CHAPTER 4

Physician and other health professional services

RECOMMENDATIONS

(The Commission reiterates its previous recommendations on improving Medicare's payments to physicians and other health professionals. See Appendix B, pp. 371–392.)

CHAPTER 4

Physician and other health professional services

Chapter summary

In 2011, Medicare paid $68 billion for physician and other health professional services, 12 percent of total Medicare spending. About 850,000 clinicians billed Medicare—550,000 physicians, with the balance consisting of nurse practitioners and other advanced practice nurses, therapists, chiropractors, and other practitioners.

Medicare pays for the services of physicians and health professionals under a fee schedule, and total payments are limited by the sustainable growth rate (SGR) formula. Because of years of volume growth exceeding the SGR limits and legislative and regulatory overrides of negative updates, fees for physicians and other health professionals will decline by about 25 percent in January 2014, according to the Congressional Budget Office.

Assessment of payment adequacy

Informing the Commission's deliberations on payment adequacy for physicians and other health professionals are beneficiary access to services, volume growth, quality, and changes in input costs.

***Beneficiaries' access to care*—**Overall, beneficiary access to physicians and other health professional services is stable and similar to access for privately insured individuals ages 50 to 64. Seventy-seven percent of beneficiaries reported that they never had to wait longer than they wanted for a routine visit,

In this chapter

and 84 percent reported that they never had to wait longer than they wanted for an illness or injury visit. A greater share of beneficiaries continues to report a big problem finding a primary care doctor than do beneficiaries seeking a specialist. This pattern is similar among individuals ages 50 to 64 with private insurance. The Commission continues to be concerned about access to primary care physicians, given the Commission's aim to transform Medicare from a fee-driven payment model to one that encourages the delivery of efficient, high-quality care.

- ***Capacity and supply of providers*—**The supply of primary care providers and specialists per beneficiary remained constant from 2009 through 2011; the supply of advanced practice nurses, physician assistants, and other providers grew. One study found that 83 percent of primary care physicians (excluding pediatrics) and 91 percent of specialists accept new Medicare patients (Decker 2012).
- ***Volume of services*—**The volume of physician and other health professional services grew 1.0 percent per fee-for-service beneficiary in 2011, although growth rates varied across type of service. Evaluation and management services increased 2.0 percent; other procedures increased 1.9 percent; and tests increased 0.8 percent. Imaging and major procedures had negative growth rates of −1.0 percent and −1.1 percent, respectively. In addition, there is geographic variation in initial and repeated diagnostic tests across the country.

***Quality of care*—**A few measures of ambulatory care quality between the periods of 2008 to 2009 and 2010 to 2011 improved slightly, a few worsened slightly, and the majority of measures did not change.

***Medicare payments and providers' costs*—**We use proxies for Medicare's payments relative to providers' costs. Medicare's payments for fee-schedule services relative to private insurer payments have remained relatively constant at 82 percent. CMS currently projects that the percentage change in the Medicare Economic Index, a measure of the change in providers' costs, will be 2.3 percent in 2014.

Repeal of the sustainable growth rate is urgent

The Commission's deliberations regarding payment updates for physicians and other health professionals are driven by concerns with the SGR, which links physician fees to volume growth. The SGR has called for negative updates for every year since 2002, and every year since 2003 the Congress has provided a short-term override of the negative payment updates. On January 2, 2013, the President signed a bill that delayed the reduction in fees under the SGR for calendar year 2013. The Commission laid out its findings and recommendations for moving forward

from the SGR system in its October 2011 letter to the Congress (Appendix B, pp. 371–392).

First, the SGR system, which ties annual updates to cumulative expenditures, has failed to restrain volume growth and may have exacerbated it. Second, temporary, stop-gap fixes to override the SGR undermine the credibility of Medicare because they engender uncertainty and anger among physicians and other health professionals, which may cause anxiety among beneficiaries. Third, the SGR is inequitable; it neither rewards health professionals who restrain volume nor punishes those who prescribe unnecessary services (Alhassani et al. 2012). Fourth, while the Congressional Budget Office's most recent budget projection has reduced the cost of repealing the SGR, the budget score is volatile, and the cost of SGR repeal will likely continue to grow, creating pressure to repeal it now. The Commission presented a set of recommendations to eliminate the SGR and replace it with a set of fee-schedule updates, improve the accuracy of physician payments, and encourage movement into risk-bearing accountable care organizations. If the Congress wishes to fund the SGR repeal entirely out of Medicare, it would require spending offsets across Medicare.

The Commission reiterates two points from our letter. First, the need to repeal the SGR is urgent. Deferring repeal of the SGR will not leave the Congress with a better set of choices: The cost will likely increase and the array of new payment models is unlikely to change. While our latest access survey does not show significant deterioration at the national level, the Commission is concerned about access, particularly for primary care. The Medicare population is increasing as members of the baby-boom generation become eligible for Medicare, a large cohort of physicians is nearing retirement age, and SGR fatigue is increasing. Second, repeal of the SGR should adhere to the following principles: The link between fee-schedule expenditures and annual updates is unworkable, beneficiary access to care must be protected, and proposals to replace the SGR must be fiscally responsible. ■

Background

Physicians and other health professionals deliver a wide range of services to Medicare beneficiaries in all settings, including physicians' offices, hospitals, ambulatory surgical centers, skilled nursing facilities and other post-acute care settings, hospices, outpatient dialysis facilities, clinical laboratories, and beneficiaries' homes. Of the nearly 850,000 clinicians billing Medicare, 550,000 are physicians and 300,000 are other health professionals, such as advanced practice nurses, physical and occupational therapists, and chiropractors. Part B of Medicare pays for physician and other health professional services; in 2011, payments totaled $68 billion, about 12 percent of Medicare spending. Between 2000 and 2011, Medicare's spending per beneficiary for physician and other fee-schedule services grew 74 percent. In 2010, 97 percent of beneficiaries received at least one physician service, and Medicare paid for nearly 1 billion services.

Medicare pays for physician and other health professionals using a fee schedule, which includes payment rates for about 7,000 separate billing codes. For each service, CMS assigns three weights: the amount of work required to provide a service, the expenses of running a practice, and the cost of malpractice insurance. Each weight is adjusted by the relative geographic cost of input prices. In total, these weights are designed to reflect the resources needed to provide the typical service. The sum of the weights is multiplied by a dollar amount called the conversion factor, which produces the total payment amount.[1]

Under current law, the conversion factor is governed by the sustainable growth rate (SGR) formula. The SGR limits the aggregate growth in payments to physicians and other health professionals, with allowances for changes in input prices, enrollment in traditional fee-for-service (FFS) Medicare, the volume of services provided under the fee schedule relative to gross domestic product growth, and changes in law and regulation. The SGR has called for negative updates for every year since 2002, and every year since 2003 the Congress has provided a short-term override of the negative payment updates. On January 2, 2013, the estimated 27 percent payment cut to physician fees under the SGR was overridden until the end of calendar year 2013.

Repeal of the SGR: Urgent and should protect access, break the link between updates and expenditures, and be fiscally responsible

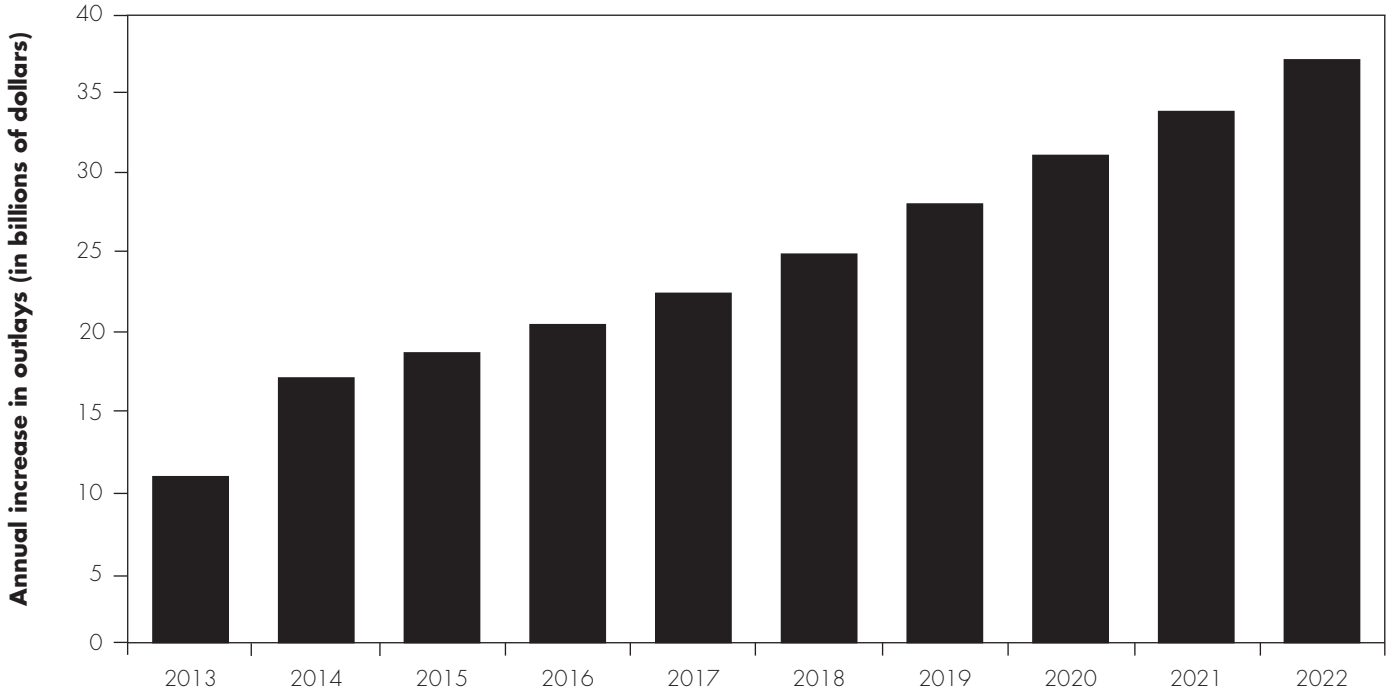
The SGR has led to significant frustration among providers and beneficiaries. In addition, the short-term overrides have led to an administrative burden for providers and CMS due to holding of claims, delays in submission of claims, and reprocessing of claims. Moreover, while some physicians and other health professionals contribute to the inappropriate volume growth that has resulted in large payment adjustments through the SGR, others have restrained volume. But the SGR cannot differentiate between physicians who restrain volume and physicians who do not restrain volume (Alhassani et al. 2012). Given the significant accumulation in spending that must be recouped under the SGR, repealing it has a very high budgetary cost—in the range of $250 billion to $300 billion over 10 years. Given the fiscal climate facing the government, proposals to permanently repeal or fix the SGR have not been enacted.

The Commission laid out its findings and recommendations for moving forward from the SGR system in its October 2011 letter to the Congress (see Appendix B, pp. 371–392). The Commission stated that the SGR is fundamentally flawed and is creating instability in the Medicare program for providers and beneficiaries. First, the SGR system, which ties annual updates to cumulative expenditures, has failed to restrain volume growth and may have exacerbated it. Any restraint on updates disproportionately burdens physicians and other health professionals in specialties with less ability to generate volume. Second, temporary, stop-gap fixes to override the SGR undermine the credibility of Medicare because they engender uncertainty and anger among physicians and other health professionals, which may cause anxiety among beneficiaries. Third, the cost of SGR repeal continues to grow, creating pressure to repeal it now.

