

CHAPTER

1

**Context for Medicare
payment policy**

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Chapter summary

Between 2009 and 2035, according to projections under current law, Medicare's share of total economic output is projected to rise from 3.5 percent to 5.5 percent (Boards of Trustees 2010). Further complicating Medicare's long-term outlook is a large non-Medicare federal fiscal burden: Debt held by the public is expected to near 70 percent of gross domestic product (GDP) within the next decade, a level not seen since World War II (Congressional Budget Office 2010a).

Medicare's cost growth does not occur in a vacuum—it is linked to other forces that drive growth in health care spending at rates well in excess of GDP. Health care spending has risen faster than GDP for over four decades (Congressional Budget Office 2010b). The reasons for this growth in health care spending are well established: advancements in technology, which include changes in the practice of medicine to help providers diagnose or treat illness and the diffusion of treatments to a wider population; changes in the makeup of insurance; and changes in household income and demographics.

Estimates of the magnitude of the various factors differ, but most analysts attribute the largest role in growth of health care spending to developments in technology. Health insurance is believed to affect health care spending at the individual level by increasing household consumption and at the macroeconomic level by helping to create a market for new technologies

In this chapter

- National health care spending and spending growth
- Reasons for growth in health care spending
- Medicare's financing challenge
- Medicare after PPACA

that is relatively insensitive to price. And although the aging of the population has not played a significant role in per capita health care spending growth to date, it will contribute to a significant increase in total federal spending on Medicare and Medicaid over the next few decades.

Medicare's spending growth has resulted in a significant share of federal tax revenues going to the program—despite dedicated payroll tax revenues, premiums, and cost sharing, Medicare also consumes 18 percent of all income tax revenue (Boards of Trustees 2010).

In their 2010 report, the Boards of Trustees project that growth in Medicare spending will be slower for the coming decade than the previous decade's growth rate. From 2000 to 2009, annual growth in total Medicare spending averaged 9.7 percent. In contrast, the Trustees estimate that total Medicare spending will grow by 6.0 percent annually from 2010 through 2019, due in part to changes made by the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010 (PPACA). The CMS Office of the Actuary estimates that the Medicare provisions in PPACA will reduce spending by \$575 billion over 10 years, resulting in Medicare spending that is 9 percent lower by 2019, compared with prior law (Foster 2010, Sisko et al. 2010).

This chapter establishes the context for the Medicare payment update recommendations in the rest of this volume. First, the chapter describes the makeup of national health care spending and historic and future trends in spending growth. The next section discusses the reasons why health care costs grow faster than the rest of the economy. The third section describes Medicare's financing challenges and the effect of PPACA. The fourth section concludes and reiterates the need to coordinate reforms across payers. ■

Introduction

Medicare is the largest single payer in the \$2.5 trillion health care sector, accounting for 20 percent of spending in 2009 (Centers for Medicare & Medicaid Services 2011). Medicare substantially reduces the health care cost burden for 46.3 million aged and disabled beneficiaries and provides nearly universal coverage for these populations; in 2009, 1.8 percent of people over age 65 were uninsured, compared with 18.8 percent of individuals under age 65 (Boards of Trustees 2010, DeNavas-Walt et al. 2010).

Medicare per capita spending growth has exceeded growth in gross domestic product (GDP) by 2.5 percentage points on average from 1975 to 2008 (Congressional Budget Office 2010b). This growth has resulted in a larger share of federal revenues going to Medicare and a larger burden on beneficiaries as a result of Medicare's cost-sharing provisions (Boards of Trustees 2010, Congressional Budget Office 2010b). The larger health care sector has also grown at rates well in excess of GDP, hampering growth in wages and creating pressure on all payers—federal, state, and private.

The Patient Protection and Affordable Care Act of 2010 (PPACA) is projected to make significant reductions in Medicare spending as compared with prior law, totaling \$575 billion over 10 years and slowing the average annual rate of growth for total Medicare spending over 2010–2019 from 6.8 percent under prior law to 6.0 percent (Boards of Trustees 2009, Boards of Trustees 2010, Foster 2010).¹ However, Medicare shortfalls remain over the longer term: According to projections under current law, the solvency of the Hospital Insurance trust fund was extended through 2029 but would be unable to pay full obligations after that date, and Medicare's share of GDP is projected to nearly double over the next 75 years.

National health care spending and spending growth

Medicare is one part of a health sector linked by related payment systems, providers, insurers, and manufacturers covering both Medicare and non-Medicare patients.

Health care sector constitutes significant share of the economy

The growth in health care spending exceeding GDP over many years has resulted in a health care sector that

makes up a significant share of the overall economy, employing 14.3 million individuals and comprising more than 595,000 separate establishments: doctors' offices, hospitals, clinical laboratories, nursing homes, and home health providers (Bureau of Labor Statistics 2009). Medicare-participating providers included 6,100 inpatient hospitals with 930,000 beds, 15,000 long-term care facilities, and more than 10,000 home health agencies (Centers for Medicare & Medicaid Services 2010). Total Medicare-participating physicians numbered over 616,000 in 2010, with the largest share specializing in internal medicine (17 percent) or family practice (13 percent) (Centers for Medicare & Medicaid Services 2010).

Sources of health care spending

Total national health spending was \$2.5 trillion in 2009, which corresponds to 17.6 percent of GDP (Figure 1-1, p. 6). Of this total, 32 percent of the spending is from private health insurance, 20 percent from Medicare, and 15 percent from Medicaid. Annual spending growth has slowed since the economic downturn, resulting in growth of 4.0 percent in 2009, the lowest yearly growth rate since the measurement of national health expenditures started (Centers for Medicare & Medicaid Services 2011). Even this lower level of growth in health care spending exceeded inflation growth, which was 2.7 percent in 2009 (Bureau of Labor Statistics 2011).²

Components of health care spending

In 2009, the largest share of national health expenditures went to hospitals (31 percent), followed by physicians and clinical services (20 percent), and prescription drugs (10 percent). While overall national health spending grew by 4.0 percent, certain sectors grew faster—home health care grew by 10 percent and spending on prescription drugs grew by 5.3 percent (Centers for Medicare & Medicaid Services 2011).

