

Context for Medicare payment policy

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CHAPTER

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Chapter summary

Medicare payment policies must be considered in the broader context of the nation's health care system—including spending, delivery of care, access to and use of services—and pressure on federal and state budgets. Health care accounts for a large and growing share of economic activity in the United States, nearly doubling as a share of gross domestic product (GDP) in the period between 1980 and 2011, from 9.2 percent to 17.9 percent. Growth in spending slowed somewhat in 2010 and 2011. Though the causes of this slowdown are debated, the economic downturn beginning in 2008 has likely had an effect on health care spending, since fewer people have insurance and those with insurance may delay care because of cost concerns.

The level of and growth in health care spending significantly affect federal and state budgets since government payers directly sponsor nearly half of all health care spending. If this spending continues to consume an increasing share of federal and state budgets, spending for other public priorities could be crowded out, and the federal government would have less flexibility to support states because of its own debt and deficit burdens. Social Security, Medicare, Medicaid, other health insurance programs, and net interest will account for more than 16 percent of GDP in 10 years, whereas total federal revenues have averaged 18.5 percent of GDP over the past 40 years.

In this chapter

- Growth in health care spending
- Growth in Medicare spending
- Health care and the federal budget
- Changes in the Medicareeligible population
- Effects of growth in health care spending on individuals and families
- Variation in health care spending suggests inefficiencies
- Conclusion

Further, the growth of health care spending has a direct and meaningful impact on individuals and families. Evidence shows that the growth in out-of-pocket spending has negated real income growth in the past decade. The lasting effects of the economic downturn affected the income, insurance status, and assets (namely, the value of owned homes) of many people, including Medicare beneficiaries and adults aging into Medicare eligibility. Likewise, cost sharing and premiums for Medicare beneficiaries are projected to grow faster than Social Security benefits.

Growth in Medicare spending over the next 10 years is projected to be much smaller than in the past 10 years, while the number of Medicare beneficiaries will grow notably faster as the baby-boom generation ages into the program. The lower growth projections are largely due to policies in the Patient Protection and Affordable Care Act of 2010, including reduced updates of fee-for-service Medicare and lower payments to managed care plans. That said, the Hospital Insurance trust fund is projected to be exhausted by 2024, and the program still faces substantial deficits over the long term. Furthermore, the population aging into the Medicare program will present a new set of challenges since rising obesity levels put this population at a greater risk than previous generations for chronic disease.

There are indications that some share of health care dollars is misspent. First, health care spending varies significantly across different regions of the United States, but studies show that populations in the higher spending and higher use regions do not receive better quality care. In addition, despite higher per capita spending by the United States compared with other developed countries, the United States does not perform as well as these countries in the Organisation for Economic Co-operation and Development's internationally accepted health care quality measures. Finally, while minority Medicare beneficiaries represent a disproportionate share of high-spending beneficiaries, they tend to experience worse health outcomes.

Health care spending and growth in spending put pressure on government, family, and individual budgets. For the Medicare program, this pressure is particularly acute given the outlook for the federal budget and the projected increases in Medicare enrollment. Because the Medicare program pays for just over a fifth of all health care in the United States, it has an important influence on the shape of the health care delivery system as a whole. Therefore, it must pursue reforms that decrease spending and create incentives for beneficiaries to seek and providers to deliver high-value services.



Note: GDP (gross domestic product). Medicare spending reflects current law, which includes the sustainable growth rate

Source: Centers for Medicare & Medicaid Services, National Health Expenditures.

Introduction

FIGURE

The following topics provide important context for the Medicare payment policies discussed in the other chapters of this report:

- the growth in health spending and the main drivers of that growth;
- Medicare's role in and effect on the whole of the federal budget and how growth in health spending affects current and future federal and state budgets;
- the effect of growth in health care spending on individuals and families; and
- variation in health spending and quality of care, indicators that suggest health care dollars may be substantially misspent or misallocated.

Taken together, these points about the levels and growth of health care spending undergird the Commission's payment update recommendations and its call for payment reforms.

Growth in health care spending

High growth in health care spending significantly affects individuals and families, providers, and payers (public, private, and individual). Much research has been dedicated to evaluating the level of spending and drivers of growth in health spending (see text box on pp. 8–9 for further discussion). The average growth rate of per capita health care spending has annually exceeded that of per capita gross domestic product (GDP) by about 2.6 percentage points since the 1960s. In 2011, health care spending accounted for 17.9 percent of GDP, nearly twice what it was in 1980 (9.2 percent of GDP) (Figure 1-1) (Martin et







Source: CMS, National Health Expenditures, 2012.

al. 2012). Nearer term effects of growth in rates of health spending at this level include growth in premiums and outof-pocket costs that exceed growth in wages and income, pressure on federal and state budgets as well as increased costs to employers, and the projected exhaustion of the Medicare Hospital Insurance trust fund in 2024.

National health care spending

In 2011, total U.S. health care spending reached \$2.7 trillion, or roughly \$8,700 per person, of which almost \$2.3 trillion was for personal health care.¹ The largest share of health spending for all payers was for hospital care (\$851 billion, or 37 percent of personal health care) and physician and clinical services (\$541 billion, or 24 percent). A smaller share went to spending on prescription drugs (\$263 billion, or 12 percent of personal health care), nursing home care (\$149 billion, or 3 percent) (Hartman et al. 2013).

In 2011, spending by private payers, Medicare, and Medicaid accounted for 73 percent of health consumption expenditures, compared with 12 percent by individuals for out-of-pocket spending (Figure 1-2).

Slowdown in health care spending since 2008

Growth in health care spending has always matched or outpaced GDP growth. However, national health expenditure (NHE) data show a significant slowdown in health care spending in recent years. In 2009 and 2010, spending grew by 3.8 percent and 3.9 percent, respectively, the two slowest years of growth since NHE data were first tracked in 1960. Continuing this trend, growth was 3.9 percent in 2011, and national health care spending remained at 17.9 percent of GDP for the third year in a row (Hartman et al. 2013). However, this slowed growth (now equal to GDP) follows many years of growth significantly in excess of GDP (Figure 1-3).

Several factors caused the recent slowdown in spending (see text box on spending level and factors attributable to spending growth, pp. 8–9). First, aggregate spending on private health insurance declined because fewer people had insurance and uninsured people generally consume less health care (Newhouse and the Insurance Experiment Group 1993). Second, demand for health care also declined for those who remained insured, as reflected in the slowdown in out-of-pocket spending. However, prices did not slow down to the same extent (Health Care Cost Institute 2012a, Health Care Cost Institute 2012b).

It is unclear whether this slowdown in health care spending is temporary or permanent, though its longevity would have major implications. Growth in health care spending has been shown to put pressure on wages, so if the long-term trend is slowed, it could help buoy wage growth (Auerbach and Kellermann 2011, Baicker and Chandra 2006, Goldman et al. 2005). If the slower growth in spending is temporary, then as the economy recovers, growth in health spending could rebound, which would create additional pressure on federal and state governments, third-party payers, and individuals. Regardless of whether the current slowdown is permanent or temporary, growth in health care spending has always matched or outpaced GDP growth and thus will likely continue to consume a greater share of GDP.

