownership of ASCs in Florida, found that physicians who invested in ASCs increased their volume of four common surgical procedures in all settings more

**TABLE
5-7**

Medicare payments to ASCs have grown, 2006-2011

	2006	2007	2008	2009	2010	2011
Medicare payments (billions of dollars)	\$2.8	\$2.9	\$3.1	\$3.2	\$3.3	\$3.4
Medicare payments per FFS beneficiary	\$85	\$89	\$97	\$102	\$104	\$106
Percent change per FFS beneficiary from previous year	8.6%	5.0%	8.1%	5.3%	2.0%	2.2%

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

Source: MedPAC analysis of data from the Office of the Actuary at CMS.

rapidly than nonowning physicians (Hollingsworth et al. 2010).¹⁷ Although this study had limitations (it was based on a single state, used a proxy measure of physician ownership, and did not examine whether the additional procedures were inappropriate), it suggests that physician ownership of ASCs is associated with greater overall volume of surgical procedures.

Two studies found that the growth of ASCs in a market is associated with higher overall volume of certain procedures (Hollingsworth et al. 2011, Koenig and Gu 2013). The first study, which was limited to Florida, found that the volume of colonoscopy and upper gastrointestinal endoscopy in ambulatory settings increased at faster rates in health care markets after ASCs entered the markets compared with markets that had no ASC entry (Hollingsworth et al. 2011). The authors found no significant relationship between ASC entry and the growth of cataract surgery or cancer-directed breast surgery. The second study examined national Medicare data and found that an increase in the number of ASC operating rooms in a state was associated with additional colonoscopy procedures in all outpatient settings (Koenig and Gu 2013). However, there was no significant relationship between growth in the number of ASC operating rooms and the volume of cataract surgery, upper gastrointestinal procedures, or arthroscopy. Based on the results of these studies, it is plausible that reductions in Medicare spending due to lower payment rates for ASCs could be partially offset by a higher overall number of certain procedures.

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 continued to increase in 2011, although at a slower rate than in previous years (Table 5-3, p. 111). This slowing growth may reflect the sluggish pace of recovery from the downturn in the economy that began in the fall of 2008, the widening difference between payment rates in the ASC payment system and the OPPIs, and the increase in physician employment by hospitals. In 2008, the average payment rate for most services provided in ASCs was 62.6 percent of what would have been paid in HOPDs. This percentage fell to 56.5 in 2011. However, Medicare accounts for a relatively small share of ASCs' overall revenue on average, so factors other than Medicare payments may have a larger effect on access to capital for this sector.

In addition, the only publicly traded ASC chain—Amsurg—continues to acquire new ASCs, which indicates that it has sufficient access to capital. During the third quarter of 2012, for example, the company announced its intention to acquire 15 new facilities (it currently has over 220 facilities) (Deutsche Bank 2012a). We caution, however, that this chain represents only 4 percent of all Medicare-certified ASCs, so its experience may not represent the entire ASC sector.

Medicare payments: Payments have increased rapidly

In 2011, ASCs received about \$3.4 billion in Medicare payments and beneficiaries' cost sharing (Table 5-7). Spending per FFS beneficiary increased by an average of 5.1 percent per year from 2006 through 2010 and by 2.2 percent in 2011. CMS increased the ASC conversion factor by 0.2 percent in 2011. Annual changes in spending on ASC services can be affected by the amount of spending on new technology intraocular lenses (NTIOLs) because the number of NTIOLs that are eligible for

Creating a value-based purchasing program for ambulatory surgical centers

To improve the quality of care provided to beneficiaries in ambulatory surgical centers (ASCs), the Commission previously recommended that CMS implement a value-based purchasing (VBP) program to reward high-performing providers and penalize low-performing providers (Medicare Payment Advisory Commission 2012). CMS should also publicly report quality measurement results to help consumers compare quality among facilities. CMS established a Quality Reporting Program for ASCs that requires them to submit quality data beginning in October 2012; ASCs that do not submit data will have their annual update reduced by 2 percentage points in 2014. However, Medicare payments to ASCs would not be adjusted based on the provider's actual performance on quality measures. CMS currently lacks the statutory authority to implement a VBP program for ASCs.