The Commission's recommendations included four components. First, the SGR should be repealed, severing the link between future payment updates and cumulative expenditures for services provided by physicians and other health professionals. In place of the SGR, the Commission outlined a 10-year path of legislated updates, including updates for primary care services that are different from those for other services.[2] Second, CMS should collect data to improve payment accuracy and identify overpriced services within the fee schedule. Third, the Medicare

FIGURE 4–1

CBO estimates of increase in outlays under freeze in payment updates for services of physicians and other health professionals, 2013–2022



Note: CBO (Congressional Budget Office).

Source: Congressional Budget Office 2012.

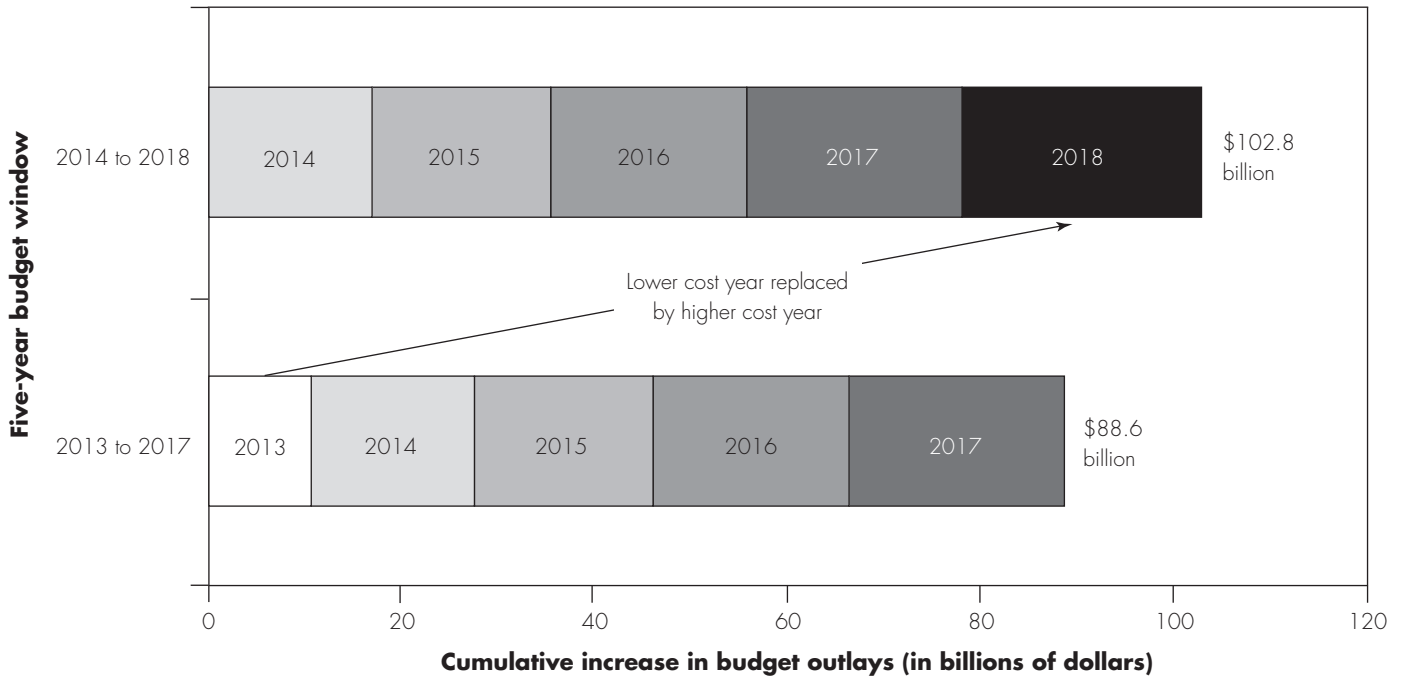
program should encourage movement from FFS into risk-bearing accountable care organizations (ACOs) by creating greater opportunities for shared savings. Fourth, repeal of the SGR should be fiscally responsible. In exercising its prerogatives, the Congress could decide to fund repeal entirely within Medicare, or it could consider other options. While the Commission has not recommended funding repeal entirely within Medicare, doing so would require spending offsets across Medicare. Specifically, in addition to a freeze in the payment rates for primary care and a reduction in payment rates for all other physicians, it would include offsets in other provider sectors—such as hospital, skilled nursing facility, home health, and others—and higher out-of-pocket costs for beneficiaries.

Further details on the Commission's position on repeal of the SGR are in our October 2011 letter. However, we emphasize several points:

- Repeal is urgent. Delay will not provide more favorable options, and repeal becomes more costly over time.
- Beneficiary access must be preserved.
- The physician fee schedule must be rebalanced to achieve equity of payments between primary care and other services.
- Pressure on FFS must encourage movement toward new payment models and delivery systems.
- Repeal of the SGR must be fiscally responsible.

In order to assist the Congress, the Commission outlined a menu of options that could constrain the cost of repeal (e.g., conversion-factor reductions) and a set of offsets (e.g., provider reductions and increases in beneficiary cost sharing). While the Commission has not endorsed every one of these items individually or as a package, they do exceed the likely cost of SGR repeal. Nonetheless, this list illustrates that funding repeal entirely within Medicare would present the Congress with some difficult choices. If, however, the Congress decides that all of the cost will not be borne within Medicare, it could enact smaller conversion-factor reductions, fewer provider reductions, and smaller increases in beneficiary cost sharing. The Congress could also choose to phase in such changes by, for example, ramping up conversion-factor reductions

FIGURE 4–2 **Cost of SGR repeal increases each year with growth in enrollment and service volume**



Note: SGR (sustainable growth rate).

Source: MedPAC analysis of Congressional Budget Office annual estimates of increases in budget outlays under the option of replacing the SGR with 0 percent updates through 2018.

over time to encourage movement of physicians and other health professionals into alternative models of payment and delivery of care.

Repeal is urgent

Although our latest access survey does not show significant deterioration at the national level, the Commission is nonetheless concerned about access. The balance between supply and demand is tight in many markets and problems could surface, particularly in primary care. The Medicare population is increasing as members of the baby-boom generation become eligible for Medicare, a large cohort of physicians is nearing retirement age, and SGR fatigue is increasing. We do not predict abrupt changes in the national access picture, but we cannot rule them out either.

Deferring repeal for one or two years will not leave the Congress with a better set of choices. First, the cost of repeal will only increase as enrollment and the volume of services per beneficiary increase. The cost increases are apparent in the Congressional Budget Office estimates of the cost of replacing the SGR with a freeze in the fee schedule's conversion factor for 10 years (Figure 4-1). Under this option, the cost of replacing the SGR results in annual increases in outlays that rise from $10.6 billion in 2013 to $37.2 billion in 2022.

In turn, the budget score for repealing the SGR continues to rise as a result of these yearly increases if there is a delay in repeal of the SGR. For example, a 10-year freeze in the conversion factor would total $88.6 billion for 2013 to 2017 (Figure 4-2). By contrast, delaying the freeze one year (to 2014) would result in a score of $102.8 billion for 2014 through 2018, an increase of 16 percent. The increase occurs because—with the one-year shift in the budget window—delaying action would replace the lowest cost year (2013) with the highest cost year (2018).

A second argument against deferring repeal of the SGR is that delay will not give the Congress better options. The array of new payment models to choose from is unlikely to change materially in the near term, and such models—when available—are unlikely to produce significant impacts on utilization in the short term. Meanwhile, ACOs will remain the principal alternative payment mechanism. If past pilots and demonstrations are any indication, we are not likely to

TABLE 4–1

Most aged Medicare beneficiaries and older privately insured individuals had good access to physician care, 2008–2012

	Medicare (age 65 or older)					Private insurance (age 50–64)				
Survey question	**2008**	**2009**	**2010**	**2011**	**2012**	**2008**	**2009**	**2010**	**2011**	**2012**
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	76%[a]	77%[a]	75%[a]	74%[ab]	77%[a]	69%[ab]	71%[a]	72%[a]	71%[a]	72%[a]
Sometimes	17[a]	17[a]	17[a]	18[a]	17[a]	24[ab]	22[a]	21[a]	21[a]	21[a]
Usually	3[a]	2[a]	3[a]	3	3	5[ab]	3[a]	4[a]	4	3
Always	2	2	2	2[a]	2[a]	2[b]	3	3	3[a]	3[a]
For illness or injury										
Never	84[a]	85[a]	83[a]	82[b]	84[a]	79[a]	79[a]	80[a]	79	80[a]
Sometimes	12[a]	11[a]	13[a]	14[a]	12[a]	16[a]	17[a]	15[a]	17[a]	16[a]
Usually	1	2	2	2	2	2	2	2	2	2
Always	1[a]	1	1[a]	1	1[a]	2[a]	2	2[a]	1	2[a]
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[a]	7[ab]	8[a]	8[a]	8[a]	12[a]	11[a]	12[a]	11[a]	11[a]
Looking for a new doctor: "In the past 12 months, have you tried to get a new...?" (Percent answering "Yes")										
Primary care doctor	6	6	*7*	6	*7*	*7*	8	*7*	*7*	*7*
Specialist	14[a]	14[a]	13[a]	14[a]	13[a]	19[a]	19[a]	15[ab]	16[a]	18[a]
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	*71*	*78*	*79*[a]	*65*	*72*	*72*	*71*	69[a]	*68*	*75*
Percent of total insurance group	*4.6*	*5.0*	*5.2*	*3.6*	*4.7*	*4.8*	*5.4*	*4.8*	*4.5*	*5.0*
Small problem	10	10	8	12	14	13	8	12	16[b]	9
Percent of total insurance group	*0.6*	*0.6*	*0.5*	*0.7*	*0.9*	*0.9*	*0.6*	*0.8*	*1.1*	*0.6*
Big problem	18	12[a]	12	23[ab]	14	13	21[a]	19	14[a]	15
Percent of total insurance group	*1.1*	*0.8*	*0.8*	*1.3*	*0.9*	*0.9*	*1.6*	*1.3*	*0.9*	*1.0*
Specialist										
No problem	88	88	87[a]	84	87	83	84	82[ab]	86	86
Percent of total insurance group	*12.8*	*12.5*	*11.0*	*12.1*	*11.7*	*15.5*	*16.1*	*12.6*	*13.9*	*15.6*
Small problem	*7*	*7*	6[a]	8	6	9	9	11[ab]	8	*7*
Percent of total insurance group	*1.0*	*1.0*	*0.8*	*1.1*	*0.7*	*1.7*	*1.7*	*1.8*	*1.3*	*1.2*
Big problem	4	5	5	7	7	7	7	6	6	7
Percent of total insurance group	*0.6*	*0.7*	*0.7*	*1.0*	*0.9*	*1.4*	*1.3*	*1.0*	*1.0*	*1.2*

Note: Numbers may not sum to 100 percent because missing responses ("Don't know" or "Refused") are not presented. Sample sizes for each group (Medicare and privately insured) were 3,000 in 2008 and 4,000 in 2009 to 2012. Overall 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 from 2012 within the same insurance coverage category (at a 95 percent confidence level).