Some health policy analysts argue that the recent slowdown in health spending may be permanent. First, some data show a decline in growth in health care FIGURE

Cumulative growth since 1970 for Medicare and private health insurance per enrollee and for per capita GDP



spending that predates the current recession (Roehrig et al. 2012). Second, some evidence exists of a slowdown in the pace of technology in certain sectors (e.g., fewer patents). Third, for many years, rising health care spending as a share of income (personal, state, and federal) has increased the pressure on payers to seek lower cost or more efficient health care (Health Care Cost Institute 2012a, Health Care Cost Institute 2012b, Lowrey 2012, Roehrig et al. 2012).

Other analysts expect that the slowdown may be short lived. Temporary slowdowns of this magnitude are not unprecedented. For example, growth rates in Medicare and private insurance were very low during the late 1990s (because of provider cuts in the Balanced Budget Act of 1997, historically low inflation and medical inflation, and the influence of managed care), but this slowdown was not sustained.

Projections

The slowdown of growth in health care spending is likely to continue through 2013 because of continuing effects of the economic downturn. Continuing levels of unemployment, moderate recoveries in insurance coverage, and growth in disposable income are expected to continue to depress health spending.

Beginning in 2014, as a result of the Patient Protection and Affordable Care Act of 2010, 10-year projections from NHE data show the uninsured moving onto the rolls of Medicaid and private plans in the new state-based health insurance exchanges. Medicare, Medicaid, and the Children's Health Insurance Program (CHIP) are projected to cover 44 percent of the population by 2020, compared with 34 percent in 2010 (Keehan et al. 2012).

The level of health care spending and factors attributable to spending growth

A stional growth in health care spending in general and Medicare spending growth in particular are both driven by five main factors: technology, prices, changes in market structure, health insurance, and changes in demographics and patient characteristics (particularly in income and wealth). Health care spending trends are sensitive to each of these factors, and interaction among factors adds an additional layer of complexity to attributing causes of spending levels, growth, or slowdowns. In addition, the level of health care spending sets the baseline from which growth in spending is built. Thus we mention the level of spending as an aspect of some of the growth factors to note its effect on health spending.

• Technology is credited as having the largest single effect on growth in health care spending (with different studies attributing 38 percent to more than 65 percent of spending growth) (Cutler 1995, Newhouse 1992, Smith et al. 2009). Technology is broadly defined as the introduction, expansion, and diffusion of new interventions or treatments, changes in procedures or processes, or changes in the appropriate treatment population (Ginsburg 2008). In other words, technology includes not only new treatments but old treatments applied to a different population or for a different purpose than originally intended. Downstream effects of technology include interventions that increase or reduce the use of other treatments (Chernew 2010, Cutler and McClellan 2001) and interventions resulting in higher survival rates for a previously terminal condition (McKinsey Global Institute 2008).

- Prices for health care products and services, both the level and growth, have a major effect on health spending. Prices are higher in the United States than they are in other developed countries, without correspondingly higher quality or outcomes (Anderson et al. 2003, Anderson et al. 2005, Laugesen and Glied 2011). Prices vary across geographic areas, payers, and providers and are rarely transparent; however, studies consistently cite growth in prices as a leading cause (between 10 percent and 25 percent) of health spending growth (Coakley 2011, Health Care Cost Institute 2012a, Health Care Cost Institute 2012b, Laugesen and Glied 2011).
- Changes in market structure among providers and insurers can affect the level of competition in a

(continued next page)

Growth in Medicare spending

As with growth in national health care spending, Medicare spending growth also slowed between 2009 and 2010, with per beneficiary growth remaining largely flat and total Medicare growth nearly 3 percent. In 2009 and 2010, hospital inpatient admissions declined as did the volume of physician claims. In contrast, spending growth picked up somewhat in 2011 to 6.4 percent overall (2.5 percent due to enrollment growth and 3.8 percent growth in spending per beneficiary).²

Areas with notable growth in Medicare spending in 2011 included hospital outpatient services (8.4 percent growth per beneficiary), physician services (4.8 percent growth per beneficiary), and skilled nursing facilities (20.9 percent

growth per beneficiary). Spending on these services was attributable to increases in price, use, or intensity: For example, the rise in spending on skilled nursing facility services was due to a change in the prices paid by Medicare, while increased spending on hospital outpatient services reflected an increase in the number of services provided (Medicare Payment Advisory Commission 2012b).

Spending for beneficiaries with chronic conditions

The number of beneficiaries with chronic conditions is an important component of Medicare's spending trajectory. Beneficiaries with certain chronic conditions make up a significant share of Medicare's spending. Among

The level of health care spending and factors attributable to spending growth (cont.)

market and thus affect both the level of spending and spending growth. Hospitals and health insurers alike are increasingly consolidating. Evidence of the effects of provider and insurer consolidation on spending growth reveals a mixed picture for health spending. Markets with provider consolidation may have higher growth in health care spending (Vogt and Town 2006), and providers may obtain market power to negotiate higher payment rates—further advancing the increase in prices (Berenson et al. 2010, Berenson et al. 2012). On the other hand, insurance market concentration can decrease health spending because providers may have less leverage in negotiating prices where insurers are dominant (Moriya et al. 2010).

 Health insurance coverage, paired with a lack of complete information about appropriate treatment or value of interventions, removes the incentive for insured individuals to seek the lowest priced effective service. Researchers suggest that population-level changes in insurance coverage may be responsible for up to half of the increase in per capita health care spending since 1950 (Finkelstein 2007, Peden and Freeland 1995). Recent studies of Oregon's experiment in extending Medicaid coverage by lottery showed that people randomly chosen for Medicaid coverage used services more an estimated 25 percent more than the uninsured control group (Finkelstein et al. 2010). Given the positive correlation between coverage and use shown by this and other studies, we contend that the declining rate of insurance coverage over the past decade likely slowed the rate of growth in health spending. Factors such as increased cost sharing (deductibles, coinsurance, and copayments), changes in benefit design that encourage patients to seek low-cost care, and increased transparency of information on prices and quality could also have contributed to slower spending growth (Ginsburg 2008).

Demographics and patient characteristics (especially income and wealth) also affect spending growth. People who have more expendable income and wealth will use more of it on health care services. National income growth, in tandem with expanding insurance coverage, can drive investment and changes in health technologies (Smith et al. 2009). Changes in the age and health status of a population also affect the growth of health spending. ■

beneficiaries in the top decile of Medicare spending, nearly half had congestive heart failure, as compared with less than 15 percent in the overall Medicare population, and ischemic heart disease was twice as common. In addition, nearly twice as many individuals in the top decile of Medicare spending had diabetes (Medicare Payment Advisory Commission 2012a).

