

CHAPTER

4

**Physician and other health
professional services**

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

- 4** The Congress should increase payment rates for physician and other health professional services by the amount specified in current law for calendar year 2017.

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

Physician and other health professional services

Chapter summary

Physicians and other health professionals deliver a wide range of services, including office visits, surgical procedures, and diagnostic and therapeutic services in a variety of settings. In 2014, Medicare paid \$69.2 billion for physician and other health professional services, accounting for 16 percent of fee-for-service (FFS) Medicare spending. About 892,000 clinicians billed Medicare—576,000 physicians and 315,000 nurse practitioners, physician assistants, therapists, chiropractors, and other practitioners.

Medicare pays for the services of physicians and other health professionals using a fee schedule. Under current law, Medicare’s conversion factor for the fee schedule will be updated by 0.5 percent in 2017.

Assessment of payment adequacy

We use the following factors to assess payment adequacy for physicians and other health professionals: beneficiary access to care, volume growth, quality, and Medicare payments and providers’ costs.

Beneficiaries’ access to care—Overall, beneficiary access to physician and other health professional services is largely unchanged from last year and comparable to access for individuals with private insurance. Most beneficiaries report they are able to obtain timely appointments for routine care, illness, or injury, and most beneficiaries are able to find a new doctor without a problem.

In this chapter

- Are Medicare fee schedule payments adequate in 2016?
- How should Medicare payments change in 2017?

A small number of beneficiaries report more difficulty, with a higher share reporting problems obtaining a new primary care doctor than reporting problems obtaining a specialist.

- **Supply of providers**—The number of physicians per beneficiary has remained relatively constant, the number of advanced practice registered nurses and physician assistants per beneficiary has grown slightly, and the share of providers accepting assignment and enrolled in Medicare’s participating provider program remains high.
- **Volume of services**—In 2014, across all services, volume per beneficiary grew by 0.4 percent. Among broad categories of service, growth rates were 0.3 percent for evaluation and management, –1.1 percent for imaging services, 1.4 percent for major procedures, 0.8 percent for other procedures, and –0.6 percent for tests. While the imaging decrease continues the downward trend we have seen since 2009, use of imaging services remains much higher than it was a decade ago. The decrease in imaging volume includes a shift in billing for cardiovascular imaging from freestanding offices to hospitals.

Quality of care—Currently, the Medicare program relies heavily on process measures to assess clinician quality, and the Commission would prefer the use of a few key outcome measures of importance to Medicare beneficiaries. However, reliability of outcome measures at the individual clinician level is poor. We report two sets of measures at the national level—avoidable hospitalizations for ambulatory care–sensitive conditions and rates of low-value care in Medicare.

Medicare payments and providers’ costs—CMS currently projects that the increase in 2017 in the Medicare Economic Index will be 2.2 percent. We find that the ratio of Medicare payments to private insurer payments for physician and other health professional services is steady (Medicare rates were 78 percent of commercial rates in 2014). In 2014, compensation was much lower for primary care physicians than for physicians in specialty groups such as radiology and nonsurgical, procedural specialties, continuing to raise concerns about fee schedule mispricing and its impact on primary care.

The evidence suggests that payments for physicians and other health professionals are adequate. Therefore, the Commission recommends an update for 2017 consistent with current law. ■

Background

Physicians and other health professionals billing under Medicare’s Part B fee schedule deliver a wide range of services—office visits, surgical procedures, and diagnostic and therapeutic services—in a variety of settings.

In 2014, the Medicare program paid \$69.2 billion for physician and other health professional services, or 16 percent of benefit spending in Medicare’s traditional fee-for-service (FFS) program (Boards of Trustees 2015). In 2014, about 892,000 professionals billed Medicare through the fee schedule—576,000 physicians and 315,000 nurse practitioners, physician assistants, therapists, chiropractors, and other practitioners.

Medicare uses a fee schedule to pay for physician and other health professional services based on a list of over 7,000 services and their payment rates. In determining payment rates for each service, CMS considers the amount of work required to provide a service, expenses related to maintaining a practice, and professional liability insurance costs. These three factors are adjusted by variation in the input prices in different markets (through the geographic practice cost index (GPCI) adjustment factor), and the sum is multiplied by the fee schedule’s conversion factor

(average payment amount) to produce a total payment amount.¹

The conversion factor was \$35.93 in 2015 and is \$35.80 in 2016 (Centers for Medicare & Medicaid Services 2015b). The effective conversion factor for 2016 is lower than for 2015, which is due in part to a current law target of 1 percent for misvalued codes that CMS did not meet. The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) established a new set of updates for clinicians billing under the Medicare fee schedule and repealed the prior framework that set the conversion factor—the sustainable growth rate (SGR) formula (Table 4-1).

The SGR was established to limit total fee schedule spending by restraining annual updates when spending exceeded certain parameters. Years of legislated overrides of negative adjustments by the Congress would have led to a large negative reduction in 2015 (Medicare Payment Advisory Commission 2011).² MACRA repealed the SGR system, eliminating the proposed negative updates and establishing a set of statutory payment updates. MACRA also enacted other provisions into law affecting Medicare’s payments for clinician services. These provisions:

- created a payment incentive for clinicians who are qualifying participants in eligible alternative payment entities;

**TABLE
4-1**

Statutory payment updates and incentive payments for physicians and other health professionals

	2015												2026 and later
	January–June	July–December	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
FFS clinicians													
Update	0%	0.5%	0.5%	0.5%	0.5%	0.5%	0%	0%	0%	0%	0%	0%	0.25%
Potential MIPS adjustments						(-4% to +4%)	(-5% to +5%)	(-7% to +7%)	(-9% to +9%)				
APM clinicians													
Update	0%	0.5%	0.5%	0.5%	0.5%	0.5%	0%	0%	0%	0%	0%	0%	0.75%
APM incentive payment						5%	5%	5%	5%	5%	5%		

Note: FFS (fee-for-service), MIPS (Merit-based Incentive Payment), APM (alternative payment model). The MIPS adjustments are budget neutral. The potential positive MIPS adjustments may be larger than those shown here due to a scaling factor and additional funds for exceptional performance.

Source: Medicare Access and CHIP Reauthorization Act of 2015.

Alternative payment models

The Medicare Access and CHIP Reauthorization Act of 2015 establishes a payment incentive for clinicians who are qualifying participants in eligible alternative payment models. To be a qualifying participant, a clinician must have a specified share of their Medicare fee-for-service revenue in an eligible alternative payment entity. Eligible alternative payment entities are participants in alternative payment models that require participants to use certified electronic health records technology; provide for payment based

on quality measures comparable to the Merit-based Incentive Payment System; and bear financial risk for monetary losses in excess of a nominal amount (or are medical homes that have been certified for expansion by the CMS Office of the Actuary). Qualifying participants will receive a 5 percent incentive payment each year that they are eligible from 2019 through 2024. The incentive payment is applied to their professional services revenue and is delivered in a lump sum. ■

- established a Merit-based Incentive Payment System (MIPS) for making payment adjustments to clinicians who do not qualify as alternative payment model (APM) participants, to start in 2019 (see text box);
- will eliminate, at the end of 2018, the separate clinician payment adjustments (meaningful use of electronic health records, the Physician Quality Reporting System (PQRS), the value-based payment modifier, and the current quality and resource use reports);
- established a Technical Advisory Panel for physician-focused payment models;
- required the Secretary to continue making Medicare data available to the public;
- changed the process for physicians who opt out of participating in Medicare so that their opt-out is automatically renewed every two years unless they affirmatively elect back into the program, and the provisions require CMS to publish information on the number of opt-out physicians, effective February 1, 2016;
- required three Commission reports: two reports on the relationship between clinician utilization and total utilization and one report on the effect of the statutory payment updates from 2015 through 2019;
- extended the work GPCI floor and the therapy caps exceptions process through 2017 (including a process for medical review of certain therapy claims); and

- prohibited CMS from finalizing a proposal to unbundle global surgical codes.

Are Medicare fee schedule payments adequate in 2016?

We assess payment adequacy by reviewing beneficiary access to care provided by physicians and other health professionals, volume growth, quality of care, and Medicare payments and providers' costs. Overall, most indicators show no significant change from prior years.

Beneficiaries' access to care

We use a number of measures to assess beneficiary access to timely, appropriate care, including direct reporting from beneficiaries (through, for example, our own beneficiary telephone survey); focus groups with beneficiaries and practitioners; and health facility site visits conducted yearly. Supplementing these primary sources, we also review other patient access surveys and clinician surveys. Where possible, we note whether the pattern under discussion pertains to the entire Medicare population or to FFS beneficiaries only.

Each year, the Commission sponsors a telephone survey of 4,000 Medicare beneficiaries ages 65 and over and 4,000 privately insured individuals ages 50 to 64. The goal in surveying these two populations is to assess whether access concerns reported by Medicare beneficiaries are unique to the Medicare population or are part of trends

in the broader health care delivery system. This year’s survey was fielded in the summer and fall of 2015. The Commission also conducts focus groups in markets around the country to provide a qualitative description of beneficiary and provider experiences with the Medicare program.³ This year, the focus groups consisted of Medicare beneficiaries and primary care physicians. We also conducted site visits, with a focus this year on retail clinics and urgent care facilities.

Overall, findings from our survey and focus groups are consistent with one another and with external sources. Medicare beneficiaries have generally stable access to ambulatory care services, and their reported access is either as good as or better than access among privately insured individuals. The share of beneficiaries who waited longer than they wanted for an appointment is largely unchanged from prior years. Beneficiaries seeking a new primary care doctor are more likely to report difficulty doing so than are beneficiaries seeking a specialist, although the share of beneficiaries experiencing any problem continues to be small.

Medicare beneficiaries’ overall satisfaction with care is better than privately insured patients

Medicare beneficiaries reported high levels of satisfaction with their overall health care and were more likely to report being satisfied than privately insured individuals ages 50–64. In our telephone survey, higher shares of Medicare beneficiaries reported that they were very or somewhat satisfied with their care (88 percent) compared with those who have private insurance (80 percent) (Table 4-2).

These overall satisfaction rates are similar to those found in other surveys. The Medicare Expenditure Panel Survey (MEPS) finds that satisfaction with care for individuals ages 65 and over with Medicare is largely comparable with those under age 65 with private insurance. At about the same rates as the under-65 insured population, Medicare beneficiaries reported that they were able to get appointments as soon as they needed them and felt that their providers are respectful, explain information clearly, and listen carefully (Soni and Zibman 2014).

Most beneficiaries report that they are able to see a doctor when they need to

Based on our telephone survey, the share of Medicare beneficiaries reporting that they never had to wait longer than they wanted for routine care (72 percent) or illness or

TABLE 4-2

Satisfaction with the overall quality of health care received in all settings in the past 12 months, 2014–2015

	Medicare (ages 65 or older)	Private insurance (ages 50–64)
Very satisfied	69%	55%
Somewhat satisfied	19	25
Somewhat dissatisfied	3	5
Very dissatisfied	2	2

Note: Table excludes the following responses: “Did not receive health care in past 12 months,” “Don’t know,” and “Refused.” It does not include Medicare beneficiaries under the age of 65.

Source: MedPAC-sponsored telephone survey conducted in 2015.

injury care (82 percent) is consistent with prior years and better than the rates reported by the privately insured—69 percent for routine care and 77 percent for illness or injury care (the differences are statistically significant) (Table 4-3, p. 98).