The Commission supports the quality data reporting program for ASCs but believes that, eventually, high-performing ASCs should be rewarded and low-performing facilities should be penalized through the payment system. In our March 2012 report, the Commission made the following recommendation:

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

The current quality reporting 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 reduce the administrative burden on ASCs and CMS, and the measure set should primarily focus on clinical outcomes, as Medicare's central concern should be improving outcomes across all ASCs and over time. The program should also include some clinical process, structural, and patient experience measures. Several of these indicators are already being reported through the ASC Quality Reporting Program, but other measures need to be developed, such as a surgical site infection (SSI) indicator and a patient experience measure. An ASC VBP program should reward ASCs for improving care and 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.

CMS should consider incorporating the following outcome measures into an ASC VBP program:

- patient fall in the ASC;
- patient burn;
- wrong site, wrong side, wrong patient, wrong procedure, wrong implant;

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separate payment changes from year to year. Therefore, we also examined the change in Medicare spending on surgical services provided in ASCs excluding spending on NTIOLs. In 2011, per capita spending on surgical services increased 2.6 percent. Per capita spending on surgical services newly covered after 2007 increased 4.5 percent, and spending on surgical services covered in both 2007 and 2011 increased 2.6 percent.

How should Medicare payments change in 2014?

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. However, our information for assessing payment adequacy is limited because, unlike other types of

Creating a value-based purchasing program for ambulatory surgical centers (cont.)

- hospital transfer or admission after an ASC procedure, whether the patient is transferred directly to the hospital from the ASC or admitted to the hospital after returning home from an ASC procedure; and
- SSI rate.

The first three outcome measures listed above are patient safety indicators identified by the National Quality Forum as “serious reportable events,” which are defined as errors in medical care that are clearly identifiable and measurable, usually preventable, serious in their consequences for patients, and indicate a problem in a health care facility’s safety systems. ASCs have begun reporting these claims-based measures under the ASC Quality Reporting Program. Because these indicators represent errors that are usually preventable, they could be measured against an absolute national benchmark that starts very low and is reduced over time to a rate that approaches zero.

By contrast, the last two outcome measures listed above (hospital transfer or admission after an ASC procedure and SSI rate) may occur at low rates even in the highest quality facilities. Therefore, an ASC’s performance

on these indicators should be measured against the performance of other ASCs rather than an absolute benchmark. Because certain ASCs may report small numbers of cases for the calculation of these measures, the rates reported for these providers could vary substantially from one observation period to the next, due solely to random statistical variation. To address this issue, CMS could consider using a composite measure that would aggregate the rates for several measures of rare events into a single rate or using data from multiple years for a single measure.

Because measures of patient experience provide information on patients’ perceptions of access to care and how well their providers communicate with them, the Commission supports the development of a survey to measure patients’ perceptions of their ASC care. We recognize that scores on a patient experience measure may be similar across facilities because ASCs usually provide low-risk procedures to patients who tend to be less complex than patients treated in hospital outpatient departments. If patient experience scores turn out to be similar across all ASCs, CMS could assign this measure less weight in determining an ASC’s overall performance. ■

facilities, Medicare does not require ASCs to submit cost data. We also do not yet have information on the quality of care in ASCs because they did not begin submitting quality data to CMS until October 2012. The Commission has recommended that Medicare develop a value-based purchasing program that would use ASC quality data to reward high-performing and penalize low-performing providers, but CMS does not have the statutory authority to implement such a program (see text box).

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 or an ASC-specific market basket should be developed. As discussed in the text box on pp. 118–119, the Commission previously expressed concern that the

price index that CMS uses to update ASC payments (the CPI-U) may not reflect ASCs’ cost structure (Medicare Payment Advisory Commission 2010b). CMS has also concluded that it needs data on ASC costs to determine whether there is a better alternative than the CPI-U to measure changes in ASCs’ input costs (Centers for Medicare & Medicaid Services 2012b).

Although CMS and ASCs have expressed concern that requiring ASCs to submit cost data may impose a burden on these facilities, we believe it is feasible for ASCs to provide a limited amount of cost information (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. 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. One such

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) payments. Because of our concern that the CPI-U may 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 physicians' offices.