Historical trends in chronic disease prevalence

Data reported by the Centers for Disease Control and Prevention from the National Health and Nutrition Examination Survey show mixed results on whether the prevalence of chronic disease has increased over time. For example, between 1997 and 2010, the proportion of individuals over age 65 who reported being told that they had heart disease remained relatively constant, at about 30 percent of the population. In contrast, during the same period, those reporting that they had cancer increased from 14 percent to 18 percent. Between 1988 and 2006, prevalence of diabetes among the Medicare population increased more significantly, from about 20 percent to 26 percent. On the other hand, rates of self-reported health status for individuals over age 65 improved during a similar time frame (1991 to 2010) as fewer beneficiaries (24 percent compared with 29 percent) reported that they were in fair or poor health (Centers for Disease Control and Prevention 2012a).

Recent patterns in prevalence and spending per beneficiary in Medicare

Medicare spending for beneficiaries with chronic conditions is the function of the prevalence of disease and



Note: COPD (chronic obstructive pulmonary disorder), CHF (congestive heart failure). Only includes full-year fee-for-service enrollees. Beneficiaries may be included in more than one column.

Source: Beneficiary Annual Summary file.

TABLE 1-1	Prevalence of disease among Medicare beneficiaries			
Condition	2006	2008	2010	
Chronic conditions				
Chronic kidney disease	9%	11%	13%	
Chronic obstructive pulmonary disease	10	10	10	
Congestive heart failure	15	15	11	
Diabetes	25	26	27	
Ischemic heart disease	31	31	25	
Acute conditions				
Acute myocardial infarction	1	1	1	
Atrial fibrillation	7	7	7	
Hip fracture	1	1	1	
Stroke/transient ischemic attack	4	4	4	

Note: Beneficiaries may be included in more than one category. Disease definitions based on Chronic Condition Data Warehouse definitions.

Source: MedPAC analysis of the Beneficiary Annual Summary files.

FIGURE

Medicare spending is concentrated among beneficiaries with multiple chronic conditions, 2010



Note: Data based on Chronic Condition Data Warehouse definitions of chronic conditions.

the growth in spending per beneficiary with that disease. For example, spending on beneficiaries with chronic kidney disease and diabetes grew fastest among the major chronic conditions (Figure 1-4). The rise in spending for these two conditions is due to both rising spending per beneficiary (2 percent to 4 percent per year) and the prevalence of disease. Spending on beneficiaries with congestive heart failure and ischemic heart disease remained relatively steady over time, but this spending is the function of a decline in the prevalence of those conditions, not a slowdown in spending per beneficiary. For other chronic diseases, the prevalence was relatively stable (Table 1-1).³

Share of beneficiaries with multiple chronic conditions

Beneficiaries who have multiple chronic conditions account for a greater share of Medicare spending than those with a single chronic condition or none. For example, in 2010, beneficiaries with six or more chronic conditions constituted only about 14 percent of the Medicare population but accounted for over 40 percent of Medicare spending (Centers for Medicare & Medicaid Services 2012). In contrast, those beneficiaries with zero or one chronic condition—about a third of the population—accounted for 7 percent of total Medicare spending (Figure 1-5).

Other research finds that the number of multiple chronic conditions reported by beneficiaries has increased over the past 10 years: A study assessing self-reported health status stated that 45 percent of individuals over age 65 reported having 2 or more of 9 chronic conditions, up from a third 10 years before (Centers for Disease Control and Prevention 2012a). Between 2000 and 2010, the rate of multiple chronic conditions among respondents ages 45 to 64 also grew from 16 percent to 21 percent, raising concern about those newly enrolling in Medicare.

The aging of Medicare beneficiaries will magnify trends in the prevalence of multiple chronic conditions. In general, older beneficiaries are more likely to have multiple chronic conditions (Table 1-2). In about 10 years, distribution of Medicare beneficiaries will shift upward in age. If

TABLE 1-2

Percentage of Medicare FFS beneficiaries by number of chronic conditions, 2010

Number of chronic conditions	Age (in years)			
	Less than 65	65 to 74	75 to 84	85+ years
0 to 1	47%	37%	23%	17%
2 to 3	28	34	33	29
4 to 5	17	20	27	29
6 or more	9	9	18	25

Note: FFS (fee-for-service). Number of chronic conditions is based on counts of 15 selected conditions using the Chronic Condition Data Warehouse definitions. Totals may not sum to 100 percent due to rounding.

Source: Centers for Medicare & Medicaid Services. Chronic conditions among Medicare beneficiaries. Chartbook: 2012 edition.

Source: Centers for Medicare & Medicaid Services. Chronic conditions among Medicare beneficiaries. Chartbook: 2012 edition.



Historical and projected growth rates for Medicare enrollment and per beneficiary spending



the current pattern holds, the relatively older Medicare population may increase the number of beneficiaries needing treatment for multiple chronic conditions.

Medicare spending over the next 10 years

The Medicare Trustees project that Medicare spending will grow at an average annual rate of about 6.8 percent over the next 10 years, consisting of 3.9 percent per beneficiary growth and 2.9 percent enrollment growth (Figure 1-6), assuming that physician fees are updated by 1 percent per year starting in 2013, instead of the payment reductions mandated by the sustainable growth rate (SGR) formula. The Trustees also project that demand for health care (reflected by increases in both the units and intensity of service) will increase when the economic recession abates (Boards of Trustees 2012) (See online Appendix 1-A at http://www.medpac.gov for further detail on Medicare spending trends).⁴

The Trustees predict that enrollment in Medicare Advantage (MA), which is Medicare's managed care alternative under Part C of Medicare law, will peak in 2012 as payment reductions prescribed in the Patient Protection and Affordable Care Act of 2010 begin to have an impact on MA plans. By 2018, once the payment changes to the MA program are fully phased in, the Trustees estimate that about 17 percent of beneficiaries will remain on MA plans. Beneficiaries rejoining traditional fee-for-service Medicare will likely be in low-cost areas, slightly depressing fee-forservice costs (Boards of Trustees 2012).

Medicare program spending and funding

edicare's spending covers acute and post-acute care, ambulatory care, and prescription drugs (Table 1-3). The Medicare program is funded by premiums and cost sharing, payroll taxes, general revenue, and other sources (Table 1-4). General revenue alone accounts for 42 percent of Medicare's revenue (and consists of about 17 percent of all income taxes collected by the government) (Congressional Budget Office 2012).

- *Part A is Medicare's Hospital Insurance benefit,* which covers hospitalizations and post-acute care. Part A is financed through a 2.9 percent payroll tax split between employers and employees and, starting in 2013, an additional 0.9 percent payroll tax on wages over \$200,000 for single filers and \$250,000 for married filers.
- Part B is Medicare's Supplementary Medical Insurance benefit, which covers outpatient hospital

1-3 Med	Medicare spending, 2011	
	Dollars (in billions)	
Total	\$549	
Inpatient hospital	133	
Medicare Advantage	124	
Physician fee schedule	68	
Prescription drugs	67	
Other Part B services	48	
Outpatient hospital	35	
Skilled nursing facilities	33	
Home health	20	
Hospice	15	
Administration	8	
Note: Individual dollar amounts may no	ot sum to total due to rounding.	
Source: 2012 annual report of the Board funds.	s of Trustees of the Medicare trust	

TABLE 1-4

Sources of Medicare revenue, 2011

	Dollars (in billions)
Total	\$530
General revenue	223
Payroll taxes	196
Premiums	69
Interest from HI trust fund	15
Taxation of Social Security benefits	15
Transfers from states	7
Other	5
Note: HI (Hospital Insurance).	
Source: 2012 annual report of the Boards of Truste	ees of the Medicare trust

funds.

services and ambulatory care as well as some home health care under certain circumstances. Part B is financed through beneficiary premiums and general revenue. Since 2011, Medicare collects a fee from pharmaceutical manufacturers that also funds Part B.