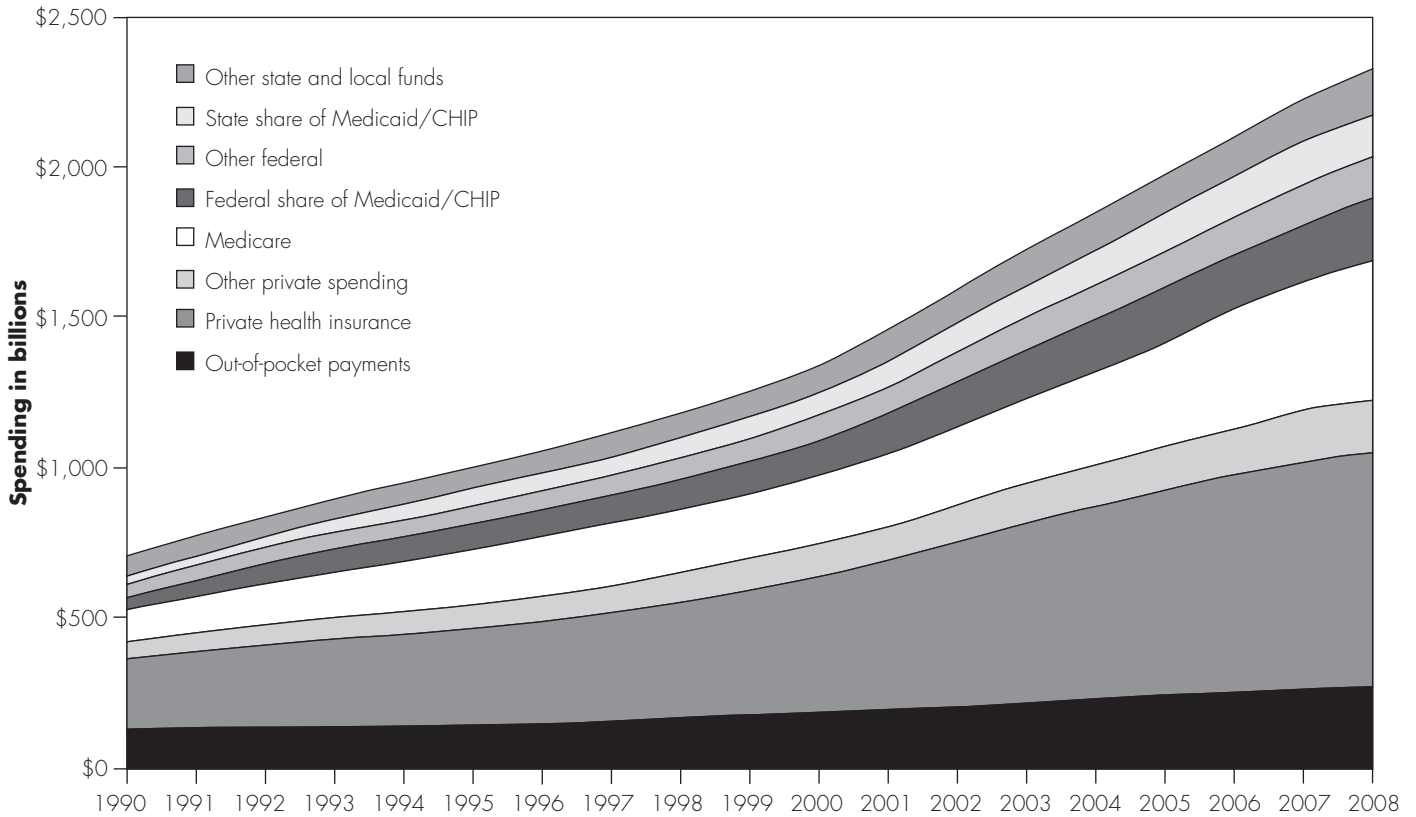
The share of spending on health services and supplies by category differs by payer. For private health insurance, the share of spending on hospitals (33 percent) is similar to the share spent on physicians (30 percent). For Medicare, spending on hospitals accounts for a much larger share of spending on health services and supplies (44 percent), while spending on physicians accounts for 22 percent (Centers for Medicare & Medicaid Services 2011).

Health care spending has grown faster than the economy

Growth in health care spending in excess of growth in GDP is not a recent phenomenon—public and private

FIGURE 1-1

National health spending by payer



Note: CHIP (Children’s Health Insurance Program).

Source: CMS, National Health Expenditures.

payers have experienced growth in health spending in excess of growth in GDP for over 35 years.

High growth in spending for private and public payers

Historically, in some periods, growth in Medicare per capita spending has exceeded growth in private per capita spending, while in others, the opposite is true (Figure 1-2). There are four possible reasons for these differences: (1) Medicare and private insurance cover different benefits; (2) utilization of services is different; (3) the number of beneficiaries in Medicare, along with their risk profiles, has changed; and (4) the payment methods for Medicare have changed and differ from payment methods in the private sector. Finally, comparisons of public and private spending are sensitive to the time frame measured and adjusting for the differences in the characteristics of public