Source: MedPAC-sponsored telephone surveys conducted in 2008, 2009, 2010, 2011, and 2012.

have meaningful results on bundling and medical homes within two years.

In considering budget packages to improve the government's fiscal picture, the Congress often looks to Medicare for savings. If those savings are applied to deficit reduction and the SGR remains in place, it will become more difficult to offset the cost of replacing the SGR one or two years from now. At that point, the only option for dealing with an even larger score for SGR repeal may be to add it to the deficit, which may be unpalatable after much effort to get the deficit down.

Editor's note: *After production of this chapter was finalized, the Congressional Budget Office released new, substantially lower estimates of the costs of freezing updates and eliminating the SGR. These estimates are lower largely because they assume lower rates of service volume growth. While the Congressional Budget Office is projecting lower volume growth in the near term, the history of volume growth is highly volatile—in the 1980s per capita volume growth ranged from at least 3.7 percent to 9.7 percent, in the 1990s the range was from –0.7 percent to 3.4 percent, and from 2001 to 2011 it ranged from 1.0 percent to 5.6 percent. These new estimates do not change the Commission's recommendation for SGR repeal—instead they underscore the need for action now. Repeal is now less costly than it has been for many years, and it could be accomplished—depending on how the Congress decides to finance it—with less burden on physicians, other providers, beneficiaries, and taxpayers.*

Repeal should adhere to certain principles

The Commission's principles for moving forward from the SGR are as follows:

- the link between cumulative fee-schedule expenditures and annual conversion-factor updates is unworkable and should be eliminated,
- beneficiaries' access to care must be protected, and
- proposals to replace the SGR must be fiscally responsible.

It is the Congress's prerogative to decide how to replace the SGR in a way that is fiscally responsible. Our October 2011 letter outlined options for the Congress to consider if it were to decide that the cost of SGR repeal must be fully offset within Medicare. The Commission struck a balance by coupling, first, a freeze or decreases in fees for physicians and other health professionals with, second, reductions for other providers and increases in beneficiary cost sharing. Much of the discussion about our letter since we submitted it has been focused on the magnitude of the cuts in the fee-schedule conversion factor. However, the magnitude of the cuts presented was driven by the assumed need to offer a budget-neutral package. If the Congress were to opt not to finance repeal fully out of Medicare, those cuts could be reduced.

Are Medicare fee-schedule payments adequate in 2013?

We assess payment adequacy by reviewing beneficiary access to care provided by physicians and other health professionals, volume growth, quality of care, and Medicare's payment rates relative to those in the private sector. Overall, most indicators are positive or neutral.

Beneficiaries' access to care: Generally stable with few reported problems

We review a range of beneficiary access measures, including our own beneficiary survey, other beneficiary surveys, physicians' willingness to accept Medicare beneficiaries, and results from our beneficiary and physician focus groups. In general the share of beneficiaries in 2012 reporting good access to care and satisfaction with their care is consistent with prior years. The Commission's patient survey finds that beneficiaries have generally stable access to physician services.

Every year, the Commission sponsors a telephone survey of Medicare beneficiaries and privately insured individuals ages 50 to 64. This year, the survey was administered to 4,000 respondents in each group and oversampled minority beneficiaries to increase statistical power. The goal in surveying both Medicare beneficiaries and near-elderly enrollees in private insurance is to assess whether issues reported by Medicare beneficiaries are unique to the Medicare population or due to trends in health care delivery system wide. This year's survey was fielded in summer and fall 2012.

Overall, we find that beneficiaries' access to physician services is stable and similar to (or better than) access among privately insured individuals (Table 4-1). Higher shares of Medicare beneficiaries report that they are very or somewhat satisfied with their care (88 percent) compared with those with private insurance (84 percent) (not shown). Most beneficiaries report they are able to obtain timely

TABLE 4–2

Medicare beneficiaries had better or similar access to physicians compared with privately insured individuals, but minorities in both groups reported problems more frequently, 2012

	Medicare (age 65 or older)			Private insurance (age 50–64)		
Survey question	**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	77%[a]	78%[a]	77%[a]	72%[a]	73%[a]	70%[a]
Sometimes	17[a]	17[a]	15[a]	21[a]	21[a]	22[a]
Usually	3	3	3	3	3	3
Always	2[a]	2[a]	2[a]	3[a]	3[a]	5[a]
For illness or injury						
Never	84[a]	84[a]	82	80[a]	80[a]	78
Sometimes	12[a]	12[a]	14	16[a]	17[a]	15
Usually	2	1	2	2	2	2
Always	1[a]	1	1[a]	2[a]	2[b]	4[ab]
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[a]	8[a]	9	11[a]	11[a]	11
Looking for a new doctor: "In the past 12 months, have you tried to get a new...?" (Percent answering "Yes")						
Primary care physician	7	7[b]	5[b]	7	7	7
Specialist	13[a]	15[ab]	8[ab]	18[a]	19[ab]	13[ab]
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	72	70	76	75	77	67
Percent of total insurance group, by race	*4.7*	*5.0*	*3.6*	*5.0*	*5.2*	*4.6*
Small problem	14	13	16	9	8	13
Percent of total insurance group, by race	*0.9*	*0.9*	*0.8*	*0.6*	*0.5*	*0.9*
Big problem	14	15	8	15	13	20
Percent of total insurance group, by race	*0.9*	*1.1*	*0.4*	*1.0*	*0.8*	*1.4*
Specialist						
No problem	87	88	81	86	88[b]	77[b]
Percent of total insurance group, by race	*11.7*	*13.1*	*6.6*	*15.6*	*17.1*	*10.3*
Small problem	6	6	4[a]	7	5[b]	14[ab]
Percent of total insurance group, by race	*0.7*	*0.9*	*0.4*	*1.2*	*1.0*	*1.8*
Big problem	7	6[b]	15[b]	7	6	9
Percent of total insurance group, by race	*0.9*	*0.9*	*1.2*	*1.2*	*1.2*	*1.3*

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 presented. Overall sample size for each group (Medicare and privately insured) was 4,000 in 2012. Sample sizes for individual questions varied.

[a] Statistically significant difference between the Medicare and privately insured populations in 2012 (at a 95 percent confidence level).

[b] Statistically significant difference by race within the same insurance category in 2012 (at a 95 percent confidence level).

Source: MedPAC-sponsored telephone surveys, conducted in 2012.

appointments for routine care, illness, or injury, and most beneficiaries are able to find a new doctor without a problem. However, beneficiaries seeking a specialist were more likely to report that they had no problem finding a doctor than beneficiaries seeking a primary care doctor.

Most beneficiaries are able to see their doctors when they want to

The results from the 2012 survey are consistent with prior years in finding that most beneficiaries were able to see their doctors in a timely manner. The share of beneficiaries seeking a routine care appointment that reported that they never had to wait longer than they wanted was 77 percent; 84 percent of beneficiaries seeking an illness or injury appointment reported that they never had to wait longer than they wanted. These shares were significantly higher than the respective 72 percent and 80 percent shares of the privately insured population that never had to wait longer than they wanted for a routine or illness appointment.

Among the 12 percent of Medicare respondents who had to wait longer than they wanted for an illness or injury appointment, 7 percent took the later appointment date, 2 percent went to the emergency room, and 2 percent went to a walk-in clinic. Although the share of African American beneficiaries who reported that they had to wait longer for an illness or injury appointment was not greater than for other beneficiaries, a greater share reported that they went to the emergency room instead (5 percent) than did non-Hispanic White beneficiaries (2 percent).

Beneficiaries are generally able to find a new physician, but those seeking a new primary care provider encounter more trouble than those seeking a specialist Our survey also asks whether beneficiaries seeking a new doctor face problems finding one. Overall, 0.9 percent of all Medicare beneficiaries reported that they had a big problem finding a new primary care doctor, as did the share of Medicare beneficiaries (0.9 percent) who reported that they had a big problem finding a new specialist. However, among those beneficiaries looking for a new doctor, it continues to be the case that a larger share of those looking for a new primary care doctor report problems than those seeking a new specialist.

The rates of individuals with private insurance reporting a big problem finding a doctor were similar to the rates for Medicare beneficiaries: Among respondents ages 50 to 64 covered by private insurance, 1 percent had a big problem finding a primary care doctor, and 1.2 percent reported that they had a big problem finding a specialist.

A greater share of minority beneficiaries reported that they had a big problem accessing specialty care (1.2 percent) than non-Hispanic White beneficiaries (0.9 percent) (Table 4-2). Minority beneficiaries have reported problems obtaining specialty care in our surveys in prior years as well.

Overall, we do not find significant problems with beneficiary access to physicians and other health professional services, but certain areas or populations may face problems with access to care, and beneficiaries may face specific issues finding certain specialties (see text box, p. 86, for a discussion of the health professional shortage area payment adjustment). To help supplement our survey, we conduct beneficiary focus groups in different geographic areas to assess more localized access issues. While the overall share of beneficiaries having a problem finding a new doctor is small (0.9 percent of the Medicare population report big problems finding a new primary care doctor and 0.9 percent report big problems finding a new specialist), the problems faced by these beneficiaries can be personally distressing and are often featured in local and national media reports.

Reports of not getting needed care higher among privately insured individuals and some groups A lesser share of Medicare beneficiaries (8 percent) than privately insured individuals (11 percent) reported that they had a health problem that they should have seen a doctor about but did not. Hispanic beneficiaries were more likely than non-Hispanic White beneficiaries to report the reason they did not see a doctor when they thought they should have was because they could not find a doctor who would treat them. Rural beneficiaries were more likely than urban beneficiaries to report that the reason they did not see a doctor when they thought they should have was that they could not get an appointment soon enough.

Urban and rural analyses Overall, the survey finds no significant differences in access between urban and rural beneficiaries, although there are some differences. Most urban (78 percent) and rural beneficiaries (76 percent) never had to wait longer than they wanted to for routine care; the shares were greater for illness or injury appointments (84 percent for urban, 83 percent for rural beneficiaries; see online Appendix 4-A, available at http://www.medpac.gov).

Among Medicare beneficiaries, 1.0 percent of urban and 0.7 percent of rural beneficiaries reported that they had a big problem finding a new primary care physician, and 1.0 percent of urban and 0.4 percent of rural beneficiaries

Payment adjustments for health professional shortage areas

One policy in the Medicare program to improve access to physician and other health professional services in areas where problems arise is the bonus payment made to physicians practicing in health professional shortage areas (HPSAs). Physicians delivering care in a primary care HPSA are paid 10 percent above the payment amount for all fee-schedule services they provide. Psychiatrists practicing in a mental health HPSA may also receive a 10 percent adjustment to the fee-schedule amount.

Two other temporary payment adjustments are in place from 2011 through 2016 that add to the permanent HPSA bonus. First, primary care practitioners who meet certain criteria (specialty and practice patterns) receive a 10 percent increase in payment for selected fee-schedule services. And second, surgical services delivered in a primary care HPSA are eligible for a 10 percent adjustment to the fee-schedule amount. These adjustments are both in addition to the permanent HPSA bonus.