Beneficiaries report more difficulty accessing primary care than specialty care

Most beneficiaries reported that they were able to obtain timely appointments for routine care, illness, or injury, and most beneficiaries were able to find a new doctor without a problem. However, beneficiaries seeking a primary care doctor were more likely to report that they had a problem finding a doctor than beneficiaries seeking a specialist (Table 4-3, p. 98).

Among those beneficiaries looking for a new doctor, a larger share reported a big problem finding primary care doctors than specialists. For primary care, 7 percent were looking for a new doctor, and of those looking, 14 percent reported a big problem (7 percent x 14 percent = 1.0 percent of the total Medicare population). Among those looking for a new specialist, 16 percent were looking for a new doctor, and of those looking, 6 percent reported a big problem (16 percent x 6 percent = 1.0 percent of the total Medicare population).

Medicare beneficiaries overall were less likely than privately insured individuals to report a big problem finding either a new primary care doctor or a new specialist, although the same pattern of greater difficulty

**TABLE
4-3**

Most aged Medicare beneficiaries and older privately insured individuals have good access to physician care, 2011-2015

Survey question	Medicare (ages 65 or older)					Private insurance (ages 50-64)				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Unwanted delay in getting an appointment: Among those who needed an appointment in the past 12 months, "How often did you have to wait longer than you wanted to get a doctor's appointment?"										
For routine care										
Never	74% ^b	77% ^b	73%	72% ^a	72% ^a	71%	72% ^b	69%	69% ^a	69% ^a
Sometimes	18	17	20	20 ^a	19 ^a	21	21	23	23 ^a	23 ^a
Usually	3	3	3	3	4	4	3	4	4	4
Always	2	2	3	3	3	3	3	3	3	3
For illness or injury										
Never	82	84 ^b	82	83 ^a	82 ^a	79	80 ^b	77	79 ^a	77 ^a
Sometimes	14	12	14	12 ^a	13 ^a	17	16	17	16 ^a	17 ^a
Usually	2	2	2	2	3	2	2 ^b	3	2	3
Always	1	1	1	1 ^a	2	1 ^b	2	2	2 ^a	2
Not accessing a doctor for medical problems: "During the past 12 months, did you have any health problem or condition about which you think you should have seen a doctor or other medical person, but did not?"										
Percent answering "Yes"	8 ^b	8 ^b	8 ^b	10	11	11	11	11	11	12
Looking for a new doctor: "In the past 12 months, have you tried to get a new...?" (Percent answering "Yes")										
Primary care doctor	6 ^b	7	7	8	7 ^a	7 ^b	7 ^b	8	8	9 ^a
Specialist	14 ^b	13 ^b	14	17	16	16	18	16 ^b	17	18
Getting a new physician: Among those who tried to get an appointment with a new primary care physician or a specialist in the past 12 months, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it..."										
Primary care physician										
No problem	65	72	70	67	67	68	75 ^b	67	63	63
Percent of total insurance group	3.6	4.7	5.2	5.5	4.7	4.5 ^b	5.0	5.2	4.9	5.7
Small problem	12	14	11	16	18	16	9 ^b	15	16	18
Percent of total insurance group	0.7	0.9	0.8	1.3	1.2	1.1 ^b	0.6 ^b	1.2	1.3	1.7
Big problem	23 ^b	14	17	15	14	14	15	18	19	17
Percent of total insurance group	1.3	0.9	1.3	1.2	1.0	0.9 ^b	1.0 ^b	1.4	1.5	1.5
Specialist										
No problem	84	87	86	85	87 ^a	86	86 ^b	87 ^b	85	82 ^a
Percent of total insurance group	12.1	11.7	12.4	14.4	14.2	13.9	15.6	13.9	14.5	14.8
Small problem	8	6	8	7	7	8	7	6	9	8
Percent of total insurance group	1.1	0.7	1.2	1.2	1.1	1.3	1.2	0.9 ^b	1.4	1.5
Big problem	7	7	5	7	6	6 ^b	7	7	6 ^b	9
Percent of total insurance group	1.0	0.9	0.7	1.2	1.0 ^a	1.0 ^b	1.2	1.1 ^b	1.0 ^b	1.7 ^a

Note: Numbers may not sum to 100 percent because missing responses ("Don't know" or "Refused") are not included. Sample sizes for each group (Medicare and privately insured) are 4,000. Sample sizes for individual questions varied. "Aged" beneficiaries are those ages 65 or older.

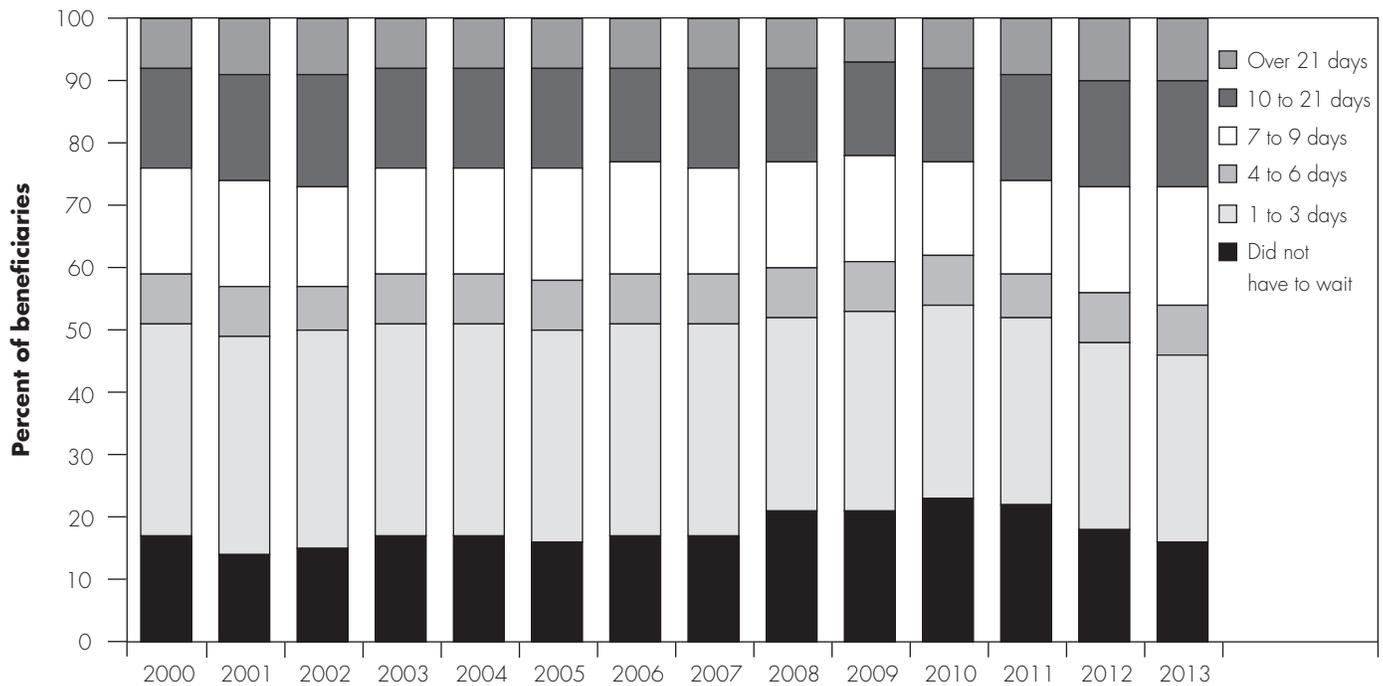
^a Statistically significant difference between the Medicare and privately insured groups in the given year (at a 95 percent confidence level).

^b Statistically significant difference from 2015 within the same insurance category (at a 95 percent confidence level).

Source: MedPAC-sponsored telephone surveys conducted from 2011 to 2015.

**FIGURE
4-1**

Slightly less than half of beneficiaries report that they can see their doctor in three days or less, 2000–2013



Note: Data include noninstitutionalized beneficiaries only.

Source: Medicare Current Beneficiary Survey, 2000–2013.

finding a primary care doctor than a specialist exists among respondents with private insurance.

Beneficiaries in our focus groups reported some difficulty obtaining specialty visits, particularly with certain types of providers—notably, dermatologists. This finding could be due in part to dermatologists specializing in areas other than medical dermatology (e.g., cosmetic dermatology). Physicians in our focus groups also reported difficulty obtaining psychiatric referrals for all of their patients because, in their experience, many psychiatrists do not accept any type of insurance. Primary care providers also reported that they sometimes treated their patients’ behavioral health issues themselves if they could not obtain alternative treatment for them. Some physicians in the focus groups mentioned that, for their patients in Medicare Advantage, they had trouble finding certain types of specialty services in network, especially dermatology and psychiatry.

Wait times for appointments

The Medicare Current Beneficiary Survey (MCBS), a panel survey (a survey covering the same group of people over time) of Medicare beneficiaries, includes a question assessing wait times—how long, specifically, respondents waited for their last physician appointment. In 2013, the share of beneficiaries reporting that they could see their doctor within three days remained slightly below 50 percent, continuing a slight trend downward since 2010, when 54 percent reported seeing their physician in three days or less (Figure 4-1). By type of coverage, beneficiaries with private insurance in addition to Medicare were more likely to report that they did not have to wait for an appointment (20 percent reported they did not have to wait) than those without any supplemental coverage (15 percent) (data not shown).

In our focus groups, most beneficiaries said that they could get a check-up with their primary care provider within one

**TABLE
4-4**

Medicare beneficiaries have better or similar access to physicians compared with privately insured individuals, but minorities in both groups report problems more frequently, 2015

Survey question	Medicare (ages 65 or older)			Private insurance (ages 50-64)		
	All	White	Minority	All	White	Minority
Unwanted delay in getting an appointment: Among those who needed an appointment in the past 12 months, "How often did you have to wait longer than you wanted to get a doctor's appointment?"						
For routine care						
Never	72% ^a	74% ^{ab}	64% ^b	69% ^a	70% ^{ab}	66% ^b
Sometimes	19 ^a	18 ^{ab}	23 ^b	23 ^a	23 ^a	23
Usually	4	4	5	4	4	6
Always	3	3 ^b	6 ^b	3	3 ^b	5 ^b
For illness or injury						
Never	82 ^a	83 ^{ab}	76 ^b	77 ^a	78 ^a	74
Sometimes	13 ^a	12 ^a	15 ^a	17 ^a	17 ^a	20 ^a
Usually	3	3	4	3	3	2
Always	2	1 ^{ab}	4 ^b	2	2 ^{ab}	3 ^b
Not accessing a doctor for medical problems: "During the past 12 months, did you have any health problem or condition about which you think you should have seen a doctor or other medical person, but did not?"						
Percent answering "Yes"	11	10 ^b	15 ^b	12	11 ^b	16 ^b
Looking for a new doctor: "In the past 12 months, have you tried to get a new...?" (Percent answering "Yes")						
Primary care physician	7 ^a	7 ^a	8	9 ^a	9 ^a	10
Specialist	16	16 ^a	15	18	19 ^a	16
Getting a new physician: Among those who tried to get an appointment with a new primary care physician or a specialist in the past 12 months, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it..."						
Primary care physician						
No problem	67	66	68	63	63	62
<i>Percent of total insurance group, by race</i>	<i>4.7</i>	<i>4.4</i>	<i>5.6</i>	<i>5.7</i>	<i>5.7</i>	<i>6.0</i>
Small problem	18	17	20	18	18	18
<i>Percent of total insurance group, by race</i>	<i>1.2</i>	<i>1.2</i>	<i>1.6</i>	<i>1.7</i>	<i>1.6</i>	<i>1.7</i>
Big problem	14	15	12	17	17	19
<i>Percent of total insurance group, by race</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.5</i>	<i>1.5</i>	<i>1.8</i>
Specialist						
No problem	87 ^a	87	86	82 ^a	84	77
<i>Percent of total insurance group, by race</i>	<i>14.2</i>	<i>14.3</i>	<i>13.3</i>	<i>14.8</i>	<i>15.7^b</i>	<i>12.0^b</i>
Small problem	7	6	10	8	8	11
<i>Percent of total insurance group, by race</i>	<i>1.1</i>	<i>1.0</i>	<i>1.5</i>	<i>1.5</i>	<i>1.4</i>	<i>1.7</i>
Big problem	6	7	4 ^a	9	8	12 ^a
<i>Percent of total insurance group, by race</i>	<i>1.0^a</i>	<i>1.1</i>	<i>0.7^a</i>	<i>1.7^a</i>	<i>1.6</i>	<i>1.9^a</i>

Note: Respondents who did not report race or ethnicity were not included in "White" or "Minority" results but were included in "All" results. Numbers may not sum to 100 percent because missing responses ("Don't know" or "Refused") are not included. Sample sizes for each group (Medicare and privately insured) were 4,000 in 2015. Sample sizes for individual questions varied.