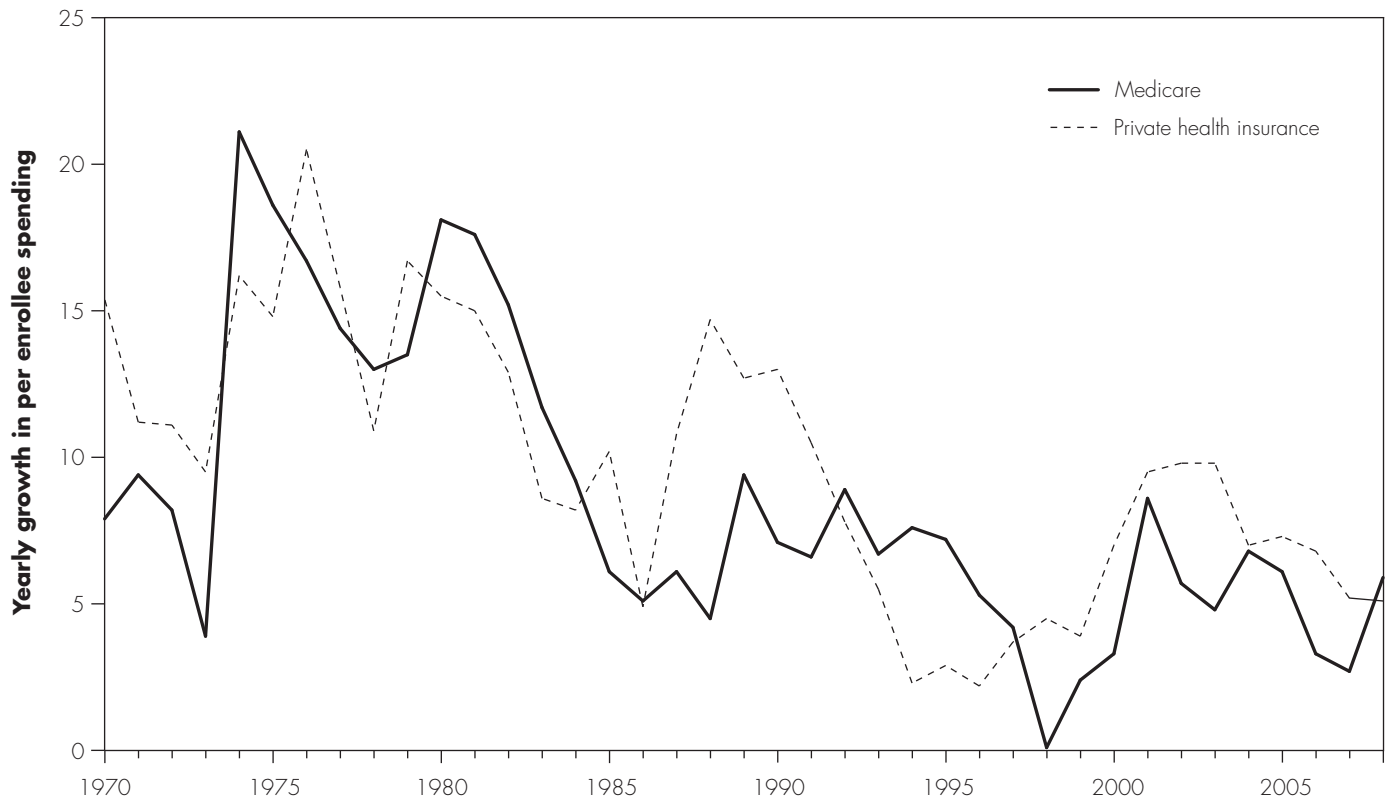
and private insurance such as benefit design, payment methods, and the patient population can be challenging.

Rise in health care spending as a share of GDP is projected for the near and longer term

Health spending is estimated to grow 6.3 percent between 2009 and 2019, rising from 17.3 percent of GDP in 2009 to 19.6 percent of GDP in 2019 (Sisko et al. 2010).³ The Congressional Budget Office (CBO) assumes that over the long term growth in health care spending will slow down as a share of GDP even in the absence of specific legislative action. Under CBO’s long-term baseline, Medicare spending is projected to slow between 2021 and 2084 from GDP plus 1.7 percent to GDP plus 1 percent (Congressional Budget Office 2010b). Even with this assumption, which is well below recent experience, under CBO’s baseline scenario, Medicare and other federal

**FIGURE
1-2**

Yearly growth of common benefits for Medicare and private health insurance



Note: Common benefits are hospital services, physician and clinical services, other professional services, and durable medical products.

Source: CMS, Office of the Actuary, National Health Statistics Group, National Health Expenditure Accounts, 2010.

health spending will consume nearly 60 percent of federal revenues by 2084 (Congressional Budget Office 2010b).

Growth in health care spending has not led to equivalent improvements in quality

Despite the rise in health care spending as a share of GDP, evidence as to whether this growth has resulted in commensurate improvements in quality or outcomes is mixed. In some instances, interventions have improved outcomes for a specific medical condition. However, many analysts contend that, in the aggregate, a material share of health care spending does not correspond to better outcomes or higher quality (New England Healthcare Institute 2008). In addition to outcomes of care such as rates of condition-specific mortality, readmissions, and potentially avoidable admissions, other indicators that can help frame discussions about health care quality, which are discussed in more detail below, include: variation in health care use by geographic location, compliance with

recommended practices, occurrence of adverse events such as medical errors and health-care-associated infections, and disparities across populations in obtaining appropriate care.

Health care use varies across geographic locations

The geographic variation in the amount of health care used for specific diseases or conditions is well documented, with differences persisting even after adjusting for severity. Areas with high utilization do not necessarily correspond to areas of better care (Fisher et al. 2003a, Fisher et al. 2003b). Prior work by the Commission found substantial geographic variation in the utilization of health care across the country, with service use 30 percent higher at the 90th percentile than at the 10th percentile (Medicare Payment Advisory Commission 2009b). A number of factors affect health care utilization, including providers' practice and care patterns, patients' expectations of care, health status, and supplemental coverage.

Adherence to recommended practices and occurrence of adverse events

Studies of the adherence to recommended care and studies of medical errors resulting in adverse events suggest that health care quality is not as high as may be expected given the large share of national resources devoted to it. In a 2003 study by Elizabeth McGlynn and colleagues, adults in the United States with certain conditions received care that was consistent with recommended practices only about half the time (McGlynn et al. 2003). Adherence to preventive care guidelines is also relatively low—in 2005, 63 percent of individuals age 65 or over received the recommended pneumococcal vaccination and 64 percent received the recommended influenza vaccine, although these rates have risen over time (Centers for Disease Control and Prevention 2006).

Adverse health events—injuries that result from medical mismanagement exclusive of the patient’s underlying health status—also occur (Schuster et al. 2005). One study found that adverse events accounted for at least 5 percent of all health care spending, and researchers estimate that half of them were potentially avoidable (New England Healthcare Institute 2008).