The Health Resources and Services Administration oversees the HPSA designation, which was designed to measure the scarcity of physicians and other health professionals. The Medicare HPSA payment adjustment has been in place since 1991, with generally only minor adjustments. In 2010, the Congress established a negotiated rule-making committee to design a new method of establishing geographic-based health care scarcity areas (such as the HPSA), but the committee did not reach consensus (Babitz et al. 2011).

Over the coming analytic cycle, the Commission plans to review the HPSA and other targeted payments designed to improve access to ambulatory services in areas that are underserved. The Commission's work could include reviewing HPSAs and other similar policies; the geography, demography, and service use of beneficiaries living in these areas; the profile of physicians receiving HPSA payments; the type of services they deliver; and the effects of these policies. ■

reported that they had a big problem finding a new specialist. However, none of these differences between urban and rural beneficiaries was statistically significant. Rural beneficiaries were statistically more likely to report that they always waited longer than they wanted to for an appointment for regular or routine care, although the rates were low (4 percent of rural beneficiaries vs. 1 percent of urban beneficiaries).

Some beneficiaries see advanced practice nurses for their primary care Consistent with findings in prior years, about 30 percent of beneficiaries reported that they saw a physician assistant or nurse practitioner for some or all of their primary care. A slightly greater share of privately insured individuals (36 percent) than Medicare beneficiaries (30 percent) reported that they saw a physician assistant or nurse practitioner for some or all of their primary care. It continues to be the case that twice the share of rural Medicare beneficiaries report that they see advanced practice nurses for all or most of their primary care versus beneficiaries in urban areas.

Beneficiary focus groups have similar findings

For a number of years, the Commission has contracted with NORC to conduct beneficiary and physician focus groups in certain geographic locations. In 2012, the focus groups took place in New York City and Greenville, South Carolina. These sites were chosen in part because beneficiaries there reported through the Consumer Assessment of Healthcare Providers and Systems survey that they had higher than average difficulty finding new physicians. This year, focus group participants included Medicare beneficiaries, Medicare beneficiaries dually eligible for Medicaid, and primary care physicians.

Nearly all beneficiaries in our focus groups reported that they had a regular source of care, and most reported that they could see that provider in a reasonable amount of time. Some reported that their providers would schedule them to see another physician or provider in the practice if their own physician could not see them in a timely way, and beneficiaries seemed generally comfortable with this approach. Most beneficiaries reported that if they were seeking a new primary care physician, they were able to find one who took new Medicare patients, although occasionally they reported difficulty because of some physicians' stated policy of not accepting Medicare patients or provider network restrictions. However, the focus groups consisting of dual-eligible beneficiaries reported more trouble finding a new primary care

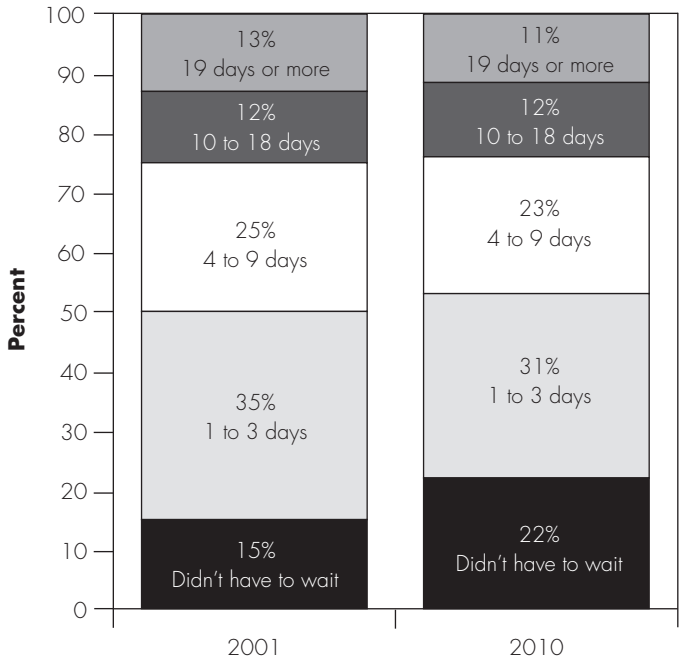
physician. Some physicians reported that they were less willing to see Medicaid patients than Medicare patients and that they were also less willing to see dual-eligible beneficiaries.

Beneficiaries were also generally able to find specialty care, although for many years beneficiaries in our focus groups have reported problems finding certain specialists (dermatology and psychiatry). Beneficiaries seeing a specialist regularly reported that follow-up visits were generally easy to obtain but that their doctor may not accept a new Medicare patient if they referred a friend. Some primary care physicians in the focus groups also reported that they had difficulty referring patients to certain specialists—the physicians would have to call the specialists themselves or rely on favors to obtain the specialty referral. Physician and beneficiary focus groups both reported that specialists were more likely than primary care physicians not to take certain types of insurance.

The physician focus groups also found that most physicians were willing to take Medicare patients, although some reported that they would take only current patients who had aged into Medicare or that they would limit the number of new Medicare beneficiaries when their practice got crowded. Physicians who did not take insurance (including Medicare) reported that the reasons they did not take insurance were significant paperwork burdens, low reimbursement rates, or both.

FIGURE 4–3

Half of all Medicare beneficiaries seeking an appointment with a physician were able to see one within three days, 2001 and 2010



Note: Intervening years did not show significant differences. Data exclude beneficiaries residing in institutions. Totals may not sum to 100 percent due to rounding.

Source: Medicare Current Beneficiary Survey.

Other national patient surveys show comparable results for access to care

In addition to the Commission's survey and focus groups, other surveys assessing access for Medicare beneficiaries have similar findings:

- An analysis of the 2010 Medicare Current Beneficiary Survey (MCBS) finds that 95 percent of beneficiaries had a usual source of medical care—74 percent go to a doctor's office and 12 percent see a doctor at a clinic. Five percent of beneficiaries reported that they had trouble getting needed care, and 9 percent of beneficiaries reported that they did not see a doctor when they thought they should have. Consistent with the focus group findings, respondents in the MCBS who are dually eligible for Medicare and Medicaid were more likely to report that the reason they did not see a doctor was because they had trouble finding one who would treat them. The MCBS also tracks the share of beneficiaries reporting that they were able to see a physician within a specified amount of time. In 2010, about half of all Medicare beneficiaries seeking an appointment with a provider were able to see one within three days (Figure 4-3). This figure was similar to that reported in 2001. In addition, the share of beneficiaries reporting that they did not wait at all for an appointment increased from 15 percent in 2001 to 22 percent in 2010.
- The Consumer Assessment of Healthcare Providers and Systems for Medicare FFS, another survey of FFS beneficiaries, found in 2011 that 89 percent of respondents were always or usually able to schedule timely appointments for routine care, and 92 percent were always or usually able to schedule timely appointments for specialty care. In addition, 91 percent of respondents reported that over the last six months they were able to get care for an injury or illness as soon as needed.
- A 2012 study of both Medicare and nonelderly respondents conducted by the Commonwealth

TABLE 4–3 **Physicians and other health professionals billing Medicare, 2009–2011**

	Physicians				Advanced practice nurses and physician assistants		Other health professionals	
	Primary care specialties		Other specialties					
Year	Number	Number per 1,000 beneficiaries	Number	Number per 1,000 beneficiaries	Number	Number per 1,000 beneficiaries	Number	Number per 1,000 beneficiaries
2009	161,411	3.8	363,836	8.5	103,344	2.4	155,406	3.6
2010	165,565	3.8	372,269	8.5	113,232	2.6	164,881	3.8
2011	169,640	3.8	379,411	8.5	123,959	2.8	172,129	3.8

Note: Primary care specialties are those eligible for the Primary Care Incentive Payment Program: family medicine, internal medicine, pediatric medicine, and geriatric medicine. Number billing Medicare includes those with a caseload of more than 15 different beneficiaries during the year. Beneficiary counts include those in fee-for-service and Medicare Advantage on the assumption that professionals are furnishing services to both types.

Source: Medicare claims data for 100 percent of beneficiaries and the 2012 annual report of the Boards of Trustees of the Medicare trust funds.

Fund found that elderly Medicare beneficiaries had fewer problems with access to care than privately insured individuals, individuals with Medicaid, or individuals with Medicare entitlement based on a disability. Twenty-three percent of elderly Medicare beneficiaries reported that they had experienced access problems due to cost—such as not filling a prescription, not getting needed specialist care, skipping a recommendation or follow-up, or having a medical problem but not seeing a physician—but the rates were significantly higher for privately insured individuals (37 percent) and Medicaid enrollees (41 percent) (Davis et al. 2012). Elderly Medicare beneficiaries were more likely to report that they had a medical home and to rate their quality of care highly. However, the study did find higher rates of access problems and dissatisfaction with care among disabled Medicare beneficiaries, a finding consistent with earlier surveys (Davis et al. 2012).

- An analysis of the 2010 National Health Interview Survey found that beneficiaries were more likely to report having a usual source of care (between 94 and 97 percent, depending on the presence and type of supplemental coverage), compared with 89 percent in the under-65 privately insured population. In addition, Medicare beneficiaries were more likely to report having a doctor's office as their usual source of care (rather than a clinic) than were privately insured individuals or Medicare beneficiaries who were also Medicaid eligible (Centers for Disease Control and Prevention 2012).

Physician surveys show that providers are generally willing to accept Medicare beneficiaries

Another measure of beneficiary access to physician services is the willingness of providers to accept new Medicare patients. An analysis of the National Ambulatory Medical Care Survey found that in 2009 and 2010, 73 percent of primary care physicians reported that they would accept new Medicare patients.[3] This number was slightly lower than the rate 10 years ago (75 percent) and lower than the rate reported for patients with private insurance (89 percent). Among specialists, 90 percent reported that they would accept new Medicare patients, also slightly lower than the rate 10 years earlier (Hing and Schappert 2012).

Another study using the same survey but a different sampling frame and more recent data (2011) found similar shares of office-based physicians accepting new Medicare patients—83 percent for primary care (when pediatricians were excluded) and 91 percent for other specialties (Decker 2012). Finally, the American Medical Association's 2012 National Health Insurer Report Card—which assesses payment accuracy, timeliness, and transparency in payment—found that, overall, Medicare performed as well as or better than other large insurers (American Medical Association 2012).

Supply of physicians and other 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). Other trends that may have implications for beneficiaries' access to physician services are the number of physicians or other professionals who choose to opt out of the Medicare program and trends in retainer-based practices, which charge an additional fee for enhanced services or access.

Supply of physicians and other health professionals billing Medicare has kept pace with enrollment growth Our analysis of Medicare FFS claims data for 2009 to 2011 shows that the number of physicians and other health professionals providing services to Medicare beneficiaries kept pace with growth in the beneficiary population (Table 4-3). First, considering physicians in specialties eligible for the Primary Care Incentive Payment Program, the ratio of these physicians per 1,000 beneficiaries remained constant at 3.8 per 1,000. Similarly, the ratio of physicians in other specialties remained constant at 8.5 per 1,000. Meanwhile, the number of advanced practice nurses and physician assistants billing Medicare increased faster than enrollment, growing between 2009 and 2011 from 2.4 per 1,000 to 2.8 per 1,000. The number of other health professionals billing Medicare—such as chiropractors and physical therapists—also grew faster than enrollment during the same period, from 3.6 per 1,000 to 3.8 per 1,000.