^a Statistically significant difference between the Medicare and privately insured populations in the given year (at a 95 percent confidence level).

^b Statistically significant difference by race within the same insurance category in the given year (at a 95 percent confidence level).

Source: MedPAC-sponsored telephone surveys conducted in 2015.

to two weeks, and most said that they could get an acute primary care visit the same day with either their regular primary care provider or another provider in the same practice. Many beneficiaries told us that they went to an urgent care facility for primary care when they could not see their primary care provider right away.

Medicare beneficiaries about as likely to report delaying medical care as privately insured individuals

Medicare and privately insured respondents in our telephone survey were equally likely to report that they had a health problem for which they should have seen a doctor, but did not (11 percent for Medicare, 12 percent for privately insured individuals, no statistical difference).

From the MEPS, in 2013, about 12 percent of individuals over age 65 with Medicare said they had difficulty receiving needed medical or dental care or prescription drugs, slightly higher than the figure reported for privately insured individuals (9.2 percent). Privately insured individuals were more likely to report that cost or insurance reasons were the reason they had trouble receiving medical care, while Medicare beneficiaries cited other reasons for why they could not obtain needed care (Agency for Healthcare Research and Quality 2014).

Some groups of beneficiaries report more difficulty obtaining care

In our telephone survey, minority beneficiaries were more likely than White beneficiaries to report that they could not obtain care as quickly as they wanted. Differences in reported access between urban and rural beneficiaries were minimal. Finally, from other sources, Medicare beneficiaries under age 65 reported significantly more difficulty obtaining care and less satisfaction with their care than beneficiaries over age 65.

Minority beneficiaries report more difficulty receiving care as soon as they want and higher rates of forgoing care In our 2015 telephone survey, the share of beneficiaries reporting that they never had to wait longer than they wanted for routine care was lower for minority Medicare beneficiaries (64 percent) than for White Medicare beneficiaries (74 percent) (Table 4-4). Minority Medicare beneficiaries were more likely than White Medicare beneficiaries to report that they always had to wait longer than they wanted for a routine doctor's appointment (6 percent vs. 3 percent, respectively). This pattern is replicated among the survey's privately insured

respondents: Minorities with private insurance were less likely than Whites to report that they never had to wait longer than wanted for routine care.

Minority Medicare beneficiaries were also more likely than White beneficiaries to say that they did not receive care when they thought they should have (15 percent for minority beneficiaries vs. 10 percent for White beneficiaries). The pattern is echoed on the private side: Minorities with private insurance were also more likely than White respondents to report forgoing care (16 percent for minority respondents vs. 11 percent for White respondents).

Differences in reported access between minority and White Medicare beneficiaries have appeared in other years in our survey. In particular, in 2013, we reported that our survey found a higher share of minority than White beneficiaries who said they had difficulty finding a specialty provider. However, it is worth noting that while this year's survey suggests differences between White and minority beneficiaries in their wait times for appointments, there were no significant differences between the two groups facing difficulty in finding a new physician (either primary care or specialist).

We also looked at racial and ethnic differences in reported access and satisfaction using the MCBS to see whether these patterns appeared in other data sources. In the 2013 MCBS, black and Hispanic beneficiaries were more likely to report that they were very unsatisfied with their care (5 percent for black and Hispanic beneficiaries vs. 3 percent for Whites). Hispanic beneficiaries in particular reported significantly higher rates of dissatisfaction with ease of access to their doctor (8 percent, vs. 5 percent for Whites), and they reported difficulty obtaining care at about twice the rates of White beneficiaries. Other differences by race and ethnicity were not significant or only marginally so (Centers for Medicare & Medicaid Services 2014).

Another factor that may underlie reported differences in access by race is the presence of other coverage. Black and minority beneficiaries over age 65 are more likely to be dually eligible for Medicaid and Medicare than are White beneficiaries, and the share enrolled in Medicare Advantage also varies by race and ethnicity (Table 4-5, p. 102). Beneficiaries with Medicaid coverage consistently report more difficulty accessing services than do Medicare beneficiaries who are not dually eligible for Medicare and Medicaid.

**TABLE
4-5**

**Share of beneficiaries
ages 65 and over with other
coverage, December 2012**

	Dually eligible for Medicaid	Enrolled in Medicare Advantage
White	8%	26%
Black	27	32
Asian	38	31
Hispanic	31	43

Note: Beneficiaries in the first column include those entitled to either full or partial Medicaid benefits (full benefits, qualified Medicare beneficiary plus, specified low-income Medicare beneficiary plus, qualified Medicare beneficiary, specified low-income Medicare beneficiary, qualifying individual or qualified disabled working individual).

Source: MedPAC analysis of enrollment files from CMS.

No major differences in access between urban and rural beneficiaries The Commission’s telephone survey shows no major differences in access between urban and rural beneficiaries (Table 4-6). There was no significant difference between the share of urban and rural beneficiaries experiencing an unwanted delay in getting an appointment. Beneficiaries in rural areas have been more likely than beneficiaries in urban areas to report no problem finding a primary care doctor and in fact, relative to last year, reported improvements in finding a new primary care provider. Other differences were small and not statistically significant.

Beneficiaries who are disabled and under age 65 face more access problems Beneficiaries under age 65 (entitled to Medicare on the basis of receiving Social Security Disability Insurance) reported much worse access to physician services and lower levels of overall satisfaction with their care. Some of these differences may be due to these beneficiaries’ medical conditions, often multiple; the presence of behavioral health conditions; and their higher rates of poverty (about 45 percent of Medicare beneficiaries under age 65 are also entitled to Medicaid) (see text box, pp. 104–105).

In the 2013 MCBS, beneficiaries under age 65 were nearly three times more likely than Medicare beneficiaries overall to report difficulty obtaining care (16 percent vs. 6 percent, respectively) and delaying care because of cost (26 percent vs. 10 percent, respectively) (Centers for Medicare & Medicaid Services 2014). Beneficiaries under

age 65 reported higher levels of dissatisfaction with access to their doctor and were more than twice as likely to report having a problem for which they did not see the doctor (23 percent vs. 11 percent overall).

Nearly all beneficiaries have a regular source of care, with more use of advanced practice nurses and physician assistants in rural areas

Nearly all beneficiaries in our focus groups reported that they had a regular source of primary care. In the 2013 MCBS, 95 percent of Medicare beneficiaries reported that they had a usual source of medical care, with 85 percent citing a doctor’s office or clinic (Centers for Medicare & Medicaid Services 2014). Fifty-five percent of beneficiaries reported that they had been associated with their usual source of care for five years or more.

In our telephone survey, 12 percent of beneficiaries responded that they saw a nurse practitioner (NP) or physician assistant (PA) for all or most of their primary care, and 25 percent said that they saw an NP or PA for some of their primary care. Similar to prior years, rural beneficiaries were more likely than urban beneficiaries to report seeing NPs and PAs for all or most of their primary care (16 percent for rural beneficiaries vs. 11 percent for urban beneficiaries). Beneficiaries in our focus groups also reported that they could often obtain care more quickly by seeing NPs and PAs in their primary care practice.

Beneficiaries were generally positive about retail clinics and urgent care clinics as a source of care, citing their convenience and accessibility.⁴ Some physicians were less enthusiastic, feeling that retail clinics in particular may be appropriate for single, common conditions (such as a rash or sore throat) but are less appropriate for rare conditions or ongoing primary care. Urgent care facilities provide a wider range of services, some offer X-ray and laboratory services on site, and some are affiliated with a hospital or health system. A few physicians said they like urgent care clinics because they relieve the pressure physicians feel to have weekend hours for patient appointments.

Clinician acceptance of Medicare beneficiaries

The National Electronic Health Records Survey reports that, in 2013, 84 percent of office-based physicians said they accept Medicare, similar to the share accepting private insurance (85 percent) (Hing et al. 2015). Physician surveys over the past decade have consistently shown higher rates of specialty than primary care physicians accepting Medicare (Hing and Schappert 2012). Most of

**TABLE
4-6**

Access to physician care for Medicare beneficiaries is similar to that for privately insured individuals in urban and rural areas, 2015

Survey question	Medicare (ages 65 or older)			Private insurance (ages 50-64)		
	All	Urban	Rural	All	Urban	Rural
Unwanted delay in getting an appointment: Among those who needed an appointment in the past 12 months, "How often did you have to wait longer than you wanted to get a doctor's appointment?"						
For routine care						
Never	72% ^a	71%	73%	69% ^a	69%	68%
Sometimes	19 ^a	19 ^a	18 ^a	23 ^a	23 ^a	25 ^a
Usually	4	5	4	4	5	3
Always	3	3	3	3	3	3
For illness or injury						
Never	82 ^a	81 ^a	82	77 ^a	77 ^a	78
Sometimes	13 ^a	12 ^a	13	17 ^a	18 ^a	16
Usually	3	3	3	3	3	3
Always	2	2	2	2	2	2
Not accessing a doctor for medical problems: "During the past 12 months, did you have any health problem or condition about which you think you should have seen a doctor or other medical person, but did not?"						
(Percent answering "Yes")	11	11	11	12	12	14
Looking for a new primary care physician: "In the past 12 months, have you tried to get a new...?" (Percent answering "Yes")						
Primary care physician	7 ^a	7 ^a	7	9 ^a	9 ^a	8
Specialist	16	17 ^b	14 ^b	18	19 ^b	15 ^b
Getting a new physician: Among those who tried to get an appointment with a new primary care physician or a specialist in the past 12 months, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it..."						
Primary care physician						
No problem	67	64 ^b	79 ^b	63	63	68
<i>Percent of total insurance group, by area</i>	4.7	4.5 ^a	5.7	5.7	5.8 ^a	5.4
Small problem	18	20	10	18	18	17
<i>Percent of total insurance group, by area</i>	1.2	1.4	0.6	1.7	1.7	1.3
Big problem	14	15	9	17	17	15
<i>Percent of total insurance group, by area</i>	1.0	1.1	0.6	1.5	1.6	1.2
Specialist						
No problem	87 ^a	87	86	82 ^a	84	77
<i>Percent of total insurance group, by area</i>	14.2	14.7	11.9	14.8	15.7 ^b	11.8 ^b
Small problem	7	7	5	8	8	11
<i>Percent of total insurance group, by area</i>	1.1	1.3	0.6	1.5	1.4	1.8
Big problem	6	6	9	9	8	12
<i>Percent of total insurance group, by area</i>	1.0 ^a	1.0	1.1	1.7 ^a	1.7	1.8

Note: Numbers may not sum to 100 percent because missing responses ("Don't Know" or "Refused") are not included. Sample sizes for each group (Medicare and privately insured) were 4,000 in 2015. Sample sizes for individual questions varied. The Commission uses the Census Bureau definitions of "urban" and "rural." The Census Bureau classifies as urban all territory, population, and housing units located within an urbanized area (UA) or an urban cluster (UC). The Census Bureau's classification of rural consists of all territory, population, and housing units located outside of UAs and UCs.