Disparities in access to care for certain populations

There is significant variation in the amount and quality of care that certain populations receive. The percentage of individuals with a regular source of care was significantly lower for poor individuals (80 percent) than for non-poor individuals (92 percent) (Agency for Healthcare Research and Quality 2010). Individuals who do not have a regular source of care have worse health outcomes and are less likely to be diagnosed in an early stage of disease. Lack of access to preventive care can result in patients using a higher intensity setting (such as the emergency department) than they would have needed otherwise (New England Healthcare Institute 2008).

The Commission’s March 2010 report includes a discussion of an annual survey sponsored by the Commission that assesses access to physician services for Medicare beneficiaries and for privately insured people age 50 to 64 years (Medicare Payment Advisory Commission 2010b). The survey found that most Medicare beneficiaries have reliable access to physician services. Access, as measured by the ability to obtain an appointment in 2009, did vary by race, with minority individuals (72 percent) somewhat less likely than whites (78 percent) to report that they never waited longer than

they wanted for routine care appointments (Medicare Payment Advisory Commission 2010b). There are parallel differences across race for privately insured individuals, but overall Medicare beneficiaries reported fewer access problems than privately insured people.

The share of patients receiving the recommended level of care for chronic conditions is lower for racial and ethnic minorities, even when the rates are adjusted for income, education, and health insurance status (Agency for Healthcare Research and Quality 2010). The share of diabetics receiving all three recommended services each year (eye examination, foot examination, and blood glucose testing) was significantly lower for Hispanics and those who are poor and near poor. Racial and ethnic minorities and lower income individuals are also less likely to receive recommended screenings and preventive care. This situation is true even for those with health insurance coverage, such as Medicare beneficiaries (Figure 1-3).

Comparison of the U.S. health system with other countries gives a mixed picture

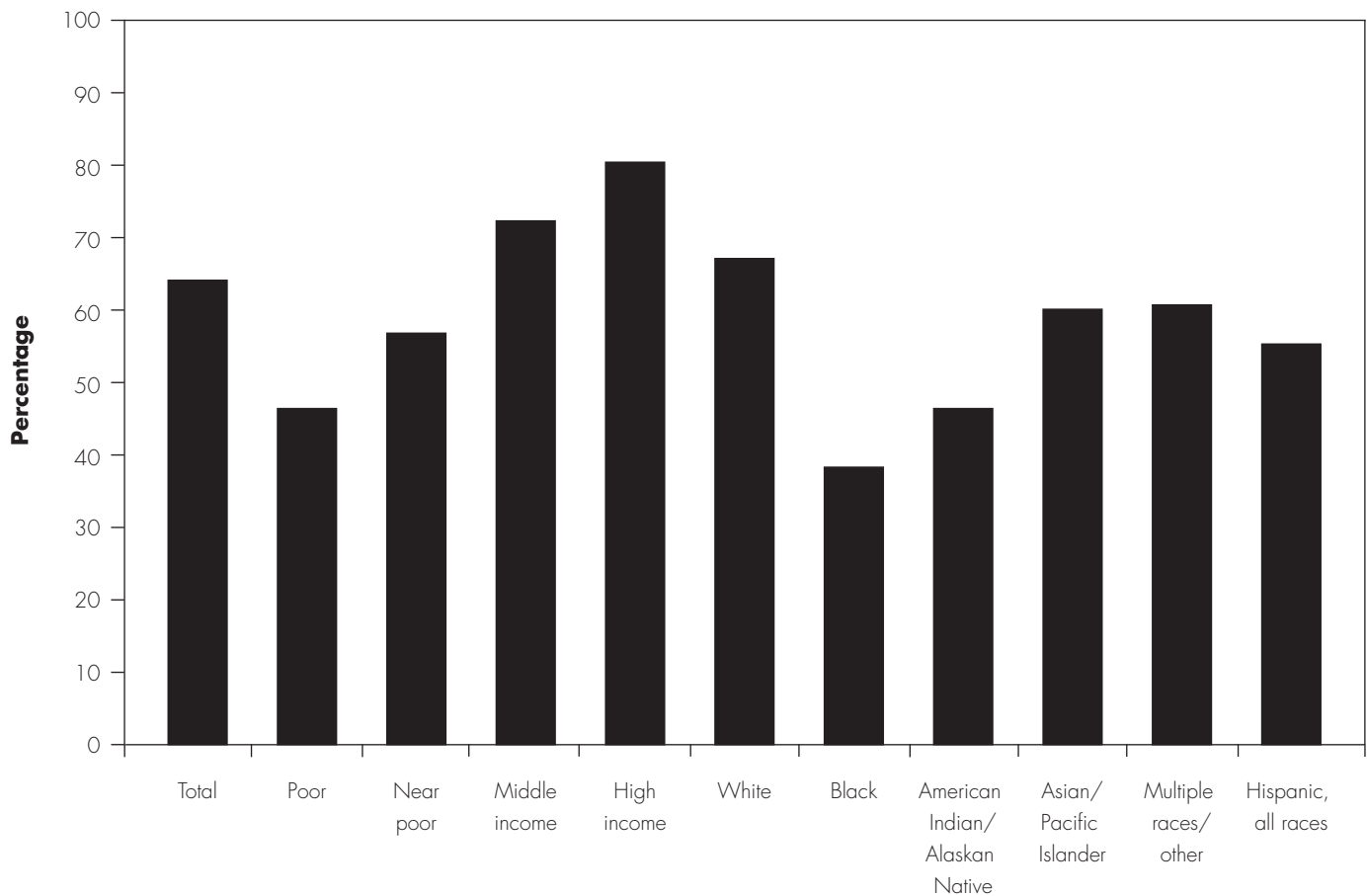
Spending in the United States on health care on a per capita basis or as a share of GDP is significantly larger than in other Organisation for Economic Co-operation and Development (OECD) countries, even when adjusted for purchasing power.⁴ In 2008, per capita spending in the United States was \$7,500, compared with the OECD average of \$3,100 (Organisation for Economic Co-operation and Development 2010).