- *Part C is the Medicare Advantage (MA) program,* which contracts with private plans to offer Part A and Part B services. The MA program is funded through beneficiary premiums and transfers from Part A and Part B.
- *Part D is Medicare's Supplementary Medical Insurance benefit for outpatient pharmaceuticals,* which is financed through beneficiary premiums and general revenue.

Nearly all parts of Medicare have some beneficiary cost sharing through deductibles and coinsurance. The Medicare program does not have a catastrophic limit on cost sharing other than in Part D. ■

Long-run Medicare projections

The Trustees project that by 2085, Medicare's share of GDP will increase from 3.7 percent today to 6.7 percent (see text box for a description of 2011 program financing and spending). Under an alternative set of assumptions—

including an override of the SGR cuts, a phase-out of productivity cuts to Medicare providers after 2020, and an override of cuts mandated by the Independent Payment Advisory Board—Medicare's share of GDP would reach 7 percent of GDP in 2040 and 10.3 percent in 2085 (Boards FIGURE



Note: GDP (gross domestic product), HI (Hospital Insurance). These projections are based on the Trustees' intermediate set of assumptions. "Tax on benefits" refers to a portion of income taxes that higher income individuals pay on Social Security benefits that is designated for Medicare. "State transfers" (often called the Part D "clawback") refers to payments called for within the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 from the states to Medicare for assuming primary responsibility for prescription drug spending. "Drug fee" refers to a tax on manufacturers and importers of brand-name prescription drugs, which is credited to the Part B trust fund.

Source: 2012 annual report of the Boards of Trustees of the Medicare trust funds.

of Trustees 2012). Part B spending alone is expected to grow from 1.5 percent of GDP in 2011 to 4.4 percent of GDP in 2080 under these alternative assumptions (Shatto and Clemens 2012).

The Hospital Insurance trust fund currently runs an annual deficit (i.e., currently pays more in benefits than it collects in revenues), and the trust fund assets are projected to be exhausted by 2024. A large share of Medicare's financing is projected to come from general revenues (Figure 1-7). As Medicare becomes more dependent on general revenue, there will be fewer resources available to finance other priorities and greater pressure to reduce spending or increase revenues.

Health care and the federal budget

Because general revenues finance a large share of Medicare, its fiscal sustainability is tightly linked to that of the overall federal budget and vice versa. Between 2013 and 2035, Medicare's share of the nation's GDP will increase from 3.7 percent to 5.4 percent. This high growth rate reflects rising enrollment and increases in per beneficiary spending (Boards of Trustees 2012).

Over the next 10 years, growth in Medicare spending is projected to increase by about 70 percent, split about equally between enrollment (35 percent) and per beneficiary spending (35 percent) (Boards of Trustees TABLE 1-5

Historical and projected annual growth rates for major components of the federal budget

	2002–2011 actual growth rates	2012–2021 projected growth rates
Medicare	9.2%	6.0%
Medicaid	7.2	8.9
Social Security	5.4	5.7
Medicare, Medicaid, and Social Security	5.9	6.4
Other mandatory spending	7.0	-0.2
Defense	8.0	0.6
Nondefense discretionary	5.9	0.0
Net interest	3.2	11.4
Nominal GDP	4.0	4.8
Population growth	0.9	0.9

Note: GDP (gross domestic product). All figures are nominal and based on the Congressional Budget Office's (CBO's) March 2012 baseline, which conforms to the statutory spending caps and sequester provisions in the Budget Control Act of 2011. Growth rates are compound annual growth rates.

Source: CBO March 2012 baseline, Bureau of Economic Analysis.

2012). These projections include reductions in provider payments under the SGR formula; if the SGR fee reductions do not take effect, per beneficiary spending growth will be higher.

The population shift over the next 30 years from workingage individuals to individuals in retirement will reshape government spending and revenues. A larger share of the population will be of retirement age and proportionately fewer people will be of working age, paying the taxes that support Medicare, Social Security, and Medicaid.

Table 1-5 illustrates the trends in federal spending. Spending for Medicare, Medicaid, and Social Security is projected to grow by 6.4 percent on average over the next 10 years. In contrast, the current projections for other parts of the budget—defense, nondefense discretionary spending, and other mandatory spending—are projected to grow between 0 percent and 1 percent per year under the mandatory caps and sequester established in the Budget Control Act of 2011.

Taking population growth into account, no part of the budget is projected to grow in nominal terms over the next 10 years—except for Medicare, Medicaid, Social Security, and net interest payments. These four parts of the budget, together with other health spending, are projected to total over 16 percent of GDP within 10 years. When defense spending is added, the total nears 19 percent of GDP. In contrast, total government revenues over the past 40 years have averaged around 18.5 percent of GDP.

Federal debt and deficits

The federal government was projected to run a deficit of \$1.2 trillion in 2012, and debt held by the public is now projected to be 70 percent of GDP by the end of 2012 (Congressional Budget Office 2012). The debt burden has grown dramatically over the last few years, from 40 percent of GDP in 2008.

The role of growth in health care spending in the federal budget is also significant. Because Medicare and Medicaid, along with Social Security, are the only parts of the budget projected to grow in real terms over the coming years, the budget projections are extremely sensitive to the rate of growth in health care spending. For example, if the current-law projections of Medicare and Medicaid per beneficiary spending remain at or around the GDP growth rate through 2085, as projections from the Office of Management and Budget and the Congressional Budget Office assume, the federal debt and deficit will remain relatively steady. If, however, the rate of growth in health care spending is higher—for example, at GDP



plus 1 percent, the federal fiscal picture looks much worse. This increase would happen if, for example, use of health care is much higher than expected, the Congress makes legislative changes to increase provider payments, or costcontrol mechanisms such as the SGR formula do not take effect (Figure 1-8).

Medicaid dominates many states' fiscal outlooks

While Medicaid is their largest source of federal revenues, states spent about 17 percent of their own general revenues on Medicaid in fiscal year 2011—the second largest portion of states' general revenues (National Governors Association and National Association of State Budget Officers 2012, Smith et al. 2011). In 2011, Medicaid covered 68 million people, and CHIP covered an additional 7 million; together they accounted for over \$400 billion in state and federal spending (Medicaid and CHIP Payment Access Commission 2012). Since the economic downturn of 2008, Medicaid enrollment has expanded considerably. The number of individuals covered will increase again in 2014 when participating states implement the Medicaid expansion provision under the Patient Protection and Affordable Care Act of 2010 (National Governors Association and National Association of State Budget Officers 2012). Likewise, state resources will be increasingly diverted to cover the costs of the Medicaid program. In June 2011, enhanced federal matching rates for Medicaid from the American Recovery and Reinvestment Act of 2009 expired (Smith et al. 2011). Further, while the expansion in Medicaid enrollment will be paid mostly by the federal government, those federal subsidies will diminish beginning in 2019 (Vestal 2012).