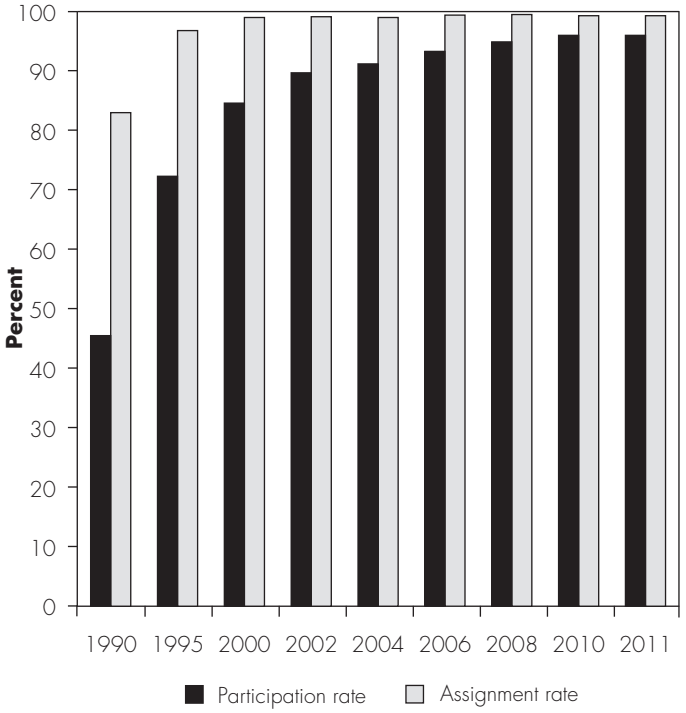
Most physicians and other professionals are part of Medicare's participating provider program, and most claims are taken on assignment Nearly all physicians and other health professionals billing Medicare sign an agreement with Medicare to be part of the participating provider program (96 percent in 2011; Figure 4-4). Participating providers agree to take assignment for all claims, which means they accept the fee-schedule amount as payment in full. In return, participating providers receive the full fee-schedule amount, can receive payments directly from Medicare (rather than billing the beneficiary for the full amount of the service), have their name and address listed on Medicare's website, and can electronically search a beneficiary's supplemental insurance status.

Providers who do not elect to participate receive a 5 percent lower payment and can choose whether to take assignment for their claims. 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 that limiting charge and Medicare's payment (80 percent of the payment amount). Balance billing and nonparticipating providers are relatively rare in Medicare, although some specialties are more likely to balance bill than others. Among all physician specialties, oral surgeons and chiropractors have the lowest rates of participation (Centers for Medicare & Medicaid Services 2012c). Chiropractors, in particular, account for about 10 percent of all balance billing, far exceeding their share of total Medicare spending (charges are only 0.6 percent of fee-schedule spending). Among geographic regions, North Dakota, South Dakota, Idaho, Wyoming, Arizona, and the District of Columbia have the lowest rates of participating providers (Centers for Medicare & Medicaid Services 2012c).

Medicare's payment adjustments Once the total fee-schedule payment amount for a service is determined, the Medicare program may make adjustments based on a

FIGURE 4–4

Medicare participation and assignment rates continue to be high



Note: "Participation rate" is the percentage of physicians and other health professionals with signed Medicare participation agreements among those in Medicare's registry. Participation agreements require the provider to accept assignment (i.e., accept Medicare's fee-schedule rate as payment in full) for all services provided to Medicare beneficiaries. Participation agreements do not require physicians to accept new Medicare patients. "Assignment rate" is the percentage of allowed charges paid on assignment.

Source: Ways and Means Greenbook (2004) and CMS Data Compendium.

provider's characteristics, geographic location, or type of care delivered. The payment adjustment for care delivered in a health professional shortage area is discussed in the text box (p. 86).

Providers who enter into participating provider agreements with Medicare receive 100 percent of the fee-schedule amount. Providers who do not enter into these agreements are paid 95 percent of the fee-schedule amount and may choose to take assignment. Nurse practitioners billing independently are paid 85 percent of the fee-schedule amount.

Qualifying physicians and other health professionals participating in the Physician Quality Reporting System (PQRS) received a 1 percent bonus on all Medicare services in 2011 and a 0.5 percent bonus in 2012 through 2014. Starting in 2015, physicians not satisfactorily reporting PQRS measures will be subject to a penalty of 1.5 percent, and the 2015 adjustment will be based on participation in PQRS in 2013. In 2010, the last year for which CMS has reported complete data on PQRS utilization, 24 percent of just over 1 million eligible professionals (or 244,145 individuals) participated in PQRS (Centers for Medicare & Medicaid Services 2012a).

The value-based payment modifier for physicians will take effect in 2015; it adjusts physicians' payments based on the cost and quality of care they provide. In 2015, the payment modifier will apply to groups of more than 100 physicians. Groups who do not satisfactorily report under the PQRS will receive a penalty of 1 percent under the modifier.

The electronic health record (EHR) incentive program makes payments to physicians who adopt EHRs and demonstrate their use in specific ways. Up to $44,000 over five years is available per physician. Starting in 2015, physicians who do not satisfy the EHR criteria will face a financial penalty of 1 percent of their fees. In 2012, most physicians who did not use a qualified electronic prescribing system received a 1 percent reduction in fees.

Few physicians and other health professionals opt out of the Medicare program, although the number has grown Physicians and other health professionals can choose to opt out of the Medicare program by signing an affidavit with Medicare. Those choosing to opt out cannot receive any reimbursement from Medicare, either directly or indirectly, for any Medicare patient they see. Opt-out physicians must enter into a private contract with a Medicare beneficiary in order to deliver care to them. The private contract must meet certain standards set out in regulations, including stating that no payment will be made from Medicare either to the beneficiary or to the provider for services delivered by the opt-out physician. Opt-out agreements are in place for two years and can be renewed. A study conducted in 2004 found that the specialty with the highest number of opt-out physicians was psychiatry, and the Department of Health and Human Services' Office of Inspector General (OIG) reported in 2012 that the number of physicians opting out every year appears to have increased between 2006 and 2010 (Buczko 2004–2005, Wright 2012). In its report, OIG noted that CMS does not regularly publish data on the number of physicians opting out, nor do the data appear to allow for tracking physicians over time (i.e., whether they rejoin the Medicare program at a later date). These types of data, if available, could provide an important indicator of physician satisfaction with the Medicare program.

Retainer-based practices are still rare but can raise issues regarding compliance with Medicare regulations The development of retainer-based physician practices may also have implications for Medicare, and the Commission contracted for a study of these practices in 2010. Retainer-based physician practices charge a monthly or annual fee for each patient. In return for the fee, the patient is offered additional services, such as greater access to the physician (through limited patient panels), extended patient hours or easier weekend access, longer appointments, or extra services. The Commission-sponsored report found about 750 retainer-based practices nationwide (Hargrave et al. 2010). Under current Medicare rules, providers may not charge beneficiaries additional fees for covered Medicare services. OIG's roadmap for new physicians explicitly states that any additional charges must be for non-Medicare-covered services (Office of Inspector General 2012).

Small increase in volume growth

We analyze annual changes in use of services as another indicator of payment adequacy, but we caution that interpreting such data is complex because of factors unrelated to Medicare's pricing of services. For example, decreases in volume could signify price inadequacy if physicians are reluctant to offer such services based on their Medicare payment. However, our evidence indicates that volume decreases are more likely due to other factors, such as general practice pattern changes or concerns about radiation exposure. For example, the volume of

coronary artery bypass grafting has been declining as other interventions substitute for the procedure. Increases in volume may signal overpricing if physicians favor certain services because they are relatively profitable, but other factors—including population changes, disease prevalence, changes in Medicare benefits, shifts in the site of care, technology, and beneficiaries' preferences—can also explain volume increases. As an example, procedures for injecting pharmacological agents into the eye have increased in volume in recent years as therapies have emerged for treating macular degeneration. Another confounding factor is that the volume of services sometimes increases when payment rates decline (Codespote et al. 1998). The possibility of such a response—known as a behavioral or volume offset—makes it particularly difficult to interpret volume increases by themselves as an indicator of payment adequacy.

For this year's analysis of volume change, we used claims data for 2006, 2010, and 2011; identified the services furnished by physicians and other professionals billing under Medicare's physician fee schedule; and calculated two measures of change in service use. First, we calculated growth in the units of service per beneficiary. Second, we calculated growth in the volume of services per beneficiary. Volume equals units of service multiplied by each service's relative value unit (RVU) from the physician fee schedule. The result is that change in volume growth 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 from, for example, X-rays to higher complexity computed tomography (CT) scans. We used RVUs for 2011 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 consultations. As of 2010, CMS stopped recognizing the billing codes for consultations.[4] Physicians and other health professionals now use office visit codes and codes for hospital and nursing facility visits. 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. To avoid this situation, we focus the discussion below—when considering changes in service use before 2010—on the change in units of service, and we limit discussion of changes in volume growth to those services not affected by the change in payments for consultations.

Across all services, volume per beneficiary grew 1.0 percent in 2011 (Table 4-4, p. 92). Among broad categories of service, growth rates were positive at 2.0 percent for evaluation and management (E&M), 1.9 percent for other procedures, and 0.8 percent for tests. Imaging and major procedures had negative growth rates, −1.0 percent and −1.1 percent, respectively.

Imaging decreases amid concerns about appropriateness

Despite decreases in 2011 and 2010, use of imaging services remained much higher than a decade ago (Figure 4-5, p. 93). Cumulative growth in the volume of imaging from 2000 through 2009 totaled 85 percent, compared with a cumulative decrease in imaging volume in 2010 and 2011 of less than 4 percent. The growth in imaging volume from 2000 through 2009 was exceeded only by the growth in use of tests—such as 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.

Meanwhile, physicians and others continue to raise concerns about overuse of imaging:

- Physicians have voiced concerns about diagnostic tests that are ordered without an understanding of how the results could change patient treatment (Hoffman and Cooper 2012, Redberg et al. 2011). Sophisticated technology, while able to detect disease, can also have costs such as exposure to radiation, adverse effects of treatment, and proliferation of false-positive results.

- In a study for the Commission documenting trends in services furnished to Medicare beneficiaries by cardiologists from 1999 to 2008, physician researchers found that the bulk of the growth occurred in two established technologies: echocardiograms and stress tests with nuclear imaging (Andrus and Welch 2012). They conclude that it is unlikely that these services were underutilized in 1999 and express doubt that there was a clinical justification for a threefold increase in nuclear stress testing and a twofold increase in echocardiography. They also note that excessive use of such services poses a number of potential harms, including cancer risk due to radiation exposure (from nuclear imaging), anxiety related to false-positive results, and complications of invasive procedures pursued in response to those false-positive results.