Health care resources in the United States compared with other OECD countries

The higher level of spending in the United States does not necessarily correspond to more medical professionals or hospital beds. There are fewer medical professionals per capita in the United States (2.4 per thousand) than in the average OECD country (3.1 per thousand) (Organisation for Economic Co-operation and Development 2010). The United States also ranks relatively low on inpatient hospital capacity—it has 3.1 hospital beds per thousand people, whereas European countries range from 3.4 beds per thousand in the United Kingdom to 8.2 per thousand in Germany. Among other G8 countries, Japan is significantly higher, with 13.8 beds per thousand (Organisation for Economic Co-operation and Development 2010).⁵

**FIGURE
1-3**

Percentage of female Medicare beneficiaries age 65 or over who report being screened for osteoporosis, 2006



Source: Agency for Healthcare Research and Quality, national healthcare disparities report 2009.

Utilization and prices of health care services across countries

Differences in the amount of health care spending by country cannot be easily explained by comparing the amount of health care used by patients in the United States with use in other countries. On the contrary, the United States has fewer inpatient admissions per capita and the average hospital stay is shorter than in the median OECD country. The United States does have higher use per capita than the median OECD country of certain technology-intensive interventions, such as coronary angioplasty and dialysis (Anderson et al. 2003, Anderson et al. 2005), and the use of outpatient care for certain types of procedures is more common in the United States (McKinsey Global Institute 2008). However, the fact that utilization of health care in the United States does not appear to be

significantly higher than in other OECD countries has led some analysts to conclude that higher prices for medical care are largely responsible for the high level of health care spending in the United States compared with other OECD countries (Anderson et al. 2003).

Quality outcomes across countries

It is difficult to compare the quality of health care across countries using measures such as life expectancy, measures of the quality of the health care provided, patient and practitioner viewpoints, and safety because these aggregate measures also reflect underlying differences in the population. Among amenable deaths (those that may be avoidable through the provision of health care) the United States has the highest rates of mortality for certain conditions. However, the prevalence of disease for these

conditions is also higher in the United States—which illustrates the difficulty in measuring the quality of health care across countries using only mortality or other national statistics (Organisation for Economic Co-operation and Development 2010).

Quality measures on the provision of preventive care are also mixed, with the United States ranking higher on the share of individuals receiving cancer screenings but below other OECD countries on vaccinations (Docteur and Berenson 2009). Some studies have shown that the United States performs somewhat better at ensuring that patients with chronic illnesses receive recommended screening or treatments—85 percent of hypertensive patients in the United States received two recommended tests, the second highest rate among OECD countries (Docteur and Berenson 2009). Finally, survival rates are the highest in the United States for patients with five types of relatively common cancers (breast, colon, rectum, lung, and prostate), although screening rates are also higher in the United States, which may result in diagnosing more cancers earlier when they are more easily treated (Docteur and Berenson 2009).

Reasons for growth in health care spending

With persistent growth in health care spending that exceeds the growth in the size of the economy, two questions are in order: First, why does spending on health care grow so fast; second, are prices, utilization, or a combination of both causing the growth in health care spending?

Technology advances and rising prices are major drivers of growth in spending

Most analysts attribute a large share of growth in health care spending to technological advancement, defined broadly as improvements to health care services, products, and procedures. Prices in the health care sector have also grown faster than prices in other sectors, although the change in price may correspond to improvements in the quality of the service or product, which makes it difficult to isolate the effect of pure price changes on health care spending growth.

Technological advancement

Technology is generally identified as the largest single driver behind the growth in health care spending.

After conducting a literature review, CBO found that studies generally attribute roughly half of the spending growth in health care to advancements in technology (Congressional Budget Office 2008b). Smith and colleagues estimated that between 27 percent and 48 percent of the increase in health care spending was due to technological factors, a somewhat lower share than in prior studies (Newhouse 1992, Smith et al. 2009). In these studies, technology is a catch-all category that represents a wide range of changes in the allocation and use of health care services. For example, in the studies cited here, applying an intervention to a new population or in a new way would be categorized as a technological change. Similarly, changes in protocol, process, or procedures would also be classified as a technological change. While researchers can estimate the effect of a specific technological intervention in a specific clinical situation, to measure the causes of health care spending growth, studies generally use this broader definition of technological advancement.

Technological change in non-health sectors often results in lower costs for a specific innovation as more firms enter the market and prices fall due to competitive pressure from other firms. However, for a number of reasons technological change has not resulted in lower costs or slower spending growth in the health care sector. For most types of consumer goods, a relationship exists between market prices and total spending: Introduction of a new product may not result in high levels of demand until the price falls, when many consumers purchase it (Congressional Budget Office 2008b). However, in health care, patients and providers may be unaware of the true cost of a specific intervention because health insurance lessens the incentive to seek the lowest priced effective care. In addition, patients often lack complete information about the marginal effectiveness of a specific intervention, making it difficult to determine whether it is worth the incremental cost.

More recent analysis has speculated that isolating the effect of technological advancements may understate the role of interactions between technology and other factors that affect growth in health care spending. For example, some studies have theorized that widespread, comprehensive insurance coverage shapes the market for new medical interventions by ensuring a built-in market that is less sensitive to price (Finkelstein 2007, McKinsey Global Institute 2008, Smith et al. 2009). Further, while some technological improvements may shorten the duration or severity of a disease, other improvements may

make it possible to survive with a previously terminal condition, increasing total lifetime costs (McKinsey Global Institute 2008).

Growth in prices

Growth in prices for health care services is estimated to contribute to between 5 percent and 19 percent of total growth in health care spending, although these estimates are highly uncertain (Congressional Budget Office 2008b, Smith et al. 2009). Measuring the effect of price changes for a specific type of care across time is difficult, as the procedure or product may also change substantially.