Source: Census Bureau population projections.

Changes in the Medicare-eligible population

The Medicare population is projected to grow by a third within the next 10 years as the baby-boom generation ages into Medicare eligibility. With this expansion, the new Medicare population will differ in key ways from the current one. First, the population will be younger and more racially and ethnically diverse. Second, the covered individuals may have a different burden of chronic conditions or diseases. Finally, the newly eligible will likely have had a different experience of insurance coverage through employers because of market changes in the past few years.

Age and demographic changes

The average age of Medicare beneficiaries will slightly decline as the baby-boom generation ages into Medicare coverage. This trend will continue through the next decade when nearly a third of all Medicare beneficiaries will be between the ages of 65 and 69. However, around the middle of the next decade the average age of Medicare beneficiaries will rapidly increase as a function of increasing longevity in combination with the baby-boom retirement. For example, by 2050 it is projected that there will be nearly 3 million people over the age of 95 (Figure 1-9).

Over the longer term, the Medicare population will become racially and ethnically more diverse, with increasing numbers of Hispanic, African American, and Asian American beneficiaries. In particular, the proportion of Medicare beneficiaries identifying as Hispanic or Latino is projected to grow nearly 10-fold over the next 40 years (Figure 1-10, p. 18).

Disease burden

Compared with the current Medicare population, the baby-boom generation will bring a different set of health

Demographics of the Medicare population will change over time



challenges to Medicare. The prevalence of obesity has rapidly increased in the last two decades, and this trend is expected to continue (Robert Wood Johnson Foundation 2012). New Medicare beneficiaries will more likely be overweight or obese and will have been overweight or obese for longer than current beneficiaries, beginning in their thirties and forties. The prevalence of obesity could heighten the risk of chronic diseases (such as heart disease, stroke, type 2 diabetes, and certain cancers), difficulties with mobility and activities of daily living, and disabilities (Centers for Disease Control and Prevention 2012b, Leveille et al. 2009). Between 2000 and 2030, the number of Americans with chronic conditions is expected to increase by 37 percent (Anderson 2010).

Chronic conditions, both related and unrelated to obesity, are more prevalent among minority populations, an additional concern for Medicare considering the changing demographics of the beneficiary population and the persistent disparities in quality of care. Likewise, obesity is especially prevalent among minority populations, including almost half of African Americans and 40 percent of Hispanics (Centers for Disease Control and Prevention 2012b, Flegal et al. 2012).

Insurance coverage

Changes in the private insurance market may have an effect on new Medicare beneficiaries' familiarity with different types of products and their expectations about costs. For example, over 19 percent of the currently employed population is in a high-deductible plan, which has been widely available only since 2005 (Kaiser Family Foundation and Health Research and Educational Trust 2012). In addition, premiums of employer-sponsored coverage have grown rapidly—premiums for family coverage have grown by 30 percent since 2007 and have nearly doubled since 2002 (Kaiser Family Foundation and Health Research and Education and Health Research and Educat

Effects of growth in health care spending on individuals and families

The persistent and aggressive growth of health care spending has a major effect not just on payers and public programs but on individuals and households. Growth of spending in health care has exceeded growth in the economy since the 1960s. Income gains have been negated over the last 10 years because of growth in health care spending and the economic recession. Such high costs have not only wiped out income growth for people of all ages but also pose financial challenges and provoke anxiety for individuals and families as resources are diverted to health spending and away from investments or retirement savings.

Income growth offset by rising health care spending

Growth in health care spending has the most direct impact on individuals and beneficiaries, those who are exposed to rising spending in both premium increases and at the point of service. Some evidence points to health care spending (including rising premiums, out-of-pocket costs, and taxes for health care) as a main roadblock to growth in family income (Auerbach and Kellerman 2011). For those individuals with health insurance, the increase in premiums has far outweighed increases in average wages. In addition, between 2010 and 2011, median household income fell 1.5 percent in nominal terms to \$50,054 (DeNavas-Walt et al. 2012).

Annual premium growth for private health insurance has ranged from 5 percent to 15 percent over the last 10 years (Kaiser Family Foundation and Health Research and Educational Trust 2012). And while there is some variation across states, the affordability of health insurance has declined—in 2008, employer premiums on average accounted for more than 18 percent of family median income in 18 states, up from just 3 states meeting that threshold in 2003 (Schoen et al. 2009).

About a quarter of Americans report that they have had difficulty paying medical bills in the past year, and roughly 60 percent have forgone or delayed seeking medical care to avoid the hefty costs (including 77 percent of those who report being in poor health) (Kaiser Family Foundation 2012).

Medicare beneficiaries are not exempt from the financial challenges of ever-growing out-of-pocket costs (Figure

1-11, p. 20). In 2010, premiums and cost sharing for Part B and Part D consumed 27 percent of the average Social Security benefit. By 2030, the Medicare Trustees estimate that out-of-pocket costs will consume 36 percent of Social Security benefits (Potetz et al. 2011). Growth in total cost sharing for Medicare beneficiaries is projected to continue to outpace the growth in Social Security benefits, which constitutes about 40 percent of income for the median Medicare beneficiaries in the bottom income quintile (Kaiser Family Foundation 2010).

Despite these challenges, Medicare beneficiaries experience greater stability from guaranteed insurance benefits than adults under the age of 65. Adults age 65 or older are less likely to report trouble paying for health care (17 percent). Relative to privately insured adults under 65, fewer seniors report skipping care due to cost concerns (43 percent compared with 60 percent) (Kaiser Family Foundation 2012). In the survey conducted annually by the Commission on access to physician services, we find that most beneficiaries have reliable access to primary and specialty care, though a small share of the Medicare population (about 2 percent) report trouble finding a new primary care physician or a specialist (see Chapter 4).

Lasting effects of the economic downturn

In addition to rising health care spending, the recent economic downturn has depreciated the value of assets and caused more financial insecurity for Medicare beneficiaries and for adults approaching Medicare eligibility (ages 45 to 64). Adults in this age group experienced a notable increase in unemployment during the recent recession, similar to those in most other age groups (Bureau of Labor Statistics 2012). A quarter of respondents ages 50 to 59 in a 2010 RAND survey lost more than 35 percent of their retirement savings, and 40 percent had been affected by unemployment, declining home values, or foreclosure (Hurd and Rohwedder 2010). As a result, adults approaching Medicare eligibility could have smaller assets and income than their predecessors and thus are more likely to participate in the labor force after they turn 65. The Bureau of Labor Statistics has reported that the share of adults over age 65 in the labor force has steadily increased since the mid-1990s (Bureau of Labor Statistics 2008a). This trend is projected to continue since the number of workers between the ages of 65 and 74 is predicted to increase by 83 percent between 2006 and 2016 (Bureau of Labor Statistics 2008b), potentially affecting the number of beneficiaries with employersponsored coverage.