Although CMS has historically used the CPI-U as the basis for Medicare's annual updates to ASC payments, the mix of goods and services in this price index probably does not reflect ASC inputs. The CPI-U is based on a sample of prices for a broad mix of goods and services, including food, housing, apparel, transportation, medical care, recreation, personal care, education, and energy (IHS Global Insight 2009). The weight of each item is based on spending for that item by a sample of urban consumers during the survey period. Although some of these items are probably used

by ASCs, their share of spending on each item is likely very different from the CPI-U weight. For example, housing accounts for 43.4 percent of the entire CPI-U (Bureau of Labor Statistics 2009).

We explored whether one of two existing Medicare indexes would be an appropriate proxy for ASC input costs: the hospital market basket, which is used to update payments for inpatient and outpatient hospital services, or the practice expense component of the Medicare Economic Index (MEI), which measures changes in physicians' practice expenses. It is reasonable to expect that ASCs have many of the same types of costs as hospitals and physicians' offices, such as medical equipment, medical supplies, building-related expenses, clinical staff, administrative staff, and malpractice insurance.

We used ASC cost data from the GAO survey to compare the distribution of ASC costs with the distribution of hospital costs (derived from the hospital market basket) and physician practice expenses (derived from the practice expense portion of the MEI). Our March 2010 report has more details on the method (Medicare Payment Advisory Commission 2010b). Although the GAO data are not sufficient for comparing

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mechanism could be annual surveys of a random sample of ASCs with mandatory response. CMS conducted cost surveys of a sample of ASCs in 1986 and 1994, and the Government Accountability Office conducted a survey of ASC costs in 2004. Another approach would be to require all ASCs to submit streamlined cost reports on an annual basis.

To enable the Commission and other analysts to determine the relationship between Medicare payments and the costs of efficient ASCs, ASCs would probably need to submit the following information:

- total costs for the facility;
- Medicare unallowable costs (e.g., entertainment, promotion, and bad debt);
- costs of clinical staff that 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);
- total Medicare payments; and
- total Medicare visits (this information would enable CMS to validate the cost data with Medicare claims data).

Revisiting the ambulatory surgical center market basket (cont.)

each category of costs across settings, they suggest that ASCs have a different cost structure from hospitals and physicians' offices. ASCs appear to 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 physicians' offices. ASCs' larger share of costs for medical supplies and drugs could be related to their high volume of cataract removal and lens insertion procedures. These procedures use intraocular lenses, which are included in the medical supplies category and are relatively expensive. Another factor could be that ASCs primarily perform surgical procedures, whereas hospitals and physicians' offices provide a significant number of imaging, tests, and evaluation and management services, which probably have lower supply costs than surgical procedures.

Since our 2010 analysis, CMS also considered whether the hospital market basket or the practice expense component of the MEI is a better proxy for ASC costs than the CPI-U (Centers for Medicare & Medicaid Services 2012b). However, CMS believes 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 and emergency 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 ASC 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 nine 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 2010b, Medicare Payment Advisory Commission 2011, Medicare Payment Advisory Commission 2012). CMS should use this information 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 the unique cost structure of ASCs. ■

In addition to the information described above, 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 (e.g., legal, accounting, and billing services). CMS should 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 0.2 percent in 2011, 1.6 percent in 2012, and 0.6 percent in 2013. The update for 2013 was based on a projected 1.4 percent increase in the CPI-U, minus a 0.8 percent deduction for multifactor productivity growth, as mandated by

the Patient Protection and Affordable Care Act of 2010 (PPACA).¹⁸

Update recommendation

In recommending an update to the ASC conversion factor for 2014, the Commission balanced the following objectives:

- maintain beneficiaries' access to ASC services;
- pay providers adequately;
- hold down the burden on the beneficiaries, workers, and firms 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 2014 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 2014. The Congress should also require ambulatory surgical centers to submit cost data.

RATIONALE 5

On the basis of our payment adequacy indicators, the importance of maintaining financial pressure on providers to constrain costs, and the lack of ASC cost and quality data, we believe that ASC payment rates should not be increased for 2014. The indicators of payment adequacy for which we have information are positive: The number of Medicare-certified ASCs continues to grow, as does beneficiaries' use of ASC services, and ASCs have adequate access to capital. Therefore, although we do not have cost and quality data, the indicators we have suggest that payments have been at least adequate.