TABLE 4–4

Use of services furnished by physicians and other health professionals, per fee-for-service beneficiary

Type of service	Change in units of service per beneficiary: Average annual 2006–2010	Change in units of service per beneficiary: 2010–2011	Change in volume per beneficiary: Average annual 2006–2010	Change in volume per beneficiary: 2010–2011	Percent of 2011 allowed charges
All services	**1.7%**	**0.8%**	**N/A%**	**1.0%**	**100.0%**
Evaluation and management	**0.8**	**0.9**	**N/A**	**2.0**	**45.1**
Office visit—new and established	0.9	0.6	N/A	1.8	24.8
Inpatient visit—hospital and nursing facility	0.3	1.0	N/A	1.5	15.5
Emergency room visit	1.7	3.4	3.5	4.6	3.1
Hospital visit—critical care	6.0	5.0	7.5	5.0	1.4
Home visit	4.8	2.8	6.3	2.7	0.4
Imaging	**1.0**	**0.6**	**1.3**	**–1.0**	**12.6**
Advanced—CT: other	3.9	2.1	3.2	1.2	1.8
Standard—nuclear medicine	–3.3	–3.6	–3.7	–9.8	1.6
Echography—heart	1.4	–0.3	1.8	–3.7	1.3
Advanced imaging—MRI: other	0.4	2.4	–0.7	0.9	1.3
Standard—musculoskeletal	0.5	0.9	0.0	0.2	1.0
Echography—other	5.7	5.6	7.3	4.2	0.9
Imaging/procedure—other	4.7	–6.4	9.9	–2.3	0.7
Standard—breast	2.9	4.2	2.5	3.3	0.7
Advanced—MRI: brain	–0.8	1.9	–3.7	–1.1	0.6
Advanced—CT: head	3.0	2.6	2.1	0.8	0.5
Standard—chest	–0.8	–0.6	–1.4	–1.2	0.5
Echography—abdomen and pelvis	2.2	1.9	2.8	1.6	0.5
Major procedures	**1.1**	**–1.4**	**2.4**	**–1.1**	**7.5**
Cardiovascular—other	–0.7	–3.8	3.4	–3.5	1.8
Orthopedic—other	6.4	–0.7	7.6	2.3	1.1
Knee replacement	2.1	–3.6	2.8	–3.4	0.5
Coronary angioplasty	–3.8	–5.2	–3.6	–5.2	0.4
Explore, decompress, or excise disc	3.0	1.8	5.2	2.7	0.3
Coronary artery bypass graft	–7.1	–8.0	–7.1	–8.3	0.3
Hip replacement	2.3	2.0	3.2	2.5	0.3
Hip fracture repair	–1.6	–0.5	–1.3	–0.5	0.3
Other procedures	**4.2**	**2.1**	**3.3**	**1.9**	**22.6**
Skin—minor and ambulatory	1.8	–1.5	N/A	–0.5	4.5
Outpatient rehabilitation	8.6	5.2	9.3	6.7	3.4
Radiation therapy	–1.0	1.2	2.5	3.2	2.3
Minor—other	2.2	–0.2	2.2	1.0	2.1
Cataract removal/lens insertion	–0.7	–1.2	–0.3	–1.1	1.6
Minor—musculoskeletal	2.4	2.3	2.4	2.4	1.4
Eye—other	11.6	11.7	4.4	6.4	1.0
Colonoscopy	–2.1	0.3	–2.0	0.5	0.9
Upper gastrointestinal endoscopy	0.9	1.1	1.6	1.2	0.5
Cystoscopy	–0.2	0.7	–0.1	0.1	0.4
Tests	**0.6**	**1.0**	**3.4**	**0.8**	**5.1**
Other tests	–0.1	0.6	1.9	–0.3	1.9
Electrocardiograms	0.1	–0.5	1.0	–0.7	0.5
Cardiovascular stress tests	–4.0	–3.2	–3.3	–8.0	0.3

Note: N/A (not available), CT (computed tomography). 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 2011. For billing codes not used in 2011, we imputed RVUs based on the average change in RVUs for each type of service. Some low-volume categories are not shown but are included in the summary calculations. Evaluation and management 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 2006, office visits and inpatient visits include, respectively, office and inpatient consultations. Skin procedures volume is not reported for 2006 to 2010 due to a change in coding of Mohs procedures that prevented assignment of RVUs for these services in 2006.

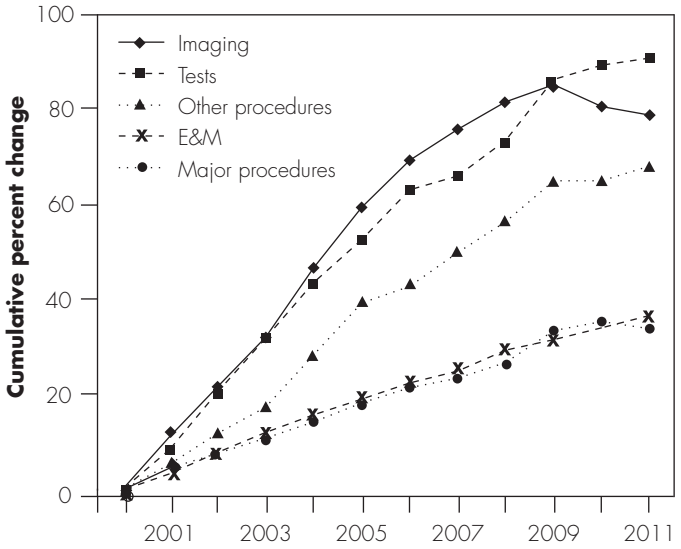
Source: MedPAC analysis of claims data for 100 percent of Medicare beneficiaries.

- Another study for the Commission considered the extent to which certain diagnostic services are repeated when furnished for Medicare beneficiaries (Welch et al. 2012). The list of services included three imaging services: echocardiography, imaging stress tests, and chest CT. Given the lack of research on this topic, the first aim of the project was to document the extent to which services are repeated at given intervals, such as within one year after an initial service. The study showed that some clinicians routinely repeat services, even though standards for doing so are lacking. In addition, the study showed that—when comparing testing in the 50 largest metropolitan statistical areas—there is a high positive correlation between the proportion of beneficiaries who are tested and the proportion of tests repeated. This finding suggests that—in the absence of external standards—local practice style is determining testing thresholds. One reason to study repeat testing is that it is a risk factor for overdiagnosis, which occurs when individuals are diagnosed with conditions that will never cause symptoms or death (Welch et al. 2011). In addition, a tendency to repeat services routinely can reduce the capacity of physicians and other health professionals to serve new patients, raise practice costs as more equipment and personnel are used to serve a given population, and raise spending.

- The ABIM Foundation has a Choosing Wisely initiative under way to help physicians and patients have conversations about the overuse of tests and procedures and support physicians' efforts to help patients make smart and effective choices about their care (ABIM Foundation 2012).

- As reported in the press, physicians and others have expressed concerns about overuse of services, including imaging (Elton 2009, Holohan 2011, Johnson 2008, Kolata 2011, Palfrey 2011). For example, in an essay for the *New York Times*, a physician wrote, "Overconsultation and overtesting have now become facts of the medical profession. The culture in practice is to grab patients and generate volume. 'Medicine has become like everything else,' a doctor told me recently. 'Everything moves because of money.'" (Juahar 2008). In a commentary for the *New England Journal of Medicine*, a physician and another author wrote that "the goal should be to redirect nascent physicians from a shotgun approach toward the critical use of imaging in thoughtful and elegant diagnosis" (Hillman and Goldsmith 2010).

FIGURE 4–5 **Growth in volume of practitioner services, 2000–2011**



Note: E&M (evaluation and management). Volume growth for E&M from 2009 to 2010 is not directly observable due to a change in payment policy for consultations. To compute cumulative volume growth for E&M through 2011, 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.

- As discussed in the Commission's June 2011 report, there is evidence that some diagnostic imaging services ordered by physicians are not clinically appropriate and that inappropriate use occurs in both physicians' offices and hospitals. The American College of Cardiology Foundation (ACCF) and UnitedHealthcare assessed the appropriateness of nuclear cardiology procedures performed by six nonhospital practices using criteria developed by the ACCF and the American Society of Nuclear Cardiology (Hendel et al. 2010). The researchers found that 14 percent of the studies performed at these sites were inappropriate, and 15 percent were of uncertain appropriateness.

Much of imaging decrease is due to shift in billing for cardiovascular imaging from professionals' offices to hospitals Physicians and other health professionals can bill for fee-schedule services as furnished in either a nonfacility setting, such as a professional's office, or a facility setting, such as a hospital. As discussed in this report's chapter on hospital inpatient and outpatient

TABLE 4–5 **Change in cardiac imaging units of service per beneficiary, 2010–2011**

Type of imaging	Hospital outpatient department	Professional office
Echocardiography	17.6%	–7.2%
Nuclear cardiology	13.6	–12.9

Note: Echocardiography includes services in ambulatory payment classifications (APCs) 0269, 0270, and 0697. Nuclear cardiology includes services in APCs 0377 and 0398.

Source: MedPAC analysis of outpatient claims data for 5 percent of Medicare beneficiaries and carrier claims data for 100 percent of Medicare beneficiaries.

services, there has been a shift in billing for some services from professionals' offices to hospitals. In 2011 compared with 2010, the number of echocardiograms per beneficiary furnished in hospital outpatient departments went up by 17.6 percent, but the number furnished in professionals' offices went down by 7.2 percent (Table 4-5). Similarly, from 2010 to 2011, the number of cardiac nuclear medicine studies per beneficiary furnished in hospital outpatient departments went up by 13.6 percent, while the number furnished in professionals' offices went down by 12.9 percent. These changes in billing patterns are consistent with reports of an increase in cardiologists' practices that are owned by hospitals (American College of Cardiology 2012).

This shift has implications for changes in the volume of services. RVUs used in measuring volume are higher for services billed in a nonfacility setting, such as a professional's office, than in a facility setting, such as a hospital.[5] Specifically, practice expense RVUs are higher for services furnished in nonfacility settings than for services furnished in facility settings to account for higher practice costs incurred when services are furnished in nonfacility settings. In turn, measures of service volume decrease when there is a shift in billing patterns from higher RVU nonfacility settings to lower RVU facility settings.

Much of the 1.0 percent decrease in the volume of imaging services is due to decreases in units of service for two cardiovascular services: nuclear medicine and echocardiography. The more important factor, however, is the shift in setting for these services from the nonfacility setting to the facility setting. If these two types of services are excluded from the calculations, the change in the volume of imaging services from 2010 through 2011 would be an increase of 0.5 percent.

Quality of care: Most ambulatory care measures were stable or improved, although declines occurred for some measures

A set of quality indicators called the Medicare Ambulatory Care Indicators for the Elderly (MACIEs) was developed by the Commission with input from a group of clinicians to assess the quality of care delivered by physicians and other health professionals. The MACIEs measure 38 types of clinically indicated acute and follow-up care for beneficiaries diagnosed with certain chronic or acute conditions (see online Appendix 4-B, available at http://www.medpac.gov). We assess these quality measures for FFS beneficiaries based on changes between two time periods, 2008 to 2009 and 2010 to 2011. Between these periods, 12 indicators improved, 20 indicators were statistically unchanged, and 6 indicators worsened. Both the increases and decreases in quality were modest.