FIGURE



Variation in health care spending suggests inefficiencies

Evidence suggests that some spending on health care in the United States does not improve the population's health outcomes. Researchers have documented notable geographic variation in the use of and spending on health care that cannot be fully explained by differences in disease burden or severity or by the supply of providers (Fisher et al. 2003a, Fisher et al. 2003b, Medicare Payment Advisory Commission 2011b, Zhang et al. 2010, Zuckerman et al. 2010). Likewise, the level of health care spending in the United States consistently exceeds that of comparable countries (Organisation for Economic Co-operation and Development 2012). Evidence also points to a decline in the marginal value of the health care dollar, particularly for the elderly (Cutler et al. 2006), suggesting that some health spending does not equate to better health. Finally, though quality of care is broadly improving, disparities in health care delivery remain, and racial and ethnic minorities continue to experience worse health outcomes. These variations suggest opportunities for systemic reforms to encourage spending that improves health outcomes and that achieves higher quality and higher value care.

Wide variation in spending on and use of care

Researchers have documented wide variations in the use of health care services and the spending on such services by geographic areas. The observed variation is so wide that it cannot be fully explained by differences in disease burden or severity or by the supply of care and caregivers (Fisher et al. 2003a, Fisher et al. 2003b, Medicare Payment Advisory Commission 2011b, Zuckerman et al. 2010). In 2011, the Commission reported significant variation in the use of services among comparable Medicare patient populations. After accounting for Medicare's explicit price adjustments and special payments, variation in Medicare service use between the 90th percentile and 10th percentile of measurement area was 44 percent. After adjusting for health status, a 30 percent gap in service use remained between the 90th percentile and 10th percentile of areas. Variation in service use for post-acute care services (such as home health care and durable medical equipment) was particularly high, and those services disproportionately contributed to overall variation (Medicare Payment Advisory Commission 2011b). Similarly, use of Medicare Part D for drugs was 20 percent greater for beneficiaries in higher spending areas (the 90th percentile) compared with lower spending areas (the 10th percentile).

While beneficiaries in high-spending areas (in the top 20 percent) received as much as 60 percent more care than their counterparts in low-spending areas, they were not necessarily more satisfied with their care, nor did they realize better health outcomes (Baicker and Chandra 2004, Fisher et al. 2003a, Fisher et al. 2003b). This level of variance in spending and service use across the country with no added benefit to patient experience or quality of care prompts questions about the efficiency of health care spending, as well as significant concerns about fraud and abuse.

In addition to regional variation, differences can be found across member countries in the Organisation for Economic Co-operation and Development (OECD). As measured by per capita spending, share of GDP spent on health care, or spending adjusted for purchasing power, U.S. spending levels are well above the average of OECD countries (Organisation for Economic Co-operation and Development 2012). Evidence indicates that while use of health services tends to be similar for developed economies, the United States' higher spending levels are attributable to the nation's significantly higher prices for health services and products (Anderson et al. 2003, Laugesen and Glied 2011, White 2007). At the same time, other OECD countries appear to obtain similar or better outcomes (Anderson and Squires 2010, Docteur and Berenson 2009).

Value of health care

Considering the wide variation in service use and spending that does not correspond to significant differences in health outcomes, health system analysts have questioned the comparative value of health services. First, researchers have noted a decline in the value of health spending over time. For instance, Cutler and colleagues showed that spending from 1960 to 2000 provided reasonable value (in terms of macro-level indicators like mortality); however, the value of health care spending seems to have decreased over time, particularly among the elderly (Cutler et al. 2006).

Second, health dollars are misallocated when they are spent for inappropriate or inappropriately applied services, including improper services, services delivered at an inappropriate time, services that are not proven for a given purpose, interventions that are not proven for a specific contingent of patients, and interventions disseminated beyond a population for whom they are effective or for whom the risks of screening or treatment outweigh the benefits (Baicker and Chandra 2011, Garber et al. 2007, Redberg 2011, Welch 2012). Spending on such services does not improve health and indeed may expose patients to unnecessary medical and financial risk. Likewise, relative to a less expensive and proven intervention, such services may provide a lower value to the patient and to the public or private insurer paying the increasingly expensive bills.

Disparities across populations persist

The Commission remains concerned about the notable differences in access to quality care for different demographic groups. First, in its 2012 annual physician access survey, the Commission noted that minorities more frequently report access problems (see Chapter 4). Second, beneficiaries in racial and ethnic minorities or with low income are more likely to seek care from providers of poorer quality (Bach et al. 2004, Jha et al. 2007). Third, though quality of care is broadly improving across racial and ethnic groups, age groups, and income groups, minorities continue to experience worse health outcomes compared with their nonminority counterparts (Agency for Healthcare Research and Quality 2012).

This discrepancy is also of concern because racial and ethnic minority beneficiaries have disproportionately high rates of chronic disease with multiple comorbid conditions and so are disproportionately likely to incur high Medicare spending (Centers for Medicare & Medicaid Services 2012). For example, African Americans and Hispanics are overrepresented among those beneficiaries in the top decile of Medicare spending (Medicare Payment Advisory Commission 2012a). For individuals with kidney disease, which is a fast-growing share of the Medicare population, the rate of hospital admissions for shortterm complications is significantly higher for African Americans than for other racial and ethnic groups, and all non-White racial groups have higher rates of end-stage renal disease due to diabetes than Whites alone (Agency for Healthcare Research and Quality 2011).

Differences in medical literacy (the individual's ability to understand medical instructions and communicate with doctors and other staff) further compound disparities in the prevalence of chronic disease. The proportion of individuals having below-basic medical literacy is significantly higher for Hispanics (over 33 percent), African Americans (25 percent), and Native Americans/ Alaskan Natives (25 percent) than for Whites (9 percent) and Asian/Pacific Islander groups (13 percent) (Kutner et al. 2006). Noting that minorities tend to seek care from poorer quality providers, the Commission recommended that, when allocating federal resources dedicated to quality improvement organizations, the Secretary should prioritize supporting low-performing providers. Such a policy could lead to improved outcomes for racial and ethnic minority beneficiaries (Medicare Payment Advisory Commission 2011a).

Conclusion

The level and growth of health spending as a share of the economy mean that an ever-increasing amount of economic activity and gain will be dedicated to purchasing health care. Medicare, as the single largest

payer in the health care sector, will expand, and its eligible population will grow more diverse with the aging of the baby-boom generation—with major implications for program spending and the delivery of care. Significant variation in use and spending, which does not correspond to better quality, raises flags that higher health care use and spending are not improving overall health and put beneficiaries at risk (both medically and financially).

Because of its size and because other payers use its payment methods, Medicare has an important influence on the nation's health care delivery system and its evolution. Reciprocally, trends in the privately insured health care market can influence whether Medicare's payment reforms are ultimately successful. This interaction between public and private payers means that the alignment of incentives across payers is an important consideration for delivery system reforms. All payers will face continued pressure to decrease growth in health care spending.