^a Statistically significant difference between the Medicare and privately insured populations in a given year (at a 95 percent confidence level).

^b Statistically significant difference by area type within the same insurance category in a given year (at a 95 percent confidence level).

Source: MedPAC-sponsored telephone survey conducted in 2015.

Access to health care for beneficiaries with behavioral health conditions

The Commission has started to examine data on the ability of beneficiaries with mental or behavioral health conditions to access health care services. However, there does not appear to be a wide evidence base regarding access to health care services for Medicare beneficiaries who have behavioral health conditions. Specialized surveys such as the National Survey on Drug Use and Health, issued by the Substance Abuse and Mental Health Services Administration, are helpful in identifying the share of beneficiaries dealing with a behavioral health condition, but these surveys do not ask questions about access. The Medicare Current Beneficiary Survey (MCBS) and the National Health Interview Survey/Medical Expenditure Panel Survey do ask both sets of questions.⁵

Because the MCBS is Medicare-specific, we are able to extract the group of community-dwelling beneficiaries who reported that they had ever been diagnosed with mental retardation, Alzheimer’s disease, dementia, depression, or another mental disorder. We looked at this group’s responses to the MCBS Access to Care component (Table 4-7).⁶ Beneficiaries with one of the selected mental or behavioral health conditions were more likely to report trouble getting needed health care,

delaying care because of cost, or not seeing a doctor when they thought they should have.

In our focus groups, access to outpatient psychiatrists is often reported to be a challenge, and psychiatrists are the least likely of all physician specialties to accept insurance of any kind (including Medicare).

CMS could take steps to facilitate analysis of beneficiaries with mental and behavioral health conditions. For example, the agency could extend the Chronic Condition Warehouse (CCW) definitions developed for analysis of dual-eligible beneficiaries to all Medicare beneficiaries. The definitions are created from claims (often multiple years) using a set of rules regarding what types of diagnoses can qualify. Currently, CMS creates beneficiary flags for 27 different medical conditions in the entire Medicare population. However, there are only three mental and behavioral health conditions—Alzheimer’s disease, a separate category for Alzheimer’s disease and senile dementia, and depression. Separately, CMS has created a set of CCW flags for a suite of other chronic or disabling health conditions, including ones that are severe and costly for Medicare beneficiaries—schizophrenia, bipolar disorder, anxiety disorders, and intellectual disabilities—but only for dually eligible

(continued next page)

**TABLE
4-7**

Beneficiaries with mental or behavioral health conditions report more trouble accessing care, 2013

	Beneficiaries with a specified mental or behavioral health condition	All beneficiaries
Have you had trouble getting needed health care?	13%	6%
Last year, did you delay care due to cost?	17	11
Did you have a health problem that you thought you should see a doctor about, but didn’t?	18	11
Did you go to the ER for care?	13	10

Note: ER (emergency room). Only community-dwelling respondents included. Respondents residing in institutions are not given this section of the Access to Care module. Thirty-two percent of respondents to the Medicare Current Beneficiary Survey had a specified mental or behavioral health condition, reporting that they were ever diagnosed with mental retardation, Alzheimer’s disease, dementia, depression, or a mental disorder.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey 2013 Access to Care module.

Access to health care for beneficiaries with behavioral health conditions (cont.)

beneficiaries.⁷ Since CMS has already developed the coding requirements for these flags, they could be applied to the entire Medicare population with little extra effort. Once created, the flags would make it easier to identify incidence, spending, and utilization patterns and trends among Medicare beneficiaries with mental health conditions.

As a second step, CMS could release aggregate information about Medicare beneficiaries with substance abuse disorders. Because of a change in CMS

policy in 2013 to ensure compliance with regulations issued pursuant to the Drug Abuse Prevention, Treatment, and Rehabilitation Act, Medicare claims files for research purposes are redacted if there is any substance abuse diagnosis on the claim (Frakt and Bagley 2015). CMS could undertake an effort to make available aggregated information about the number and demographics of Medicare beneficiaries with substance abuse diagnoses, their benefit utilization and spending, outcome measures (such as drug-related mortality), and trends over time. ■

the physicians in our focus groups said that they accept Medicare, but that they may limit the number of new patients or restrict the types of Medicare Advantage plans they accept.

Supply of physicians and other health professionals billing Medicare has kept pace with enrollment growth, and most services are paid on assignment

Other indicators of access include the supply of providers billing Medicare, whether physicians and other health professionals are participating providers, and whether these providers take assignment (which means that they accept Medicare's payment as payment in full).

Supply of physicians and other health professionals billing Medicare has grown at rates similar to enrollment growth

Our analysis of Medicare FFS claims data for 2012 to 2014 shows that the number of physicians and other health professionals furnishing services to Medicare beneficiaries grew at rates similar to growth in the beneficiary population (Table 4-8, p. 106). In 2014, the ratio of physicians in primary care specialties to the number of beneficiaries was 3.7 per 1,000, unchanged from 2013. Between 2013 and 2014, the ratio of physicians in other specialties fell slightly, from 8.2 per 1,000 beneficiaries to 8.0 per 1,000. Meanwhile, the number of advanced practice registered nurses (APRNs) and PAs billing Medicare grew between 2012 and 2014, from 3.0 per 1,000 beneficiaries to 3.3 per 1,000.

Most physicians and other health professionals are part of Medicare's participating provider program, and nearly all claims are taken on assignment

In 2012, over 95 percent of physicians and other health professionals billing Medicare signed an agreement with Medicare to be part of the participating provider program. Participating providers agree to take assignment for all claims, which means they accept the fee schedule amount as payment in full (most claims are paid on assignment—99.5 percent in 2013). Providers who do not elect to participate receive a 5 percent lower payment amount and can choose whether to take assignment for their claims on a claim-by-claim basis. If they do not assign a claim, providers may “balance bill” up to 109.25 percent of the fee schedule amount, with the beneficiary paying the difference between 95 percent of the fee schedule amount and the amount billed.

CMS will make information available on opt-out clinicians

Physicians and other health professionals may opt out of the Medicare program by signing an affidavit with Medicare stating that they will not receive any payment from Medicare, directly or indirectly, for any Medicare patient they see. They must also enter into a contract with Medicare beneficiaries in order to treat them, which states that no payment will be made from Medicare either to the beneficiary or to the provider for services delivered by the opt-out clinician.

**TABLE
4-8**

Physicians and other health professionals billing Medicare, 2012-2014

Year	Physicians				Advanced practice registered nurses and physician assistants		Other practitioners	
	Primary care specialties		Other specialties		Number	Number per 1,000 beneficiaries	Number	Number per 1,000 beneficiaries
	Number	Number per 1,000 beneficiaries	Number	Number per 1,000 beneficiaries				
2012	174,848	3.8	388,237	8.4	138,184	3.0	146,396	3.2
2013	178,404	3.7	394,103	8.2	152,612	3.2	150,466	3.1
2014	180,165	3.7	396,289	8.0	165,164	3.3	150,037	3.0

Note: Primary care specialties are specialties eligible for the Primary Care Incentive Payment Program: family medicine, internal medicine, pediatric medicine, and geriatric medicine. "Other practitioners" includes physical and occupational therapists, chiropractors, optometrists, psychologists, social workers, and podiatrists. The number billing Medicare includes those with a caseload of more than 15 different beneficiaries during the year. Beneficiary counts used to calculate numbers per 1,000 include those in fee-for-service and Medicare Advantage on the assumption that professionals are furnishing services to both types. Figures exclude nonperson providers, such as suppliers or clinical laboratories.

Source: Medicare claims data for 100 percent of beneficiaries and the 2015 annual report of the Boards of Trustees of the Medicare trust funds.

Data on the number of clinicians who opt out of Medicare have been scarce, but one point-in-time estimate released by CMS in 2013 indicated that less than 1 percent of Medicare providers had opted out. MACRA makes two changes to the Medicare opt-out provisions. First, agreements between the opt-out clinician and Medicare are automatically renewed every two years unless the clinician elects to rejoin Medicare.⁸ Second, CMS must make publicly available a list of opt-out clinicians, their specialty, and their geographic location by February 1, 2016, and every year thereafter.

Physician affiliation with hospitals and health systems

In our physician focus groups this year, many of the respondents indicated that they were affiliated with hospitals and health systems, and nearly all of the physicians reported that they had been approached by a hospital or health system about affiliation. Physicians in our focus groups reported some trade-offs to hospital or health system ownership—autonomy of practice as compared with better negotiating power and more financial stability.

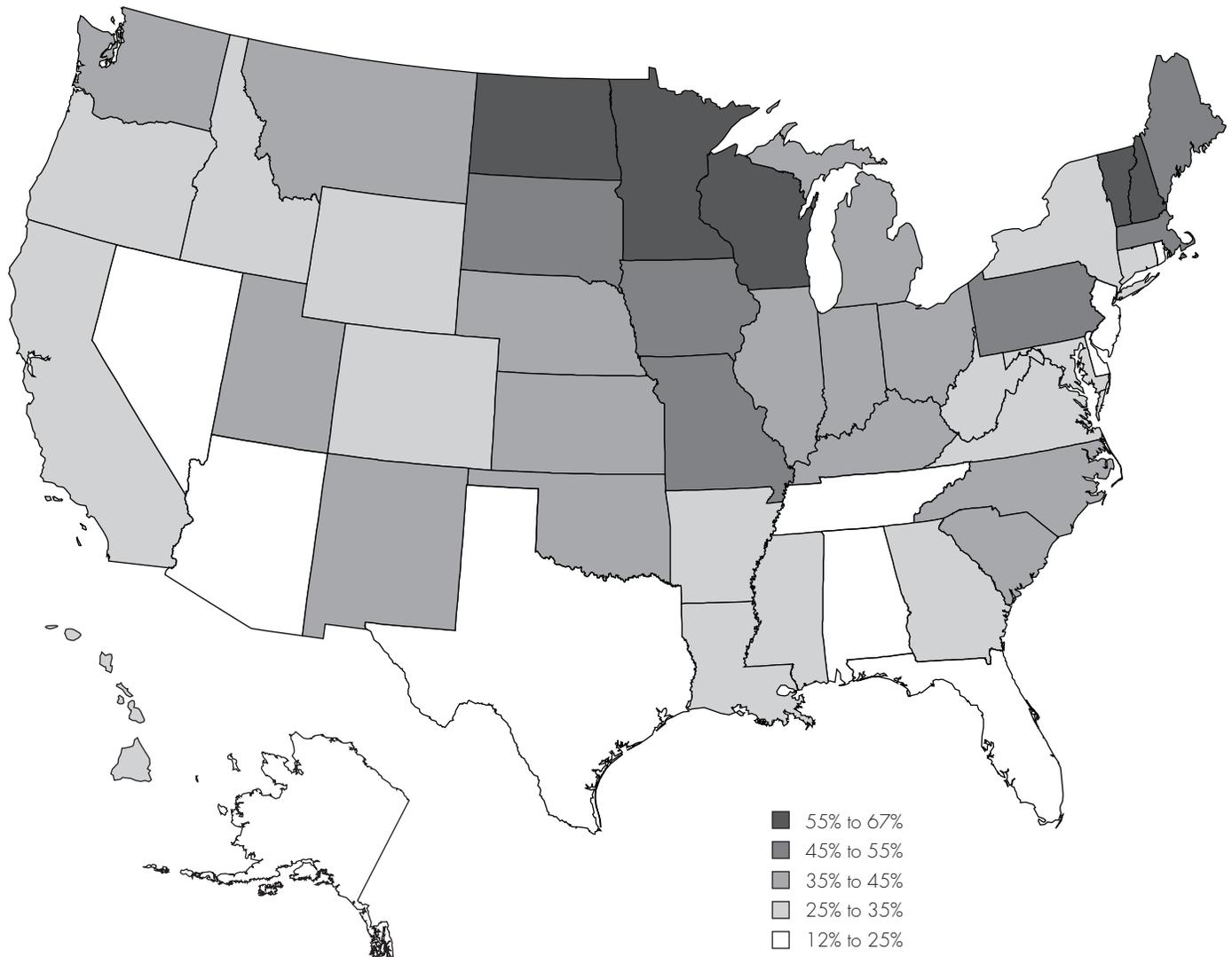
According to a commercial database of physician characteristics, in 2012, 33 percent of office-based physicians reported an affiliation with a hospital or health system, but this figure varied widely by geography (Figure 4-2).