Health insurance coverage, reimbursement, and provider market power also drive spending growth

The characteristics of health insurance coverage, including the generosity of the coverage, and fee-for-service provider payments also drive the growth in health care spending. In addition, consolidation among providers, which can lead to improved coordination and lower costs of producing services, can also lead to higher costs or lower efficiency if the consolidation results in a significant reduction in competition among providers and suppliers or if providers begin to compete by providing more services of questionable value.

Health insurance coverage

Evidence exists indicating that more comprehensive health insurance coverage (such as a lower deductible or cost sharing) increases consumption of health care services (Manning et al. 1987). The share of health spending paid out of pocket by enrollees in private insurance has dropped significantly, falling from 55 percent in 1960 to 14 percent in 2007 (Smith et al. 2009). Some analyses find that the increase in the generosity of health insurance may explain between 10 percent and 13 percent of the growth in health care spending (Congressional Budget Office 2008b).

The Commission's 2009 survey of health care use for Medicare beneficiaries with and without supplemental coverage (medigap, employer-sponsored retiree insurance, or Medicaid) found that spending in discretionary or elective categories of health care was higher for those with supplemental coverage (Medicare Payment Advisory Commission 2009a). Secondary coverage resulted in higher spending for Part B services; spending for office visits was 75 percent higher. Spending on elective admissions to inpatient hospitals was 90 percent higher for those with supplemental coverage than for those without

it. As might be expected, for urgent and emergency visits the level of spending was not significantly different for those with and without supplemental coverage (Medicare Payment Advisory Commission 2009a). One way to address spending on lower value care that results from blanket coverage policies is to implement the use of incentives such as differential cost-sharing amounts, which steer beneficiaries to high-value care (or steer them away from low-value care).

Some health insurance is also subsidized through the tax system. The value of employer-sponsored health insurance is deducted from taxable income, which provides an incentive to purchase insurance through one's employer. Some researchers have theorized that this tax preference encourages workers to receive more of their compensation in health insurance instead of wages than they might otherwise prefer (Feldstein 1973, Pauly 1986). Others have theorized that the tax preference for employer coverage helps correct for individuals undervaluing preventive care and overly discounting the long-term benefits of such care (Liebman and Zeckhauser 2008).

Payment incentives

Except for health maintenance organizations and other health plans that pay providers on a capitated per enrollee basis, fee-for-service payment is the dominant reimbursement method among public and private insurers. Fee-for-service payment creates incentives for providers to provide more care, and more intensive care, than may be medically indicated (Aaron and Ginsburg 2009). While the extent to which fee-for-service reimbursement is driving the *growth* of health care spending is not clear, it is generally believed to contribute to the high *level* of spending. Changes in the nature of insurance reimbursement, such as the use of managed care in the 1990s, did slow the growth in health care spending for a short period.

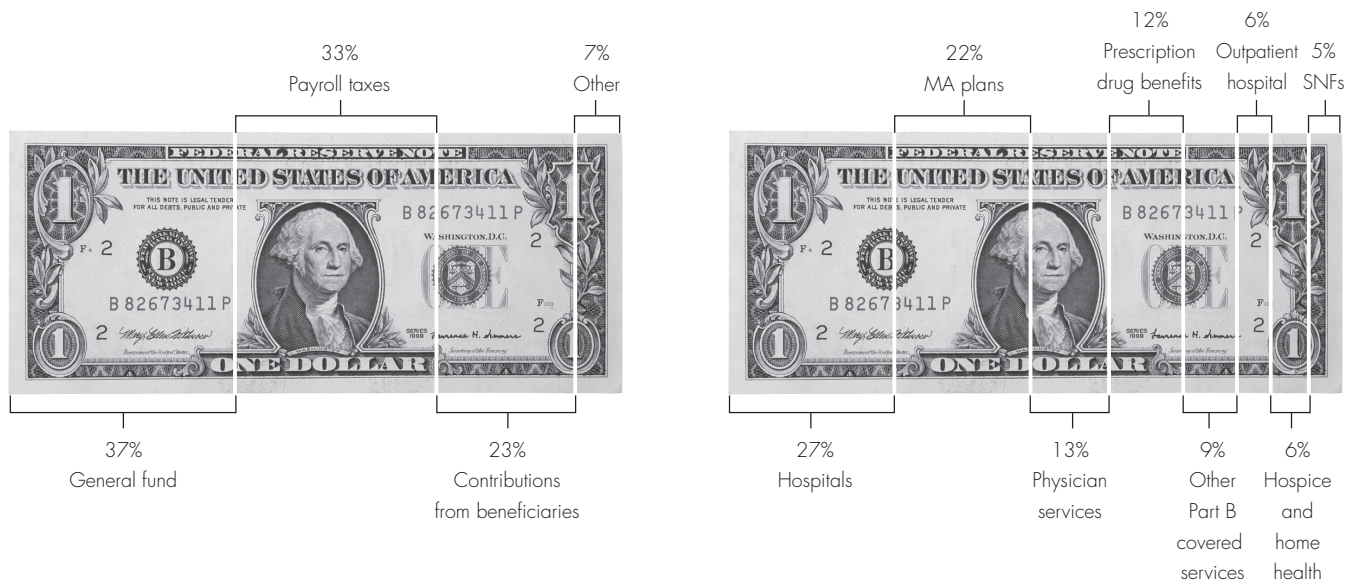
The current fee-for-service system breaks up the provider's treatment process into a set of procedures that reward the provider for greater service volume rather than care coordination. Alternative payment models discussed by the Commission and others, such as accountable care organizations (ACOs), payment bundling, and readmission policies encourage a more holistic approach to medical care, either by providing a financial incentive (ACOs and payment bundling) or by encouraging case coordination and oversight (e.g., through higher payments for primary care).

FIGURE 1-4

Sources and uses of funds for Medicare expenditures, 2010

Sources of funds for Medicare expenditures

Uses of funds for Medicare expenditures



Note: MA (Medicare Advantage), SNF (skilled nursing facility). Sources of funds graphic includes beneficiary premiums and cost sharing. Uses of funds graphic does not include expenditures funded by beneficiary cost sharing.

Source: 2010 annual report of the Boards of Trustees of the Medicare trust funds.