Despite the relatively lower growth rates experienced by and projected for the Medicare program under current law, the program will continue to absorb increasing amounts of federal revenues. Other public investments like education and infrastructure will be crowded out by high and growing levels of health care spending. State and federal budgets face continued fiscal pressure, effects intensified by the trends in health care spending. In light of strained budgets and the downward trend in income, the Medicare program must be vigilant in pursuing reforms that decrease spending and improve quality. ■

Endnotes

- 1 Personal health care is a category used in the national health expenditure data that excludes investment and public health activities, for example.
- 2 These figures are based on calculations of the total benefit payments and total enrollment from the Trustees Reports 2009–2012. Other ways to calculate per beneficiary or per enrollee spending use variations such as excluding Medicare Advantage beneficiaries and spending, measuring spending as a share of Part A beneficiaries, or adjusting for age and gender. The figures reported in this chapter make no such adjustments.
- 3 Caveats to this analysis are that it does not measure severity and could be subject to coding bias (if more clinicians have an incentive to code a diagnosis, it will appear that the prevalence of disease increased even though the underlying prevalence has not changed). The definitions of chronic disease prevalence follow CMS's Chronic Condition Data Warehouse definitions: http://www.ccwdata.org/index.htm.
- 4 The growth rate of beneficiary enrollment in 2012 shown in Figure 1-6 is due to the spike in birth rates in 1947.

References

Agency for Healthcare Research and Quality, Department of Health and Human Services. 2011. *National healthcare disparities report 2011*. Rockville, MD: AHRQ.

Anderson, G. 2010. *Chronic care: Making the case for ongoing care.* Princeton, NJ: Robert Wood Johnson Foundation.

Anderson, G. F., P. S. Hussey, B. K. Frogner, et al. 2005. Health spending in the United States and the rest of the industrialized world. *Health Affairs* 24, no. 4 (July–August): 903–914.

Anderson, G. F., U. E. Reinhardt, P. S. Hussey, et al. 2003. It's the prices, stupid: Why the United States is so different from other countries. *Health Affairs* 22, no. 3 (May–June): 89–105.

Anderson, G. F., and D. A. Squires. 2010. *Measuring the U.S. health care system: A cross-national comparison*. New York: The Commonwealth Fund.

Auerbach, D. I., and A. L. Kellermann. 2011. A decade of health care cost growth has wiped out real income gains for an average US family. *Health Affairs* 30, no. 9 (September): 1630–1636.

Bach, P. B., H. H. Pham, D. Schrag, et al. 2004. Primary care physicians who treat blacks and whites. *New England Journal of Medicine* 351, no 6 (August 5): 575–584.

Baicker, K., and A. Chandra. 2011. *Aspirin, angioplasty, and proton beam therapy: The economics of smarter health care spending.* Cambridge, MA: National Bureau of Economic Research.

Baicker, K., and A. Chandra. 2006. The labor market effects of rising health insurance premiums. *Journal of Labor Economics* 24, no. 3 (July): 609–634.

Baicker, K., and A. Chandra. 2004. Medicare spending, the physician workforce, and beneficiaries' quality of care. *Health Affairs Web Exclusive*.

Berenson, R., P. B. Ginsburg, J. B. Christianson, et al. 2012. The growing power of some providers to win steep payment from insurers suggests policy remedies may be needed. *Health Affairs* 31, no. 5 (May): 973–981.

Berenson, R., P. B. Ginsburg, and N. Kemper. 2010. Unchecked provider clout in California foreshadows challenges to health reform. *Health Affairs* 29, no. 4 (April): 699–705.

Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2012. 2012 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Insurance Trust Funds. Washington, DC: Boards of Trustees.

Bureau of Labor Statistics. 2008a. *More seniors working full time*. Washington, DC: Bureau of Labor Statistics. August 6.

Bureau of Labor Statistics. 2008b. *Projected growth in labor force participation of seniors, 2006–2016.* Washington, DC: Bureau of Labor Statistics. July 31.

Bureau of Labor Statistics. 2012. *Labor force statistics from the current population survey*. Washington, DC: Bureau of Labor Statistics. October.

Centers for Disease Control and Prevention. 2012a. *Multiple chronic conditions among adults aged 45 and over: Trends over the past 10 years*. Atlanta, GA: CDC.

Centers for Disease Control and Prevention. 2012b. *Prevalence of obesity in the United States, 2010–2011*. Atlanta, GA: CDC.

Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2012. *Chronic conditions among Medicare beneficiaries. Chartbook: 2012 edition.* Baltimore, MD: CMS.

Chernew, M. 2010. Growth in health care spending: Can we avoid fiscal Armageddon? *Inquiry* 47, no. 4 (Winter): 285–295.

Coakley, Martha. 2011. *Examination of health care cost trends and cost drivers*. Boston: Office of the Attorney General.

Congressional Budget Office. 2012. *The 2012 long-term budget outlook*. Washington, DC: CBO.

Cutler, D. M. 1995. *Technology, health costs, and the NIH*. National Institute of Health Economics Roundtable on Biomedical Research. Cambridge, MA: Harvard University and National Bureau of Economic Research.

Cutler, D. M., and M. McClellan. 2001. Is technological change in medicine worth it? *Health Affairs* 20, no. 5 (September– October): 11–29.

Cutler, D. M., A. B. Rosen, and S. Vijan. 2006. The value of medical spending in the United States, 1960–2000. *New England Journal of Medicine* 355, no. 9 (August 31): 920–927.

DeNavas-Walt, C., B. D. Proctor, and J. C. Smith. 2012. *Income, poverty, and health insurance coverage in the United States:* 2012. Washington, DC: Census Bureau.

Docteur, E., and R. Berenson. 2009. *How does U.S. health care compare internationally?* Washington, DC: Urban Institute.

Finkelstein, A. 2007. The aggregate effects of health insurance: Evidence from the introduction of Medicare. *Quarterly Journal of Economics* 122, no. 1: 1–37.

Finkelstein, A., S. Taubman, B. Wright, et al. 2010. *The Oregon health insurance experiment: Evidence from the first year.* Cambridge, MA: National Bureau of Economic Research.

Fisher, E. S., D. E. Wennberg, T. A. Stukel, et al. 2003a. The implications of regional variations in Medicare spending. Part 1: The content, quality, and accessibility of care. *Annals of Internal Medicine* 138, no. 4 (February 18): 273–287.

Fisher, E. S., D. E. Wennberg, T. A. Stukel, et al. 2003b. The implications of regional variations in Medicare spending. Part 2: Health outcomes and satisfaction with care. *Annals of Internal Medicine* 138, no. 4 (February 18): 288–298.

Flegal, K. F., M. D. Carroll, B. K. Kit, et al. 2012. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999–2010. *Journal of the American Medical Association* 307, no. 5 (February 1): 491–497.

Garber, A., D. P. Goldman, and A. B. Jena. 2007. The promise of health care cost containment. *Health Affairs* 26, no. 6 (November–December): 1545–1547.