Small increase in volume growth

We analyze annual changes in the use of services provided by physicians and other health professionals as another indicator of payment adequacy. However, we recommend caution in interpreting such data because factors unrelated to Medicare’s payment rates can influence service volume. Evidence indicates that volume decreases may be related to the movement of services from freestanding offices to hospitals, general practice pattern changes, and concerns about overuse of imaging and tests. For example, the volume of coronary artery bypass grafting has been declining as other interventions substitute for this procedure. Increases in volume may signal overpricing if practitioners favor certain services because they are relatively profitable, but other factors—including changes in the population, disease prevalence, Medicare benefits, site of care, technology, and beneficiaries’ preferences—can also explain volume increases. In addition, payments and other transfers of value from drug and device manufacturers to practitioners can influence the use of services. For example, studies have shown that physicians’ financial interactions with manufacturers are associated with greater willingness to prescribe newer, more expensive drugs (Watkins et al. 2003, Wazana 2000). In response to such concerns, the Commission recommended that drug and device manufacturers be required to publicly report their financial relationships with a variety of health care providers and organizations (Medicare Payment Advisory Commission 2009). In 2010, the Congress required CMS to create a

**FIGURE
4-2**

Share of physicians reporting hospital or health system affiliation, 2012



Source: MedPAC analysis of SK&A database of physicians, IMS Health™.

public reporting program. Online Appendix 4-A, available at <http://www.medpac.gov>, contains a description of the data this program has collected on physician-industry ties.

We used claims data from 2009, 2013, and 2014 to analyze volume changes. We identified the services provided by physicians and other professionals billing under Medicare’s fee schedule and calculated two measures of changes in service use: units of service per beneficiary and volume of services per beneficiary. Volume is measured as units of service multiplied by each service’s relative value units (RVUs) from the fee schedule. Our volume growth

measure thus accounts for changes in both the number of services and the complexity, or intensity, of those services. For example, growth in the volume of imaging services would account not just for any change in the number of such services but also for any change in intensity (e.g., if providers substitute computed tomography scans for less complex X-rays). We used RVUs for 2014 to put service volume for all years on a common scale.

Our volume analysis also accounts for the policy changes that have occurred in payments for office and inpatient

**TABLE
4-9**
Use of services provided by physicians and other health professionals, per FFS beneficiary

Type of service	Change in units of service per beneficiary		Change in volume per beneficiary		Percent of 2014 allowed charges
	Average annual 2009-2013	2013-2014	Average annual 2009-2013	2013-2014	
All services	-0.1%	0.3%	N/A	0.4%	100.0%
Evaluation and management	0.3	-0.5	N/A	0.3	47.8
Office visit—new and established	0.6	-0.7	N/A	0.2	26.8
Inpatient visit—hospital and nursing facility	-0.6	-0.6	N/A	0.0	15.9
Emergency room visit	1.5	1.3	2.6%	1.9	3.3
Hospital visit—critical care	3.7	1.4	3.8	1.3	1.5
Home visit	2.2	-0.8	2.4	-0.9	0.4
Imaging	-0.9	-1.0	-2.3	-1.1	11.0
Advanced—CT: other	1.2	4.2	0.3	3.2	1.6
Echography—heart	1.0	-0.5	-4.1	-1.5	1.1
Advanced—MRI: other	0.1	2.0	-1.7	1.0	0.9
Echography—other	3.8	1.9	3.0	1.9	0.9
Standard—musculoskeletal	-0.2	0.2	-0.7	-0.6	0.9
Standard—nuclear medicine	-7.7	-5.8	-11.6	-7.9	0.8
Standard—breast	0.5	-2.3	-0.4	-2.6	0.7
Imaging/procedure—other	-5.8	-4.2	-1.7	-1.5	0.6
Advanced—MRI: brain	-1.2	1.2	-3.7	-0.8	0.4
Advanced—CT: head	0.2	2.2	-1.2	1.6	0.4
Standard—chest	-2.6	-3.6	-3.0	-4.0	0.4
Echography—abdomen and pelvis	0.5	-1.2	0.3	-1.2	0.4
Major procedures	-0.8	0.5	0.0	1.4	7.5
Cardiovascular—other	-3.5	-1.2	-2.2	-1.5	1.7
Orthopedic—other	0.2	3.3	1.1	3.6	1.1
Knee replacement	1.0	-0.7	1.4	-0.2	0.5
Hip replacement	3.1	2.4	3.6	2.9	0.3
Explore, decompress, or excise disc	1.3	3.6	2.6	4.6	0.3
Hip fracture repair	-1.6	-0.4	-1.5	-0.1	0.3
Coronary angioplasty	-1.2	0.3	-1.3	0.7	0.2
Coronary artery bypass graft	-6.2	-4.0	-6.3	-2.8	0.2
Other procedures	0.2	2.7	0.4	0.8	21.9
Skin—minor and ambulatory	0.5	2.6	0.7	1.4	4.8
Outpatient rehabilitation	0.6	6.9	1.4	7.3	3.4
Radiation therapy	-3.6	-1.4	-2.3	-1.9	1.9
Minor—other	-0.9	-4.0	-0.7	-4.1	1.9
Cataract removal/lens insertion	-0.5	-2.3	-0.4	-2.2	1.4
Minor—musculoskeletal	0.6	1.2	1.1	2.8	1.3
Eye—other	8.5	2.0	3.8	1.5	1.1
Colonoscopy	-0.7	-2.0	-0.5	-1.7	0.8
Upper gastrointestinal endoscopy	-0.2	-3.5	0.0	-3.2	0.4
Cystoscopy	0.0	-4.3	-0.3	-5.8	0.4
Tests	0.2	-0.7	-0.7	-0.6	4.4
Other tests	0.5	2.3	-0.5	-1.4	1.7
Laboratory tests—other	2.8	-1.9	2.8	-0.5	1.5
Electrocardiograms	-1.4	-2.8	-1.8	-2.4	0.4

Note: FFS (fee-for-service), N/A (not available), CT (computed tomography), MRI (magnetic resonance imaging). Volume is measured as units of service multiplied by each service's relative value unit (RVU) from the physician fee schedule. To put service use in each year on a common scale, we used the RVUs for 2014. For billing codes not used in 2014, we imputed RVUs based on the average change in RVUs for each type of service. If a service's billing code was revised, we crosswalked the code between type of service categories if necessary to ensure consistent measurement of volume growth. Some low-volume categories are not shown but are included in the summary calculations. Evaluation and management service volume is not reported for some types of service because a change in payment policy for consultations prevented assignment of RVUs to those services. For 2009, "units of service" for office visits and inpatient visits includes, respectively, office and inpatient consultations. "Laboratory tests" includes tests billable under the fee schedule for physicians and other health professionals and excludes services billable under the laboratory fee schedule.

Source: MedPAC analysis of claims data for 100 percent of Medicare beneficiaries.

consultations. As of 2010, CMS stopped recognizing the billing codes for consultations.⁹ Physicians and other health professionals now use codes for office visits and inpatient visits (hospital and nursing facility visits) instead of consultation codes. If we ignored this change in policy, the volume analysis would show a change in intensity of services—use of lower payment rate visits in place of higher payment rate consultations. Therefore, we show the change in units of service per beneficiary for office visits, inpatient visits, and emergency room visits from 2009 to 2013, but not the change in volume for these services during the same period (Table 4-9).

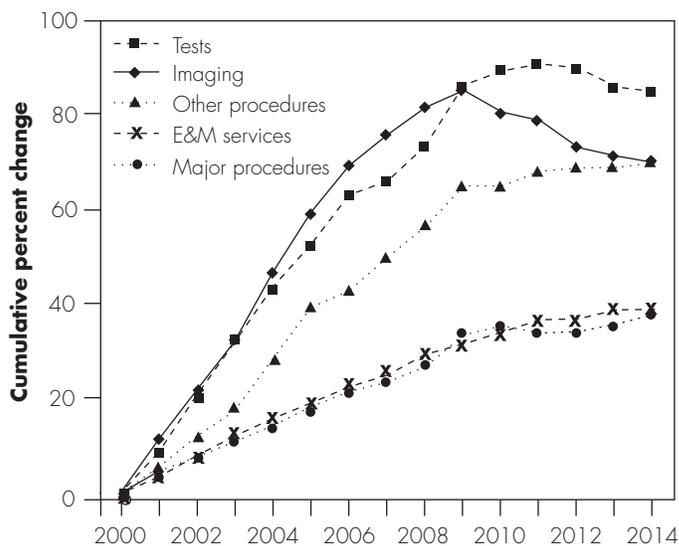
Between 2013 and 2014, across all services, volume per beneficiary grew by 0.4 percent (Table 4-9). Among broad categories of service, growth rates were 0.3 percent for evaluation and management (E&M), -1.1 percent for imaging services, 1.4 percent for major procedures, 0.8 percent for other procedures, and -0.6 percent for tests.

While the imaging decrease continues the downward trend since 2009, use of imaging services remains much higher than it was in 2000 (Figure 4-3). Cumulative growth in the volume of imaging per beneficiary from 2000 to 2009 totaled 85 percent, compared with a cumulative decrease in imaging volume since then of about 9 percent. The growth in imaging volume from 2000 to 2009 was exceeded only by the 86 percent growth in the use of tests (e.g., allergy tests) during those years. Such growth was more than double the cumulative growth rates during the same period for E&M services and major procedures, which were 32 percent and 34 percent, respectively.

The growth in use of imaging and tests has led to concerns about appropriate use of these services. Physicians have warned that diagnostic tests are often ordered without an understanding of how the results could change patient treatment (Hoffman and Cooper 2012, Redberg et al. 2011). Others have found that some clinicians routinely repeat tests and diagnostic procedures (Welch et al. 2012). When available, guidelines rarely specify how often to repeat these services. In response to concerns about overuse, the American Board of Internal Medicine (ABIM) Foundation developed the “Choosing Wisely” campaign. As part of this ongoing effort, more than 70 specialty societies have identified over 400 tests and procedures that are often overused (ABIM Foundation 2015a, ABIM Foundation 2015b). The goal of Choosing Wisely is to promote and inform conversations between clinicians and their patients about appropriate tests and treatments.