Waste, fraud, and abuse are also believed to make up a significant share of total spending on health care—in 2005, the Institute of Medicine estimated that between 30 percent and 40 percent of all health care spending was misspent (Reid et al. 2005). Fee-for-service reimbursement does not provide substantial control over fraudulent or wasteful spending, as no single provider bears the responsibility for the total cost of care. The Medicare program and private insurers use management and oversight techniques to limit fraud and abuse. However, under fee-for-service reimbursement, the financial incentive to conduct more medical care than may be appropriate remains.

Industry consolidation

Industry consolidation has the potential to improve efficiency and coordination across providers but can also lead to lower quality and higher prices (Vogt and Town 2006). The Commission has recommended that Medicare encourage collaboration between physicians and other providers for care coordination across multiple settings, while being attentive to concerns about market power (Medicare Payment Advisory Commission

2009a). Provider market power could result in higher private sector margins and higher costs, as providers may feel less pressure to keep costs down. Since Medicare reimbursement is generally fixed, those providers with high costs will tend to have lower Medicare margins. This process could lead to pressure for Medicare to keep up with the prices that market power can generate in the private sector (Stensland et al. 2010).

Changing demographics are expected to drive future growth in spending

Changes in the demographic and income profile of the population also play a role in the growth in health care spending, and aging will become a significant factor in future growth of federal health programs such as Medicare and Medicaid.

Demographic changes

Over the past 20 years, the effect of an aging population on overall growth in health spending has been relatively small. Between 1940 and 1990, Cutler, Newhouse, and Smith and colleagues found that the aging of the population contributed only 2 percent of the growth in

per capita health care spending, in contrast to the shares attributed to technology-related changes (between 38 percent and 65 percent) or changes in third-party payment (between 10 percent and 13 percent) (Congressional Budget Office 2008b, Cutler 1995, Newhouse 1992, Smith et al. 2000).

Despite the relatively small role that demographic changes have played in per capita or per beneficiary growth in health care spending to date, the aging of the population will significantly increase total spending for federal health programs over the next 25 years as the population eligible for these programs grows and a larger share of individuals have multiple chronic conditions. The aging of the population is estimated to account for 45 percent of the total spending growth in Medicare and Medicaid between 2010 and 2035 (Congressional Budget Office 2010b). The Congressional Budget Office estimates that even if federal health care spending grew at the rate of GDP, total federal spending on health care would grow from 5.5 percent today to 9 percent of GDP in 2035, solely due to the aging of the population (Congressional Budget Office 2010b).

Individual health behaviors such as smoking and obesity also affect the rate of growth and level of health care spending and will do so in the future. Cutler found that the decline in smoking among adults in the United States contributed to improvements in cancer mortality (Cutler 2008). Medicare spending for enrollees who were overweight or obese in early to middle adulthood was significantly higher than for Medicare enrollees who were not overweight in adulthood (Daviglius et al. 2004). Overall, improvements in morbidity from specific illnesses can reduce annual health care spending, but increases in longevity could increase total lifetime spending on health care.

Income and wealth

Growing income and wealth are also widely acknowledged to increase consumption of health care services, and some research has indicated that the income effect may interact with the technology effect (McKinsey Global Institute 2008, Smith et al. 2009). A recent study found that the wealth effect is almost as large as the technology effect in explaining growth in health care spending in the United States (Smith et al. 2009). To the extent that growth in household income slows to historic averages, this effect may play less of a role in future growth in health care spending.

Medicare's financing challenge

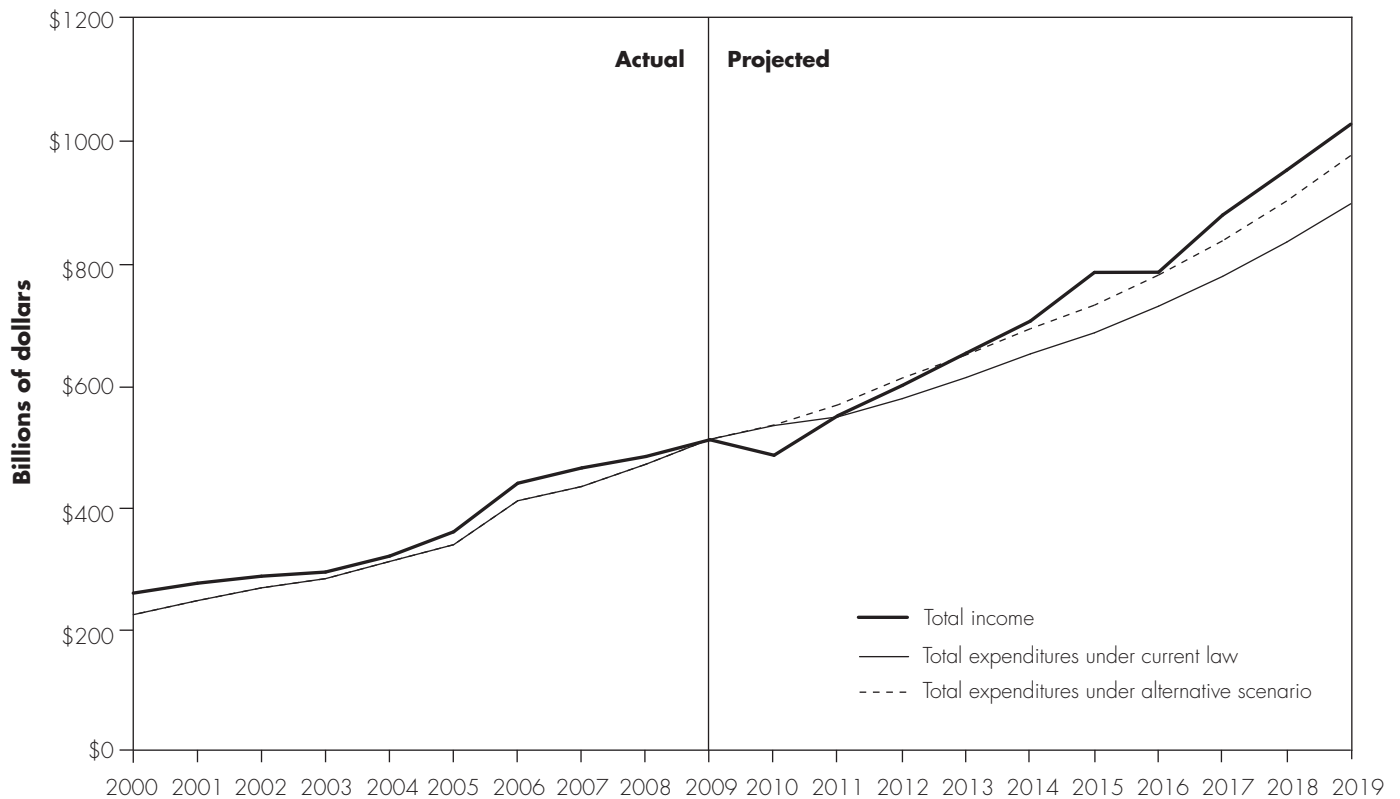
In 2009, the Medicare program spent \$509 billion, financed through a mix of dedicated taxes, general revenues, premiums, and cost sharing. The Medicare Trustees estimate that between 2010 and 2019, per beneficiary Medicare spending will increase from \$11,963 to \$15,749 annually, growing on average 3.1 percent per year. Medicare's share of the economy will continue to grow between 2010 and 2035, from 3.6 percent to 5.5 percent (Boards of Trustees 2010).