The rate of beneficiaries with a breast cancer diagnosis who received a chest X-ray at initial diagnosis declined, as did breast cancer screening and mammography surveillance. We see a similar trend in the private market, as measured in the Healthcare Effectiveness Data and Information Set (HEDIS®), which assesses quality measures for commercial insurers. In the HEDIS measures, the rates of breast cancer screening for individuals under 65 enrolled in HMOs and preferred provider organizations (PPOs) also fell slightly, after peaking in 2009. This trend may be due to ongoing discussions regarding the frequency and efficacy of breast cancer screening (Bleyer and Welch 2012).

The MACIEs also include six measures of potentially avoidable hospitalizations and emergency department visits for beneficiaries with five chronic diseases: coronary artery disease, congestive heart failure, diabetes, hypertension, and chronic obstructive pulmonary disease. Among the six measures (two for diabetes—short-term and long-term complications), one worsened (hospitalization for hypertension) and the rest were statistically unchanged.

Medicare payments and providers' costs

Because physicians do not report their costs to the Medicare program, we use indirect measures to assess the adequacy of Medicare payments relative to physicians'

costs. The first measure is how Medicare's payments compare with the fees paid by private insurers for covered services. The second looks at whether Medicare's fee schedule and FFS payment system encourage differences in physicians' compensation across specialties. The third is a measure of input prices for physicians and other health professionals—the Medicare Economic Index (MEI).

Ratio of Medicare payments to private insurer payments is steady

Since 1999, the ratio of Medicare's allowed physician and other health professional fees (including cost sharing) to private-insurer allowed fees has been around 80 percent. For 2011, we find little change from the results reported for 2010. In 2011, Medicare's payments for physician and other health professional services were 82 percent of commercial rates for PPOs, and the rate for 2010 was 81 percent. This analysis uses a data set of paid claims for PPO members of a large national insurer. We are unable to include additional private-insurer payments or penalties that may occur outside of the claims payment process. In contrast, our Medicare fees include bonuses or penalties that Medicare pays as part of the claim. Our findings on access to care for Medicare beneficiaries and privately insured individuals suggest that Medicare's lower fees on average have less effect on access than other systemic trends or local factors.

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 of the fee schedule, includes mispriced services and that these mispriced services can cause an income disparity between primary care and specialty physicians. Second, FFS payment allows some specialties to increase the volume of services they provide (and therefore their revenue from Medicare) more easily, while other specialties, particularly those that spend most of their time providing E&M services, have limited ability to increase their volume. This situation can also lead to the compensation differences between primary care and specialty care.

An analysis published on the *Health Affairs* website reviewed the argument that if commercial payers used Medicare and Medicaid payment rates, the lower rates would cause financial instability for physicians. The author found that pay for orthopedists—net of expenses—would fall from $541,000 under the current payer mix to $411,000 if commercial insurers paid Medicare fees. The author asserts that the argument has more validity for primary care physicians. In the data source the author uses, net pay for primary care physicians was $189,000, whereas if commercial insurers paid Medicare fees, primary care physicians would net $137,000 (Rickert 2012).

This finding is similar to that of a Commission-contracted study of compensation by specialty (Medicare Payment Advisory Commission 2012). Income for physicians in broad specialty categories was calculated using the Medicare fee schedule—as if all of the physician's workload consisted of Medicare patients. While these simulated physician earnings were about 17 percent lower than they were under the current mix of payers, the most striking finding was the persistence of the primary care–specialty care gap in earnings ($254,000 vs. $305,000), even under the Medicare fee schedule. Specifically, the nonsurgical, procedural group ($445,000) and the radiology group ($460,000) had simulated annual earnings that were more than twice those for the primary care group ($207,000).

The Commission will continue to review ways of addressing the primary care–specialty care income differences. Methods could include targeted add-on payments to the fee schedule (such as a primary care payment adjustment), additional payments for primary care offices that become patient-centered medical homes (see text box, pp. 96–97), or payment for primary care services through larger bundled or capitated payment models.

Input costs for physicians and other professionals are projected to increase in 2014

The MEI measures the changes in the market basket of input prices for physician and other health professional services and is adjusted for economy-wide productivity.[6] CMS's current forecast is that the percentage change in the MEI will be 2.3 percent in 2014 and 2.8 percent without the productivity adjustment (Centers for Medicare & Medicaid Services 2012b). Medicare's total payments to physicians and other health professionals have increased faster than both the MEI and updates to the fee schedule's conversion factor (Figure 4-6, p. 98). From 2000 through 2011, the updates rose at a cumulative rate of 9 percent, while the MEI rose at a cumulative rate of 26 percent. Over the same period, however, Medicare per beneficiary spending for physician and other health professional services increased by 74 percent. Growth in volume accounts for the difference between the fee-schedule

The patient-centered medical home

The patient-centered medical home (PCMH) is a primary care model that aims to improve patient outcomes by adopting a patient-centered rather than disease-centered approach, with the aim of improving quality of care, lowering costs, and improving the patient experience (Agency for Healthcare Research and Quality 2012). The concept began in pediatrics in the late 1960s to better document a patient's medical record, but it was not until recently that PCMH has been redefined as a model of primary care delivery for adult patients as well as children. In June 2008, the Commission wrote that the essential functions of a PCMH are to provide primary care, conduct care management, use health information technology for active clinical decision support, have a formal quality improvement program, maintain 24-hour patient communication and rapid access, keep up-to-date records of beneficiaries' advance directives, and maintain a written understanding with each beneficiary designating the provider as a medical home (Medicare Payment Advisory Commission 2008).

In 2007, the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association produced their Joint Principles of the Patient-Centered Medical Home. Regarding the medical home concept, they stressed the importance of each patient having a consistent personal physician, a physician-directed team of health professionals, and a "whole person orientation" of care. This means that the physician is responsible for providing "care for all stages of life: acute care; chronic care; preventive services; and end of life care" (Patient-Centered Primary Care Collaborative 2007).

Because of its basis in pediatric primary care, many of the oldest and most advanced PCMH programs are state-run Medicaid care management programs. Since 2008, the National Academy for State Health Policy has supported 16 states to implement and evaluate PCMH programs. They found that the most successful states tailored the definition of "medical home" to their local experience; used changes in payment to facilitate care coordination; minimized the administrative burden of implementing a medical home; based qualification and evaluation on national models that translate medical home principles into concrete, measurable expectations; and addressed the antitrust issues that arise when multiple payers collaborate (Kaye et al. 2011).

Examples of these models include Community Care of North Carolina, which works on improving care transitions for the state's Medicaid population by including pharmacists in efforts to coordinate care, facilitating access to medical records, and using nonphysician care managers (Trygstad et al. 2011). In Maryland and Montana, the multipayer PCMH program facilitates coordinated care by including a shared savings component in the program to give physicians incentive to participate (Kaye et al. 2011). Blue Cross Blue Shield of Michigan (BCBSM) identifies 12 "domains of function" to improve care and evaluates and reimburses practices for achieving them (BlueCross BlueShield of Michigan 2012).

(continued next page)

updates and spending growth. Aggregate Medicare payments to practices from this spending growth are a function of volume growth and fee-schedule updates.

How should Medicare payments change in 2014?

Informing the Commission's deliberations on payment adequacy for physicians and other health professionals are beneficiary access to services, volume growth, quality, and input prices for physicians and other health professionals. We find that, in general, all measures are positive or neutral.

Beneficiary access to physician and other health professional services continues to be good. Medicare beneficiaries generally have better overall access than privately insured individuals ages 50 to 64. However, more beneficiaries seeking a primary care doctor report a big problem than beneficiaries seeking a specialist,

The patient-centered medical home (cont.)

Earlier this year, the Urban Institute reviewed 10 different accreditation tools to evaluate the processes by which PCMHs receive recognition. The most widely used assessment tool was the Physician Practice Connections®–Patient-Centered Medical Home produced by the National Committee for Quality Assurance (NCQA) in 2008 and revised in 2011. Most assessment surveys seem to agree that qualification for PCMH status should require an emphasis on care coordination, health information technology, quality measurement, and patient engagement. Other more innovative considerations include the PCMH's adherence to current law, the presence of a contract acknowledging the practice–patient relationship, the capacity to provide basic care services, business practices and management, and continuity of care by the same physician over time (Burton et al. 2012).

Despite the analysis of these tools that accredit PCMHs, little work has been published to date regarding the programs' success at improving outcomes and reducing costs. Because the PCMH model as it is currently defined is only about five years old, many evaluations are still in progress. Another challenge is that many of the programs considered medical homes predate the official definition of PCMH, and thus variation and uncertainty exist in terms of what PCMHs are able to accomplish (Agency for Healthcare Research and Quality 2012).

Preliminary results from BCBSM's initiative suggest that participation in a PCMH can reduce emergency department visits, reduce the use of radiology services, and increase the use of generic drugs as opposed to brand names (BlueCross BlueShield of Michigan 2012). UPMC Health Plan recently reported lower medical and pharmaceutical costs and reduced readmissions and emergency department visits as a result of its PCMH (Rosenberg et al. 2012). But there is no evidence as to whether these results can be replicated or scaled.

The Agency for Healthcare Research and Quality (AHRQ) finds that while many evaluations did not meet rigorous methodological standards and thus could not offer statistically significant data, some positive evidence has emerged from PCMH programs around the country. The PCMH model seems to improve process and outcome measures of quality and lead to a more favorable patient experience, but the effect on cost is still unclear. Ultimately, AHRQ concluded that the evidence in favor of PCMH is still weak and that a longer term study is required.

Three demonstrations in the Centers for Medicare and Medicaid Innovation will support practices to become PCMHs that serve Medicare beneficiaries. These demonstrations share some features of state-sponsored programs, such as shared savings and technical assistance to achieve NCQA recognition. CMS will conduct an analysis of the demonstrations' success (Centers for Medicare & Medicaid Services 2011).

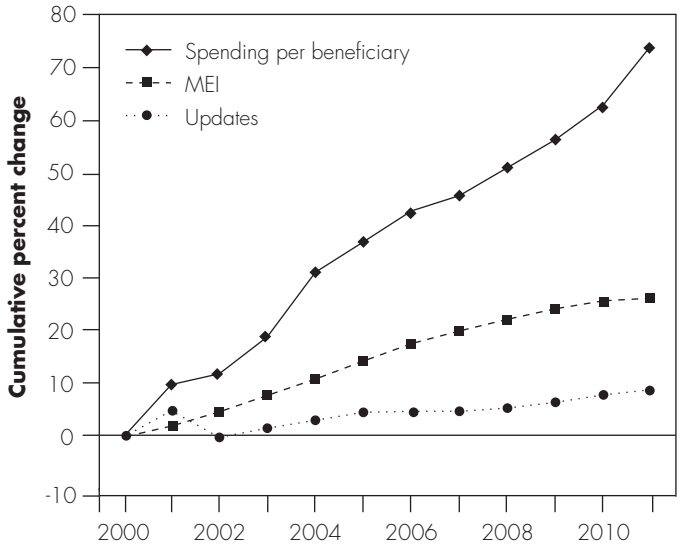
Several barriers exist to widespread adoption of PCMHs: Physicians must become comfortable with a practice structure that incorporates nonphysician health professionals and is reimbursed in ways other than fee-for-service. Also, PCMH requires a level of collaboration and communication for which Medicare payment structures have not yet created incentives (Agency for Healthcare Research and Quality 2012, Nutting et al. 2012). ■

which continues to be of concern to the Commission. Other beneficiary access surveys have consistent findings. The number of physicians per beneficiary has remained constant, the number of other health professionals per beneficiary has grown, and the share of providers accepting assignment and enrolled in Medicare's participating provider program has also grown.