FIGURE 4-3

Growth in the volume of practitioner services per fee-for-service beneficiary, 2000–2014



Note: E&M (evaluation and management). Volume growth for E&M from 2009 to 2010 is not directly observable because of a change in payment policy for consultations. To compute cumulative volume growth for E&M through 2014, we used a growth rate for 2009 to 2010 of 1.85 percent, which is the average of the 2008 to 2009 growth rate of 1.7 percent and the 2010 to 2011 growth rate of 2.0 percent.

Source: MedPAC analysis of claims data for 100 percent of Medicare beneficiaries.

Volume changes reflect shift in billing from freestanding offices to hospitals

As a measure of growth in service use, volume growth has two advantages. First, it accounts not just for changes in the number of services but also any changes in the intensity of services (e.g., substitution of advanced imaging for X-rays). Second, together with changes in fees, volume growth has a significant impact on spending growth.

Volume growth, however, is sensitive to shifts in the site of care. The RVUs used to calculate volume include practice expense RVUs, which are often lower for services provided in a facility setting, such as a hospital, compared with services in a nonfacility setting, such as a freestanding physician’s office. In 2015, for example, the most common type of E&M office visit had an average total nonfacility fee of \$73.¹⁰ By contrast, when this visit is provided in a facility setting, the average total fee was \$51 because the practice expense RVUs were lower.

**TABLE
4-10**

Cardiovascular imaging services continue to shift from freestanding physicians' offices to HOPDs, 2013-2014

	Share of services performed in HOPDs, 2014	Per beneficiary change in units of service	
		HOPD	Freestanding physician's office
Echocardiography	41.0%	7.0%	-5.7%
Nuclear cardiology	44.8	1.1	-9.6

Note: HOPD (hospital outpatient department). Echocardiography includes services in ambulatory payment classification (APC) 0269, APC 0270, and APC 0697. Nuclear cardiology includes services in APC 0377 and APC 0398.

Source: MedPAC analysis of outpatient claims and carrier claims for 100 percent of Medicare beneficiaries.

In recent years, there has been a trend toward billing for some services in hospitals instead of freestanding offices. This shift in billing patterns explains at least some of the drop in volume for imaging and tests. This shift in setting increases overall Medicare program spending and beneficiary cost-sharing because Medicare generally pays more for the same or similar services in hospital outpatient departments (HOPDs) than in freestanding offices.¹¹

Decrease in imaging volume includes shift in billing for cardiovascular imaging from freestanding offices to hospitals The decrease in volume of imaging services was influenced by a shift in billing for cardiovascular imaging from freestanding offices to HOPDs (Table 4-10). From 2013 to 2014, the number of echocardiograms per beneficiary administered in HOPDs rose by 7.0 percent, compared with a 5.7 percent decline in freestanding offices. Similarly, during that period, the number of nuclear cardiology studies per beneficiary provided in HOPDs increased by 1.1 percent, compared with a 9.6 percent decline in freestanding offices. These changes in billing patterns are consistent with reports of an increase in hospital-owned cardiology practices (American College of Cardiology 2012).

Across all services, volume growth has contributed to an increase in spending

The growth in service volume has contributed significantly to an increase in spending for fee schedule services (Figure 4-4). From 2000 to 2014, payment updates for

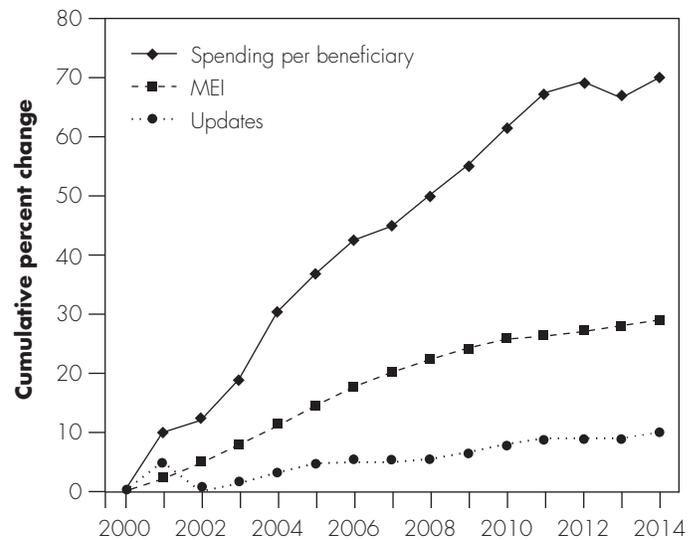
these services increased cumulatively by 10 percent—less than the 29 percent cumulative increase in the Medicare Economic Index (MEI), which measures changes in input prices. However, spending per beneficiary for these services grew at a cumulative rate of 70 percent. Volume growth, which accounts for most of the difference between the payment updates and spending growth, may reflect changes in clinical practice, such as the diffusion of new technologies, as well as changes in the demographic and health status of beneficiaries.¹²

From 2013 to 2014, per beneficiary spending for fee schedule services increased by 1.8 percent. Several factors influenced this change: the small increase in volume, the small increase in the fee schedule conversion factor (0.5 percent), the federal budget sequester, and payment adjustments outside of the update process.

Quality of care

To date, the Medicare program has relied largely on process measures through the Physician Quality Reporting System (PQRS) to assess clinician quality. The Commission has, in the past, also used a set of claims-based quality measures that it developed to measure

**FIGURE
4-4** Volume growth has caused spending to increase faster than input prices and updates, 2000-2014



Note: MEI (Medicare Economic Index).

Source: 2015 annual report of the Boards of Trustees of the Medicare trust funds and Office of the Actuary 2015.

**TABLE
4-11**

Trends in selected Prevention Quality Indicators (inpatient admissions of FFS beneficiaries for ambulatory care-sensitive conditions), 2008-2013

Inpatient admissions per 100,000 FFS beneficiaries in age group

Year	PQI 3: Diabetes long-term complications			PQI 8: Congestive heart failure			PQI 11: Bacterial pneumonia		
	Under 65	65-74	Over 75	Under 65	65-74	Over 75	Under 65	65-74	Over 75
2008	781	257	325	1,056	823	2,474	881	716	1,972
2009	774	243	301	1,047	809	2,408	901	682	1,776
2010	775	238	293	994	767	2,276	822	651	1,730
2011	751	229	275	935	710	2,139	804	631	1,708
2012	728	209	249	892	664	2,033	753	576	1,603
2013	704	200	235	867	637	1,964	695	535	1,525

Note: FFS (fee-for-service), PQI (Prevention Quality Indicator). Figures represent the number of hospital admissions for the identified condition for Medicare beneficiaries in each age range per 100,000 beneficiaries. Only FFS beneficiaries enrolled in Part A and Part B are included. Beneficiaries who were enrolled in a Medicare Advantage plan at any point during the year are excluded. Beneficiaries who died during the year are included.

Source: CMS, Data on Geographic Variation. Figures calculated by CMS from the Chronic Conditions Data Warehouse of 100 percent of claims.

underprovision of clinically indicated care. However, the Commission stopped reporting these measures in 2015 because clinical guidelines have changed since the measures were created. Overuse of services is also a significant issue in Medicare. For example, a Commission analysis found that between 21 percent and 37 percent of beneficiaries received at least one low-value service in 2012 (see text box, pp. 112-113).

More recently, the Commission has suggested that the Medicare program focus on a few key outcome measures of interest to patients in lieu of a large number of process measures. However, outcome measures such as readmissions, mortality, and avoidable hospitalizations are often unreliable at the individual clinician level; they become measureable with some certainty only when clinicians are organized into larger entities or practices.

On a separate track, CMS has established a large and growing system for collecting and reporting measures through PQRS and is carrying out a statutory requirement to develop an individual clinician-level value modifier (VM) for all physicians by 2017. The quality measures used in the VM include the over 300 measures in PQRS, plus claims-based outcome measures and 6 resource use measures. Every eligible practitioner must report at least nine PQRS measures to avoid a negative payment adjustment. Even among practices with groups of 100

clinicians or more, in the first year of the VM, CMS reported that the majority of clinicians could not be differentiated from average (Centers for Medicare & Medicaid Services 2015a). MACRA retains the general structure of the VM in the new payment adjustment, the Merit-based Incentive Payment System.

However, MACRA provides an opportunity to pause and reconsider Medicare’s approach to measuring clinician quality. One approach could be to assess large groups (such as the size of an accountable care organization) for cost and quality. Individual clinicians could be assessed using a few claims-based measures (such as relative resource use or inpatient admissions for ambulatory care-sensitive conditions) using multiple years and robust reliability thresholds to identify persistent outliers.¹³ Such a policy would require deciding how beneficiaries would be attributed to providers, identifying the comparison groups, and interpreting differences.

CMS publishes data on one set of potentially avoidable hospitalization measures for the Medicare population—Prevention Quality Indicators (PQIs), developed by the Agency for Healthcare Research and Quality. Table 4-11 presents PQI results for three common conditions among the Medicare population—diabetes, congestive heart failure, and bacterial pneumonia. For each age category,

Research shows substantial use of low-value care in fee-for-service Medicare

Low-value care is the provision of a service that has little or no clinical benefit or care in which the risk of harm from the service outweighs its potential benefit (Chan et al. 2013, Kale et al. 2013). In addition to increasing health care spending, low-value care has the potential to harm patients by exposing them to the risks of injury from inappropriate tests or procedures and may lead to a cascade of additional services that contain risks but provide little or no benefit (Keyhani et al. 2013, Korenstein et al. 2012). The “Choosing Wisely” campaign, an initiative of the American Board of Internal Medicine Foundation, defines services that represent low-value care. In the latest iteration, over 70 specialty societies have identified more than 400 tests and procedures that are often overused (ABIM Foundation 2014, ABIM Foundation 2015a, ABIM Foundation 2015b).

A team of researchers, including two physicians, developed 26 measures of low-value care drawn from evidence-based lists—such as Choosing Wisely—and medical literature, which they applied to Medicare claims data from 2009 (Schwartz et al. 2014). The authors developed two versions of each measure: a broader one with higher sensitivity (and lower specificity) and a narrower one with lower sensitivity (and higher specificity). Increasing the sensitivity of a

measure captures more potentially inappropriate use, but is also more likely to misclassify some appropriate use as inappropriate. Increasing a measure’s specificity leads to less misclassification of appropriate use as inappropriate, at the expense of potentially missing some instances of inappropriate use.

The Commission contracted with the authors of this study to obtain the measures’ specifications and their algorithms, which we applied to Medicare claims data from 2012. Based on the original study, we calculated two versions of each measure: a broader version (more sensitive, less specific) and a narrower version (less sensitive, more specific). For each version, we calculated the number of low-value services per 100 beneficiaries, the share of beneficiaries who received at least one low-value service, and total spending across all fee-for-service (FFS) beneficiaries for each service.

Our results using 2012 data show substantial use of low-value care in FFS Medicare. Based on the broader version of each measure, there were 65 instances of low-value care per 100 beneficiaries, and 37 percent of beneficiaries received at least one low-value service. Medicare spending for these services in 2012 was \$5.8 billion, or 1.7 percent of total FFS Medicare spending for the beneficiaries in our sample. Based on the narrower

(continued next page)

between 2008 and 2013, there were declines in all three measures as well as most of the other PQI measures.

Medicare payments and providers’ costs

Because physicians and other health professionals do not report their costs to the Medicare program, we use other measures to assess the adequacy of Medicare payments relative to clinicians’ costs. The first measure is how Medicare’s payments compare with the fees paid by private insurers for covered services. The second measure is whether Medicare’s fee schedule contributes to differences in physician compensation across specialties—even after accounting for the cost of running a practice. The third measure assesses input prices for physicians

and other health professionals—the MEI. We also review payment adjustments made in addition to the conversion factor update.