As we have stated in prior reports, it is vital that CMS begin collecting cost data from ASCs without further delay. The lack of such data for ASCs is one reason why our recommended update for ASCs is lower than that for HOPDs (1.0 percent for 2014) (Chapter 3 of this report). Cost data would enable the Commission to examine the

growth of ASCs' costs over time and evaluate Medicare payments relative to the costs of efficient providers, which would help inform decisions about the ASC update. Such data are also needed to analyze whether an alternative input price index would be an appropriate proxy for ASC costs or an ASC-specific market basket should be developed.

IMPLICATIONS 5

Spending

- CMS has decided to increase ASC payment rates by the change in the CPI-U (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 2014 is 1.9 percent, and the forecast of productivity growth for 2014 is 0.4 percent, resulting in a projected update of 1.5 percent for 2014 (IHS Global Insight 2012). However, we recommend that the update be eliminated. Therefore, relative to the statutory update, 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 volume of ASC services, we do not anticipate that this recommendation would diminish beneficiaries' access to ASC services or providers' willingness or ability to provide those services.
- ASCs would incur some administrative costs to track and submit cost data. ■

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 relative weight 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 pass-through devices.
- 3 GAO surveyed a random sample of 600 ASCs to obtain cost data from 2004; they received reliable cost data from 290 facilities.
- 4 The average time includes time spent by the patient in the operating room and postoperative recovery room.
- 5 The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 eliminated a requirement that the Secretary collect cost data from ASCs every five years.
- 6 Medicare's share of total ASC revenue varies by type of ASC, ranging from 7 percent for ASCs that specialize in orthopedic procedures to 43 percent for ASCs that specialize in ophthalmology cases (Medical Group Management Association 2009).
- 7 Because some states have a disproportionately high number of ASCs per beneficiary (Maryland, Idaho, Washington, and Georgia), we weighted beneficiaries so that in each state the percentage of beneficiaries 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.
- 8 The CMS–HCC model is an abbreviated version of the full HCC model. The full HCC model includes 189 disease categories, while the CMS–HCC includes 70. We excluded beneficiaries who had missing risk scores and beneficiaries who were new Medicare enrollees in 2010 because those beneficiaries' risk scores were not based on diagnosis data. Our analysis included only surgical procedures that were covered in the ASC payment system in 2010.
- 9 We dropped APCs that did not have any ASC volume.
- 10 These data are based on 266 ASCs and 165 hospitals.
- 11 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).
- 12 Whether a state has certificate-of-need (CON) laws for ASCs appears to affect the number of ASCs in the state. Twenty-six states and the District of Columbia have CON laws for ASCs. The 12 states with the lowest number of ASCs per FFS beneficiary all have CON laws, while only 4 of the 10 states that have the highest number of ASCs per beneficiary have CON laws. Among these four states, Maryland and Georgia have exceptions in their CON requirements for ASCs that make it easier to establish new ASCs.
- 13 By statute, the copayment for a service paid under the OPPS cannot exceed the hospital inpatient deductible (\$1,184 in 2013). The ASC payment system does not have the same limitation on copayments, and for a few services the ASC copayment exceeds the inpatient deductible. In these instances, the ASC copayment exceeds the OPPS copayment.
- 14 Our analysis of service volume in 2011 included surgical procedures only, as nearly all these procedures had Current Procedural Terminology codes in the range 10000–69999. Our analysis did not include nonsurgical services, such as radiology services, brachytherapy sources, drugs, and pass-through devices. In addition, it did not include services that were packaged in 2011.
- 15 Nerve procedures are represented by APCs 220 and 221.
- 16 This group of services is represented by APCs 239 through 242.
- 17 This study assumed that physicians who performed at least 30 percent of their outpatient surgeries at a given ASC within a year were ASC owners. The four procedures for which there was a significant relationship between ASC ownership and volume were carpal tunnel release, cataract excision, colonoscopy, and knee arthroscopy. There was no significant relationship for myringotomy with tube placement.
- 18 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 2012b). Nevertheless, CMS is mandated to subtract multifactor productivity growth from the increase in the CPI–U.

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