Ginsburg, P. B. 2008. High and rising health care costs: Demystifying U.S. health care spending. Princeton, NJ: Robert Wood Johnson Foundation, The Synthesis Project.

Goldman, D. P., N. Sood, and A. Leibowitz. 2005. Wage and benefit changes in response to rising health insurance. *Forum for Health Economics & Policy: Frontiers in Health Policy Research* 8, article 3.

Hartman, M., A.B. Martin, J. Benson, et al. 2013. National health spending in 2011: Overall growth remains low, but some payers and services show signs of acceleration. *Health Affairs* 32, no. 1 (January): 87–99.

Health Care Cost Institute. 2012a. *Health care cost and utilization report: 2010.* Washington, DC: Health Care Cost Institute. May.

Health Care Cost Institute 2012b. *Health care cost and utilization report: 2011*. Washington, DC: Health Care Cost Institute. September.

Hurd, M. D., and S. Rohwedder. 2010. *Effects of the financial crisis and Great Recession on American households*. National Bureau of Economic Research, no. 16407. Cambridge, MA: NBER.

Jha, A. K., E. J. Orav, Z. Li, et al. 2007. Concentration and quality of hospitals that care for elderly black patients. *Archives of Internal Medicine* 167, no. 11 (June 11): 1177–1182.

Kaiser Family Foundation. 2012. *Health security watch*. Washington DC: KFF.

Kaiser Family Foundation. 2010. *Medicare chartbook*. 4th ed. Washington, DC: KFF.

Kaiser Family Foundation and Health Research and Educational Trust. 2012. *Employer health benefits: 2012 annual survey*. Menlo Park, CA: KFF and HRET.

Keehan, S. P., G. A. Cuckler, A. M. Sisko, et al. 2012. National health expenditure projections: Modest annual growth until coverage expands and economic growth accelerates. *Health Affairs* 31, no. 7 (July 31): 1600–1612.

Kutner, M., E. Greenberg, Y. Jin, et al. 2006. *The health literacy* of America's adults: Results from the 2003 National Assessment of Adult Literacy. NCES 2006–483. Washington, DC: Department of Education, National Center for Education Statistics.

Laugesen, M. and S. A. Glied. 2011. Higher fees paid to US physicians drive higher spending for physician service compared to other countries. *Health Affairs* 30, no.9 (September): 1647–1656.

Leveille, S. G., C. C. Wee, and L. I. Iezzoni. 2009. *Are baby boomers aging better than their predecessors? Trends in overweight, arthritis, and mobility difficulty.* Cambridge, MA: National Bureau of Economic Research.

Lowrey, A. 2012. In hopeful sign, health spending is flattening out. *The New York Times*. April 28.

Martin, A. B., D. Lassman, B. Washington, et al. 2012. Growth in US health spending remained slow in 2010: Health share of gross domestic product was unchanged from 2009. *Health Affairs* 31, no. 1 (January): 208–219.

McKinsey Global Institute. 2008. *Accounting for the cost of U.S. health care: A new look at why Americans spend more.* New York: McKinsey and Company.

Medicaid and Children's Health Insurance Program Payment and Access Commission. 2012. *Medicaid and CHIP program statistics: March 2012 MACStats*. Washington, DC: MACPAC.

Medicare Payment Advisory Commission. 2012a. *Report to the Congress: Medicare and the health care delivery system.* Washington, DC: MedPAC.

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

Medicare Payment Advisory Commission. 2011a. *Report to the Congress: Medicare and the health care delivery system.* Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2011b. *Report to the Congress: Regional variation in Medicare service use.* Washington, DC: MedPAC.

Moriya, A. S., W. B. Vogt, and M. Gaynor. 2010. Hospital prices and market structure in the hospital and insurance industries. *Health Economics, Policy and Law* 5, no. 4 (October): 459–479.

National Governors Association and National Association of State Budget Officers. 2012. *The fiscal survey of states*. Washington, DC: NGA and NASBO.

Newhouse, J. P., and the Insurance Experiment Group. 1993. *Free for all? Lessons from the RAND Health Experiment*. Cambridge, MA: Harvard University Press.

Newhouse, J. P. 1992. Medical care costs: How much welfare loss? *Journal of Economic Perspectives* 6, no. 3 (Summer): 3–21.

Organisation for Economic Co-operation and Development. 2012. *Health data 2012.* Paris: OECD.

Peden, E. A., and M. S. Freeland. 1995. A historical analysis of medical spending growth, 1960–1993. *Health Affairs* 14, no. 2: 235–247.

Potetz, L., J. Cubanski, and T. Neuman. 2011. *Medicare spending and financing: A primer*. Menlo Park, CA: Kaiser Family Foundation.

Redberg, R. 2011. Squandering Medicare's money. *The New York Times*, May 25.

Robert Wood Johnson Foundation. 2012. *F as in fat: How obesity threatens America's future*. Washington, DC. Robert Wood Johnson Foundation.

Roehrig, C., A. Turner, P. Hughes-Cromwick, et al. 2012. When the cost curve bent—Pre-recession moderation in health care spending. *New England Journal of Medicine* 367, no. 7 (August 16): 590–593. Schoen, C., J. L. Nicholson and S. D. Rustgi. 2009. *Paying the price: How health insurance premiums are eating up middle-class incomes.* New York: The Commonwealth Fund.

Shatto, J. D., and M. K. Clemens. 2012. Projected Medicare expenditures under illustrative scenarios with alternative payment updates to Medicare providers. Memorandum from the Centers for Medicare & Medicaid Services, Office of the Actuary. May 18.

Smith, S. D., J. P. Newhouse, and M. S. Freeland. 2009. Income, insurance, and technology: Why does health spending outpace economic growth? *Health Affairs* 28, no. 5 (September–October): 1276–1284.

Smith, V. K., K. Gifford, E. Ellis, et al. 2011. Moving ahead amid fiscal challenges: A look at Medicaid spending, coverage and policy trends results from a 50-State Medicaid budget survey for state fiscal years 2011 and 2012. Washington, DC: Health Management Associates and Kaiser Commission on Medicaid and the Uninsured (Kaiser Family Foundation).

Vestal, C. 2012. *For some states, Medicaid expansion may be a tough fiscal call.* Washington, DC: Pew Center on the States.

Vogt, W., and R. Town. 2006. *How has hospital consolidation affected the price and quality of health care?* Issue brief no. 9. Princeton, NJ: Robert Wood Johnson Foundation.

Welch, Gil. 2012. Testing what we think we know. *The New York Times*, August 19.

White, C. 2007. Health care spending growth: How different is the United States from the rest of the OECD? *Health Affairs* 26, no. 1 (January–February): 154–161.

Zhang, Y., K. Baicker, and J. P. Newhouse. 2010. Geographic variation in Medicare drug spending. *New England Journal of Medicine* 363, no. 5 (July 29): 405–409.

Zuckerman, S., T. Waidmann, R. Berenson, et al. 2010. Clarifying sources of geographic differences in Medicare spending. *New England Journal of Medicine* 363, no. 1 (July 1): 54–62.