Ratio of Medicare payments to private insurer payments is steady

Since 1999, Medicare’s physician and other health professional fees (including cost sharing) are about 80 percent of private insurer fees. In 2014, Medicare’s payments for physician and other health professional services were 78 percent of commercial rates for preferred provider organizations (PPOs). This analysis uses a data set of paid claims for PPO members of a large national insurer.

Research shows substantial use of low-value care in fee-for-service Medicare (cont.)

version of each measure, there were 28 instances of low-value care per 100 beneficiaries, and 21 percent of beneficiaries received at least one low-value service. Total Medicare spending for these services was \$1.9 billion, or 0.6 percent of total FFS Medicare spending for the beneficiaries in our sample. The differences between the broader and narrower versions of the measures demonstrate that the amount of low-value care detected varies substantially based on the measures' clinical specificity. We used claims data to measure low-value care, and claims do not include detailed clinical information. Therefore, our analysis likely represents a conservative estimate of the number of low-value services in Medicare. In addition, the spending estimates probably understate actual spending on low-value care because they do not include downstream services (e.g., follow-up tests and procedures) that may result from the initial low-value service.

Under the broader version of each measure, the measures with the highest volume were imaging for low back pain, prostate-specific antigen (PSA) screening for men ages 75 and over, and colon cancer screening for older adults. Those with the highest Medicare spending were stress testing for stable coronary disease (\$1.3 billion), percutaneous coronary intervention (PCI) with balloon angioplasty or stent placement for stable coronary disease (\$1.3 billion), and renal artery angioplasty or stenting (\$445 million).

Under the narrower version of each measure, the measures with the highest volume were PSA screening for men ages 75 and over, carotid artery disease screening in asymptomatic patients, and parathyroid hormone measurement for patients with early chronic kidney disease. Those with the highest Medicare spending were vertebroplasty or kyphoplasty for osteoporotic vertebral fractures (\$352 million), screening for carotid artery disease in asymptomatic adults (\$236 million), and PCI with balloon angioplasty or stent placement (\$204 million).

For more details on the volume and spending for individual measures, see the Commission's June 2015 data book (<http://medpac.gov/documents/data-book/june-2015-data-book-section-5-quality-of-care-in-the-medicare-program.pdf?sfvrsn=0>).

After grouping the 26 measures into 6 larger clinical categories, we found that imaging and cancer screening measures accounted for most of the volume of low-value care—about 70 percent of the instances of low-value care per 100 beneficiaries in both versions of the measures. However, cardiovascular testing and procedures and imaging accounted for most of the spending on low-value care, comprising between 60 percent and 72 percent of spending on low-value care, depending on the version of the measures. ■

Compensation differences between primary and specialty care

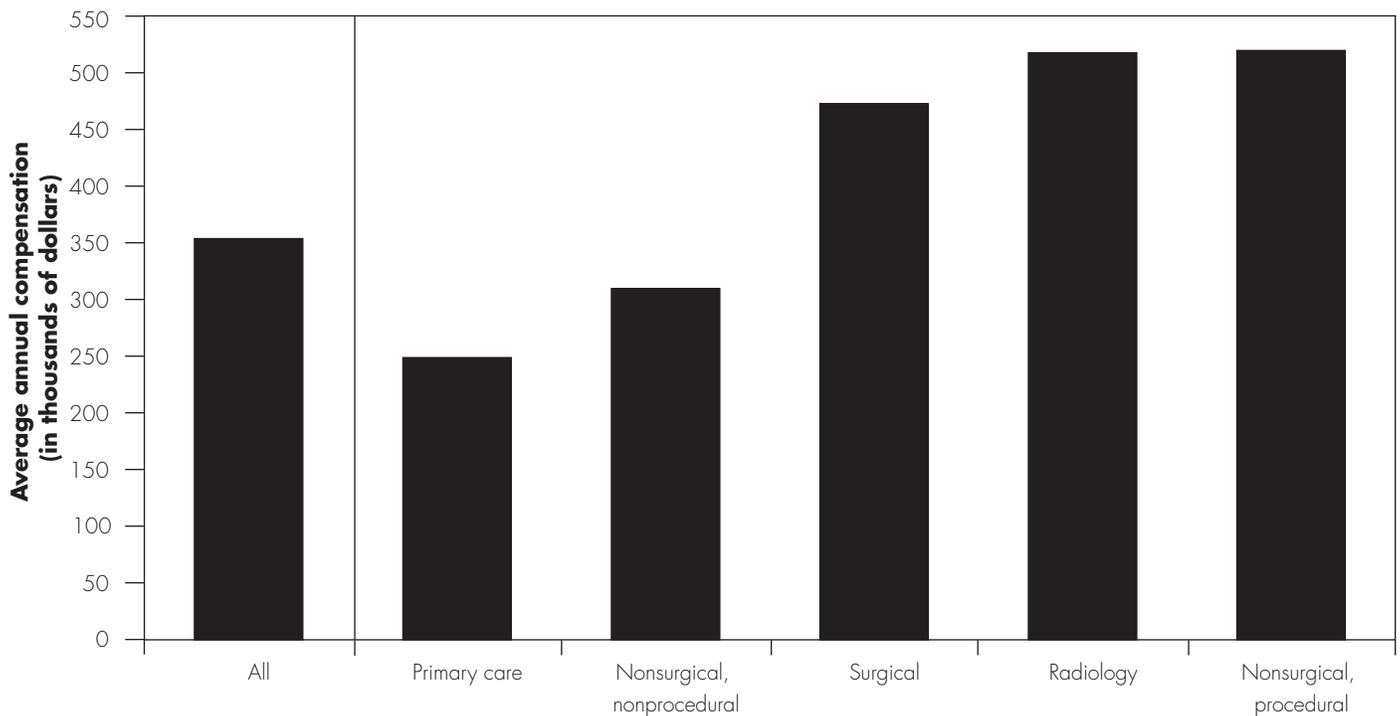
The Commission remains concerned that the fee schedule and the nature of FFS payment leads to an undervaluing of primary care and overvaluing of specialty care. First, the Commission has concerns that the resource-based relative value scale, which forms the basis for the fee schedule, includes mispriced services and that these mispriced services cause an income disparity between primary care and specialty physicians. Second, FFS payment allows some specialties to more easily increase the volume of services they provide (and therefore their revenue from Medicare), while such increases are less likely for other

specialties, particularly those that spend most of their time providing E&M services.

For an analysis of the compensation received by physicians—the largest subset of practitioners—we examined data from the Medical Group Management Association's (MGMA's) Physician Compensation and Production Survey from 2014. Averaged across all specialties, physician compensation was about \$354,000 per year. Within these averages, compensation was much higher for some specialties than others. The specialty groups with the highest compensation were the nonsurgical, procedural group (average compensation

**FIGURE
4-5**

Disparities in physician compensation are widest when primary care physicians are compared with radiologists and nonsurgical proceduralists, 2014



Source: MedPAC analysis of data from Medical Group Management Association's Physician Compensation and Production Survey, 2014.

of \$520,000) and radiology (average compensation of \$518,000) (Figure 4-5).¹⁴ Compensation for these groups was more than double the \$249,000 average for primary care physicians.¹⁵ Psychiatry—which is part of the nonsurgical, nonprocedural group—averaged \$264,000. Our analysis of 2012 data from MGMA showed similar differences. Previous Commission work using MGMA data showed that such disparities also existed when compensation was observed on an hourly basis, thus accounting for variation in hours worked per week.¹⁶ In addition, these disparities persist when compensation is simulated as if all services that physicians provide were paid under Medicare's fee schedule (Berenson et al. 2010). This finding suggests that the fee schedule is an important source of the disparities in compensation among specialties.

Validation of the fee schedule's RVUs can help correct the fee schedule's inaccuracies and ensure that physicians at the high end of the compensation scale are not overcompensated. CMS has a statutory mandate and resources to validate RVUs, and the Commission has

provided CMS with ideas on how to do so (Medicare Payment Advisory Commission 2015). In addition, the Commission made a recommendation last year for a per beneficiary payment for primary care that can also help redistribute Medicare spending to primary care from procedural services (see text box, p. 116).

Input costs for physicians and other health professionals are projected to increase from 2016 to 2017

The MEI measures the change in the market basket of input prices for physician and other health professional services and is adjusted for economy-wide productivity.¹⁷ CMS's current forecast is that the MEI will increase by 2.2 percent in 2017 (IHS Global Insight 2015).

Payment adjustments outside of the update process

Medicare spending for the services of physicians and other health professionals is also affected by bonuses, penalties,

**TABLE
4-12**

Payment adjustments for clinicians billing Medicare, 2014

Category	Adjustment	Number of providers	Spending impact (in millions)	Source and notes
Direct payment adjustments	HPSA payment adjustment	Not available	+\$136	Unpublished data from CMS, 2014
	Work GPCI floor	Not available	+400	CBO estimate of MACRA, 2014
	Sequester	All billing providers (about 900,000)	-1,400	Estimate, based on Medicare Trustees' report
	Primary Care Incentive Payment	194,000	+700	Estimate, based on CMS publication
Payment adjustments for incentive programs	PQRS incentive	494,619	+219	CMS experience report, for 2013 reporting year (2014 not available)
	eRx penalty	49,576	-65	Estimate from CMS experience report, 2014
	EHR incentive	225,710	+1,800	Estimate from CMS experience report, 2014

Note: HPSA (health professional shortage area), GPCI (geographic practice cost index), PQRS (Physician Quality Reporting System), eRx (electronic prescribing), EHR (electronic health record), CBO (Congressional Budget Office), MACRA (Medicare Access and CHIP Reauthorization Act of 2015). The providers receiving PQRS incentive payments include those who participated through the Comprehensive Primary Care Initiative, the Shared Savings Program, the Pioneer Accountable Care Organization program, and the Group Practice Reporting Option.

Source: CMS/Office of the Actuary, annual report of the Boards of Trustees of the Medicare trust funds, Congressional Budget Office, Department of Health and Human Services.

and other types of payment adjustments. The effect of these adjustments can be quite large and can help explain the portion of spending growth not explained by the update or volume growth.

Table 4-12 shows these adjustments in two categories: direct payment adjustments and payment adjustments for incentive programs. Some of the incentive programs are changing from payment incentives to payment penalties, and the eRx (electronic prescribing) penalty was sunset after 2014. In 2017, the PQRS and the electronic health record (EHR) meaningful-use program will consist of a payment penalty. The penalty is 2 percent for clinicians who do not successfully report PQRS measures and 4 percent for clinicians who do not meet the EHR meaningful-use standard. The VM in 2017 will be budget neutral by design.

In addition, the EHR meaningful-use requirement, PQRS, and the VM will be sunset at the end of 2018 and replaced by the MIPS. The PCIP also expired at the end of 2015, and the Commission has recommended replacing it with a per beneficiary payment (Medicare Payment Advisory Commission 2015).

How should Medicare payments change in 2017?

The Commission's deliberations on payment adequacy for physicians and other health professionals are informed by beneficiary access to services, volume growth, quality, and

Commission recommendation for a per beneficiary payment for primary care

The Commission has a long-standing concern that primary care is undervalued by the Medicare fee schedule for physicians and other health professionals compared with specialty care. The Commission has also become concerned that the fee schedule is an ill-suited payment mechanism for primary care. The Commission, in its March 2015 report, recommended that the Congress establish a per beneficiary payment for primary care to replace the expiring Primary Care Incentive Payment program (PCIP), which provides a 10 percent bonus payment on fee schedule payments for primary care visits provided by primary care providers (Medicare Payment Advisory Commission 2015). A monthly per beneficiary payment

based on PCIP payments would initially amount to about \$2.60.