The volume of physician and other health professional services grew 1.0 percent per beneficiary in 2011, but growth rates varied across groups of services. E&M services increased 2.0 percent, other procedures increased 1.9 percent, and tests increased 0.8 percent. Imaging and major procedures had negative growth rates of −1.0 percent and −1.1 percent, respectively. Imaging procedures declined, in part, from some cardiovascular imaging shifting from physicians' offices to hospital outpatient departments.

Ambulatory care quality assessed for FFS beneficiaries based on changes between two time periods showed slight

FIGURE 4–6 **Volume growth has caused spending to increase faster than input prices and updates, 2000–2011**



Note: MEI (Medicare Economic Index). The MEI measures the changes in the market basket of input prices for physician and other health professional services.

Source: 2012 annual report of the Boards of the Medicare trust funds and Office of the Actuary 2012.

improvement in a few measures and slight declines in a few others. Between the periods 2008 through 2009 and 2010 through 2011, 12 indicators improved, 20 indicators were statistically unchanged, and 6 indicators worsened. With a few exceptions, the increases and decreases were modest. Input prices for physicians and other health professionals are projected to be 2.3 percent in 2014 (including a productivity adjustment).

An overarching issue affecting our deliberations is the SGR system. The Commission laid out its findings, principles, and recommendations for moving forward from the SGR system in its October 2011 letter to the Congress (see Appendix B, pp. 371–392). Repeal of the SGR should follow the Commission's principles—eliminating the link between cumulative fee-schedule expenditures and annual conversion-factor updates, protecting beneficiary access to care, and having the Congress replace the SGR in a way that is fiscally responsible.

Although our latest access survey does not show significant deterioration at the national level, the Commission is nonetheless concerned about access. The balance between supply and demand is tight in many markets and problems could surface, particularly in primary care. The Medicare population is increasing as members of the baby-boom generation become eligible for Medicare, a large cohort of physicians is nearing retirement age, and SGR fatigue is increasing. We do not predict abrupt changes in the national access picture, but we cannot rule them out either.

For these reasons, the Commission reiterates the urgent need to repeal the SGR as detailed in the set of parameters for how the SGR could be repealed in our October 2011 letter to the Congress. Deferring repeal for one or two years will not provide the Congress with a better set of choices. On the contrary, delaying action makes the cost of repeal that much larger, given the projected continuing increases in volume and intensity. A second argument against deferring repeal of the SGR is that the array of new payment models to choose from is unlikely to change materially in the near term. ■

Endnotes

1 For further information, see the Commission's *Payment Basics: Physician services payment system* document, available at http://www.medpac.gov/documents/MedPAC_Payment_Basics_12_Physician.pdf.

2 For primary care, payment rates would be frozen at their current levels. For all other services, there would be reductions in the fee schedule's conversion factor in each of the first three years and then a freeze in the conversion factor for the subsequent seven years.

3 The study authors refer to "generalist" physicians, but they include the specialty types included in a primary care definition, so we use "primary care" here instead.

4 CMS changed the policy on billing for consultations with the rationale that the relaxation of consultation documentation requirements over time had brought the effort involved in consultations to levels comparable to those of visits.

5 When a service is furnished in a facility setting, there is a payment under a payment system such as the outpatient prospective payment system—separate from the payment under the physician fee schedule— to account for facility costs.

6 The MEI measures the weighted average annual price change for various inputs used by physicians and other health professionals to provide services.

References

ABIM Foundation. 2012. Choosing wisely. http://choosingwisely.org.

Agency for Healthcare Research and Quality. 2012. *Early evidence on the patient-centered medical home.* Prepared by Mathematica Policy Research for AHRQ. Rockville, MD: AHRQ.

Alhassani, A., A. Chandra, and M. E. Chernew. 2012. The sources of the SGR "hole." *New England Journal of Medicine* 366, no. 4 (January 26): 289–291.

American College of Cardiology. 2012. *Findings from the ACC cardiovascular practice consensus.* Washington, DC: ACC. http://www.nccacc.org/news/2012USCVPracticeCensusNorthCarolina.pdf.

American Medical Association. 2012. *2012 national health insurer report card.* Washington, DC: AMA.

Andrus, B. W., and H. G. Welch. 2012. Medicare services provided by cardiologists in the United States: 1999–2008. *Circulation: Cardiovascular Quality and Outcomes* 5, no. 1 (January 1): 31–36.

Babitz, M., A. Brassard, R. C. Brooks, et al. 2011. *Negotiated rulemaking committee on the designation of medically underserved populations and health professional shortage areas: Final report to the Secretary.* Washington, DC: Health Resources and Services Administration.

Bleyer, A., and H. G. Welch. 2012. Effect of three decades of screening mammography on breast-cancer incidence. *New England Journal of Medicine* 367, no. 21 (November 22): 1998–2005.

BlueCross BlueShield of Michigan. 2012. *BCBSM Physician Group Incentive Program 2012–2013 program year: Patient-centered medical home program summary document.* Detroit, MI: BCBSM.

Buczko, W. 2004–2005. Provider opt-out under Medicare private contracting. *Health Care Financing Review* 26, no. 2 (Winter): 43–59.

Burton, R. A., K. J. Devers, and R. A. Berenson. 2012. *Patient-centered medical home recognition tools: A comparison of ten surveys' content and operational details.* Washington, DC: The Urban Institute.

Centers for Disease Control and Prevention. 2012. *Summary health statistics for U.S. adults: National health interview survey, 2010.* Vital and health statistics. Series 10, no. 252.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2012a. *2010 reporting experience including trends (2007–2011): Physician Quality Reporting System and Electronic Prescribing (eRx) Incentive Program.* Baltimore, MD: CMS.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2012b. Market basket data: Medicare Economic Index. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/MarketBasketData.html.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2012c. Medicare & Medicaid statistical supplement: 2012 edition. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareMedicaidStatSupp/2012.html.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2011. *Federally Qualified Health Center (FQHC) Advanced Primary Care Practice (APCP) demonstration frequently asked questions (FAQs).* Baltimore, MD: CMS.

Codespote, S. M., W. J. London, and J. D. Shatto. 1998. *Physician volume and intensity response.* Baltimore, MD: CMS. http://www.cms.gov/ActuarialStudies/downloads/PhysicianResponse.pdf.

Congressional Budget Office. 2012. *Medicare's payments to physicians: The budgetary impact of alternative policies relative to CBO's March 2012 baseline.* Washington, DC: CBO.

Davis, K., K. Stremikis, M. M. Doty, et al. 2012. Medicare beneficiaries less likely to experience cost- and access-related problems than adults with private coverage. *Health Affairs* 31, no. 8 (August): 1866–1875.

Decker, S. L. 2012. In 2011 nearly one-third of physicians said they would not accept new Medicaid patients, but rising fees may help. *Health Affairs* 31, no. 8 (August): 1673–1679.

Elton, E. 2009. Changing the patterns of medical care. Letter to the editor. *New York Times*, June 20.

Hargrave, E., A. Mahmud, K. Quirk, et al. 2010. *Retainer-based physicians: Characteristics, impact, and policy considerations.* A study conducted by staff from NORC at the University of Chicago and Georgetown University for the Medicare Payment Advisory Commission. Washington, DC: MedPAC.

Hendel, R. C., M. Cerqueira, P. S. Douglas, et al. 2010. A multicenter assessment of the use of single-photon emission computed tomography myocardial perfusion imaging with appropriateness criteria. *Journal of the American College of Cardiology* 55, no. 2 (January 12): 156–162.

Hillman, B. J., and J. C. Goldsmith. 2010. The uncritical use of high-tech medical imaging. *New England Journal of Medicine* 363, no. 1 (July 1): 4–6.

Hing, E., and S. M. Schappert. 2012. *Generalist and specialty physicians: Supply and access, 2009–2010.* National Center for Health Statistics data brief, no. 105. Hyattsville, MD: NCHS.

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.

Holohan, E. 2011. When docs own MRIs, back pain scans increase: Study. *HealthDay*, April 28.

Johnson, L. A. 2008. Health insurers limit advanced scans. *USA Today*, March 23.

Juahar, S. 2008. Many doctors, many tests, no rhyme or reason. *New York Times*, March 11.

Kaye, N., J. Buxbaum, and M. Takach. 2011. *Building medical homes: Lessons from eight states with emerging programs.* New York, NY: The Commonwealth Fund and the National Academy for State Health Policy.

Kolata, G. 2011. Law may do little to curb unnecessary care. *New York Times*, March 29.

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

Medicare Payment Advisory Commission. 2008. *Report to the Congress: Reforming the delivery system.* Washington, DC: MedPAC.

Nutting, P. A., B. F. Crabtree, and R. R. McDaniel. 2012. Small primary care practices face four hurdles—including a physician-centric mind-set—in becoming medical homes. *Health Affairs* 31, no. 11 (November): 2417–2422.

Office of Inspector General, Department of Health and Human Services. 2012. *Avoiding Medicare and Medicaid fraud and abuse: A roadmap for new physicians.* Washington, DC: OIG.

Palfrey, S. 2011. Daring to practice low-cost medicine in a high-tech era. *New England Journal of Medicine* 364, no. 11 (March 17): e21.

Patient-Centered Primary Care Collaborative. 2007. Joint principles of the patient-centered medical home. American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians and American Osteopathic Association. http://www.pcpcc.net/content/joint-principles-patient-centered-medical-home.

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.

Rickert, J. 2012. Do Medicare and Medicaid payment rates really threaten physicians with bankruptcy? Health Affairs blog. http://healthaffairs.org/blog/2012/10/02/do-medicare-and-medicaid-payment-rates-really-threaten-physicians-with-bankruptcy/.

Rosenberg, C. N., P. Peele, D. Keyser, et al. 2012. Results from a patient-centered medical home pilot at UPMC health plan hold lessons for broader adoption of the model. *Health Affairs* 31, no. 11 (November): 2423–2431.

Trygstad, T., T. Robinson, K. J. Rice, et al. 2011. Community Care of North Carolina: Building regional integrated delivery systems that support the medical home. *North Carolina Pharmacist* 91, no. 1: 6–17.

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.

Welch, H. G., L. M. Schwartz, and S. Woloshin. 2011. *Overdiagnosed: Making people sick in the pursuit of health.* Boston, MA: Beacon Press.

Wright, S. 2012. *Memorandum report: Lack of data regarding physicians opting out of Medicare.* OEI–07–11–00340. Washington, DC: Office of Inspector General, Department of Health and Human Services.