The Commission recommended that the additional payments to primary care practitioners be in the form of a per beneficiary payment as a step away from the service-oriented fee-for-service payment approach. Funding for the per beneficiary payment would come from reducing fees for all services in the fee schedule other than PCIP-defined primary care services provided by any practitioner. This method of funding would be budget neutral and would help rebalance the fee schedule to achieve greater equity of payments between primary care and other services. ■

Medicare payments and providers' costs. On the basis of these indicators, we find that payments appear adequate.

On measures of access to the services of physicians and other health professionals, the Commission continues to find—consistent with our findings over many years—that beneficiary access to care is stable. Medicare beneficiaries generally have access comparable to privately insured individuals ages 50–64. Other beneficiary access surveys have consistent findings. The number of physicians per beneficiary has remained relatively constant, the number of APRNs and PAs per beneficiary has grown, and the share of providers accepting assignment and enrolled in Medicare's participating provider program remains high.

In 2014, across all services, volume per beneficiary grew by 0.4 percent. Among broad service categories, growth rates were 0.3 percent for E&M services, –1.1 percent for imaging services, 1.4 percent for major procedures, 0.8 percent for other procedures, and –0.6 percent for tests. Although the imaging decrease continues the downward trend since 2009, use of imaging services remains much higher than it was in 2000.

Input prices for physicians and other health professionals are projected to increase by 2.2 percent in 2017. In 2014, compensation was much lower for primary care physicians than for physicians in certain specialties, continuing to

raise concerns about fee schedule mispricing and its impact on primary care.

Update recommendation

In recommending an update for physicians and other health professionals, the Commission balanced the following objectives:

- maintain beneficiary access to physician and other health professional services,
- minimize the burden on the taxpayers and beneficiaries who finance the Medicare program, and
- ensure adequate payments for the efficient provision of services.

In balancing these objectives with the overall finding that payments appear adequate, the Commission recommends an update consistent with current law.

RECOMMENDATION 4

The Congress should increase payment rates for physician and other health professional services by the amount specified in current law for calendar year 2017.

RATIONALE 4

The Medicare Access and CHIP Reauthorization Act of 2015 changed the statute governing Medicare's payments for physicians and other health professionals, repealing

the SGR and establishing in its place a set of statutory updates. The actual update in 2017 for any given clinician will be the product of a number of factors, including the statutory update of 0.5 percent, a PQRS payment adjustment, a value modifier payment adjustment, and a potential adjustment based on misvalued codes.

Overall, access to physician and other health professional services appears stable and as good as (or better than) that of privately insured individuals. Other measures of payment adequacy are also stable and consistent with prior years. Given these indicators, the Commission does not see a reason to diverge from the current law update for 2017.

Spending

- No change as compared with current law.

Beneficiary and provider

- The Commission's recommendation of the current law update is unlikely to affect beneficiaries' access to care and providers' willingness and ability to furnish care. ■

Endnotes

- 1 For further information, see the Commission's *Payment Basics: Physician and Other Health Professionals Payment System* at <http://www.medpac.gov/documents/payment-basics/physician-and-other-health-professional-payment-system-15.pdf?sfvrsn=0>.
- 2 In 2011, the Commission recommended repeal of the SGR, and the recommendation had four components: repealing the SGR and replacing it with a set of statutory updates that were higher for primary care services than for other services, collecting data to improve the relative valuation of services, identifying overpriced services and rebalancing payments, and encouraging accountable care organizations by creating greater opportunities for shared savings (Medicare Payment Advisory Commission 2011).
- 3 Medicare beneficiaries in our focus groups have all types of coverage—supplemental coverage, Medicaid, and Medicare Advantage.
- 4 There is some overlap in the two categories, but generally retail clinics are clinics in retail settings, such as stores or pharmacies. Urgent care clinics could be freestanding or affiliated or part of a broader health care facility.
- 5 Another set of surveys, the Consumer Assessment of Healthcare Providers and Systems[®] Clinician and Group surveys, also ask about mental health and access to care, but the surveys do not target a representative sample.
- 6 Only community-dwelling beneficiaries are asked the access to care questions that are of interest in this analysis. We grouped these beneficiaries together because of concern about sample size. A total of 14,000 respondents completed the Access to Care component in the 2013 MCBS, and many of the questions were inapplicable for more than half the sample.
- 7 While the dual-eligible population makes up a large share of beneficiaries with behavioral health conditions, many beneficiaries with these conditions are not dually eligible.
- 8 Under prior law, opt-out agreements were in force for two years, and clinicians had to affirmatively renew it every two years.
- 9 CMS changed the policy on billing for consultations with the rationale that the relaxation of consultation documentation requirements over time had reduced the effort involved in consultations to levels comparable with those of routine evaluation and management visits.
- 10 The Current Procedural Terminology code for this visit is 99213. The total nonfacility fee includes work RVUs, practice expense RVUs, and professional liability insurance RVUs.
- 11 Medicare makes both a facility payment and a fee schedule payment when a service is provided in an HOPD, whereas the program makes only a fee schedule payment when a service is furnished in a freestanding office. The facility payment accounts for the cost of the service in an HOPD.
- 12 The effect of age and gender changes among beneficiaries on spending for physician and other health professional services has generally been small in the recent past, and physician spending varies less by age than spending for other services such as inpatient hospital and post-acute care.
- 13 Relative resource use is a measure of the costliness of a physician's practice style as compared with his or her peers.
- 14 The nonsurgical, procedural specialties in the analysis are cardiology, dermatology, gastroenterology, and pulmonary medicine.
- 15 The primary care specialties in the analysis are family medicine, internal medicine, and general pediatrics.
- 16 To account for differences among specialties in hours worked per week, an earlier analysis based on MGMA data from 2007 included comparisons of hourly compensation. The results were similar to those from the analysis of 2014 data on annual compensation: Hourly compensation for nonsurgical, procedural specialties and radiology was more than double the hourly compensation rate for primary care. Analysis of hourly compensation was not possible with the 2014 data because the newer MGMA survey did not include questions about hours worked.
- 17 The MEI measures the weighted average annual price change for various inputs used by physicians and other health professionals to furnish services.

References

- ABIM Foundation. 2015a. Choosing Wisely: History. <http://www.choosingwisely.org/about-us/history/>.
- ABIM Foundation. 2015b. Dermatologists identify procedures that may not be necessary. <http://www.choosingwisely.org/dermatologists-identify-procedures-that-may-not-be-necessary/>.
- ABIM Foundation. 2014. Specialty society lists of five things physicians and patients should question. <http://www.choosingwisely.org/doctor-patient-lists/>.
- Agency for Healthcare Research and Quality, Department of Health and Human Services. 2014. MEPS web tables. Table 4.1. http://meps.ahrq.gov/mepsweb/data_stats/quick_tables_results.jsp?component=1&subcomponent=0&year=-1&tableSeries=6&searchText=&searchMethod=1&Action=Search.
- American College of Cardiology. 2012. *Findings from the ACC cardiovascular practice consensus*. Washington, DC: ACC. <http://www.nccacc.org/news/2012USCVPracticeCensusNorthCarolina.pdf>.
- Berenson, R., S. Zuckerman, K. Stockley, et al. 2010. *What if all physician services were paid under the Medicare fee schedule: An analysis using Medical Group Management Association data*. A study conducted for the Medicare Payment Advisory Commission by staff from the Urban Institute and the Medical Group Management Association Center for Research. Washington, DC: MedPAC.
- Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2015. *2015 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Insurance Trust Funds*. Washington, DC: Boards of Trustees.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2015a. 2015 *Value-Based Payment Modifier Program experience report*. Baltimore, MD: CMS. <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2015-VM-Program-Experience-Rpt.pdf>.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2015b. Medicare program; revisions to payment policies under the physician fee schedule and other revisions to Part B for CY 2016. Final rule with comment period. *Federal Register* 80, no. 220 (November 16): 70886–71386.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2014. The characteristics and perceptions of the Medicare population: Data from the 2012 Medicare Current Beneficiary Survey. <http://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Tables-Items/2012CNP.html?DLPage=1&DLSort=0&DLSortDir=descending>.
- Chan, K. S., E. Chang, N. Nassery, et al. 2013. The state of overuse measurement: A critical review. *Medical Care Research and Review* 70, no. 5 (October): 473–496.
- Frakt, A. B., and N. Bagley. 2015. Protection or harm? Suppressing substance-use data. *New England Journal of Medicine* 372, no. 20 (May 14): 1879–1881.
- Hing, E., S. L. Decker, and E. Jamoom. 2015. *Acceptance of new patients with public and private insurance by office-based physicians: United States, 2013*. National Center for Health Statistics data brief. Atlanta, GA: Centers for Disease Control and Prevention. <http://www.cdc.gov/nchs/data/databriefs/db195.htm>.
- Hing, E., and S. M. Schappert. 2012. *Generalist and specialty physicians: Supply and access, 2009–2010*. NCHS data brief, no. 105. Hyattsville, MD: National Center for Health Statistics.
- Hoffman, J. R., and R. J. Cooper. 2012. Overdiagnosis of disease: A modern epidemic. *Archives of Internal Medicine* 172, no. 15 (August 13): 1123–1124.
- IHS Global Insight. 2015. IHS Global Insight 2015q4 forecast. Englewood, CO: IHS Global.
- Kale, M. S., T. F. Bishop, A. D. Federman, et al. 2013. Trends in the overuse of ambulatory health care services in the United States. *JAMA Internal Medicine* 173, no. 2 (Jan 28): 142–148.
- Keyhani, S., R. Falk, E. A. Howell, et al. 2013. Overuse and systems of care: A systematic review. *Medical Care* 51, no. 6 (June): 503–508.
- Korenstein, D., R. Falk, E. A. Howell, et al. 2012. Overuse of health care services in the United States: An understudied problem. *Archives of Internal Medicine* 172, no. 2 (January 23): 171–178.
- Medicare Payment Advisory Commission. 2015. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2011. Moving forward from the sustainable growth rate (SGR) system. Letter to the Congress. October 14.

Medicare Payment Advisory Commission. 2009. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.

Redberg, R., M. Katz, and D. Grady. 2011. Diagnostic tests: Another frontier for less is more: Or why talking to your patient is a safe and effective method of reassurance. *Archives of Internal Medicine* 171, no. 7 (April 11): 619.

Schwartz, A. L., B. E. Landon, A. G. Elshaug, et al. 2014. Measuring low-value care in Medicare. *JAMA Internal Medicine* 174, no. 7 (July): 1067–1076.

Soni, A., and C. Zibman. 2014. *Experiences with health care providers during routine care, adult U.S. civilian noninstitutionalized population, 2011*. Statistical brief no. 462. Rockville, MD: Agency for Healthcare Research and Quality. http://meps.ahrq.gov/mepsweb/data_files/publications/st462/stat462.shtml.

Watkins, C., L. Moore, I. Harvey, et al. 2003. Characteristics of general practitioners who frequently see drug industry representatives: National cross sectional study. *British Medical Journal* 326, no. 7400 (May 31): 1178–1179.

Wazana, A. 2000. Physicians and the pharmaceutical industry: Is a gift ever just a gift? *Journal of the American Medical Association* 283, no. 3 (January 19): 373–380.

Welch, H. G., K. J. Hayes, and C. Frost. 2012. Repeat testing among Medicare beneficiaries. *Archives of Internal Medicine* 172, no. 22 (December 10): 1745–1751.