Federal revenues are Medicare's major funding source; hospitals and Medicare managed care plans account for largest spending shares

Payroll taxes and the general fund are Medicare's largest funding source. Approximately 23 percent of Medicare revenue in 2010 is from beneficiary contributions, 33 percent is from payroll taxes, and 37 percent is from the general fund (Figure 1-4). Each part of Medicare has a different funding arrangement:

- Part A (hospital insurance) is funded through a payroll tax of 2.9 percent on all earned income. Higher income taxpayers must also pay an additional tax of 0.9 percent starting in 2013.
- Part B (supplementary medical insurance) is funded through beneficiary premiums and general revenue transfers in proportion to the premiums collected, roughly equaling one-quarter from beneficiary premiums and three-quarters from general revenues.
- Part C (Medicare Advantage, Medicare's managed care option) is funded through beneficiary premiums and transfers from Part A and Part B.
- Part D (prescription drug benefit) is funded through enrollee premiums, general revenue transfers, and transfers from states.

Payments to hospitals (27 percent) and Medicare Advantage plans (22 percent) account for the largest shares of Medicare spending. Payments to physicians and other practitioners account for 13 percent of total spending, and payments for prescription drugs account for 12 percent of spending (Figure 1-4).

**FIGURE
1-5****Total Medicare income and expenditures**

Note: The difference reflected in the alternative scenario is the changes to physician payments, which would take effect inside the 10-year window.

Source: 2010 annual report of the Boards of Trustees of the Medicare trust funds.

Growth in Medicare spending is projected to continue

Medicare is projected to grow at 6.0 percent annually between 2010 and 2019—Part A is projected to grow at 4.8 percent and Part B is projected to grow at 5.8 percent (Boards of Trustees 2010). As a result of Medicare’s funding mechanisms, this growth rate will affect taxpayers and current Medicare beneficiaries.

The 2010 Trustees’ report projects that the actuarial balance for the Hospital Insurance (HI) trust fund has improved as a result of PPACA to –0.66 percent of taxable payroll (from the Trustees’ projected –3.88 percent in 2009) and that the HI trust fund exhaustion date has been extended to 2029. The share of Medicare that is paid by general revenues is expected to rise between 2010 and 2030 from 43 percent to 48 percent, an improvement over the Trustees’ projection before the enactment of PPACA, under which the share financed by general revenues was

to have reached 53 percent by 2030 (Boards of Trustees 2009, Boards of Trustees 2010).

There may be reasons to expect that actual Medicare growth will exceed these estimates. First, the current law projections assumed that Medicare reimbursement to physicians would be reduced by 30 percent over the next three years as a result of the sustainable growth rate (SGR) formula. These reductions have been delayed in the past, and in Public Law 111-309 (the Medicare and Medicaid Extenders Act of 2010) the rate reductions required by the SGR were deferred until the end of 2011. Second, the projections assume that the productivity adjustments to the provider payment updates in PPACA will be implemented as scheduled and kept in place throughout the 75-year projection period.

For these reasons, the Medicare Trustees in their 2010 report asked the CMS Office of the Actuary to estimate

**TABLE
1-1**

Medicare financial outlook, 2010 Trustees' report

Category	2010 report (current law)	2010 report (alternative scenario)	2009 report
HI Trust Fund exhaustion date	2029	2028	2017
Growth rate, 2010–2019			
Total Medicare	6.0%	6.9%	6.8%
Part A	4.8	4.8	6.5
Part B	5.8	8.1	6.3
Part D	10.3	10.3	9.3
Total Medicare share of GDP in 2084	6.38%	10.75%	11.18%

Note: HI (Hospital Insurance), GDP (gross domestic product). Growth rates represent the cumulative annual growth rate between 2010 and 2019, based on Table III.A1, Table III.B4, Table III.C8, and Table III.C19 of the 2010 Trustees' report. The growth rates for the 2009 column are measured over 2009–2018. Alternative scenario assumes physician payments are updated by the Medicare Economic Index starting in 2011 and the Patient Protection and Affordable Care Act of 2010 productivity adjustments are in place through 2019 and subsequently phased out over the 2020 to 2035 period.

Source: 2009 and 2010 annual reports of the Boards of Trustees of the Medicare trust funds, and Shatto and Clemens 2010.

Medicare spending under an alternative scenario (Figure 1-5). The alternative scenario assumes that the productivity adjustments are in effect through 2019 and are phased out over the following 15 years and that physician payments are updated by the Medicare Economic Index. Under this scenario, Medicare's growth rate over 2010–2019 would be 6.9 percent, a magnitude similar to the Trustees' projection before passage of PPACA (Table 1-1) (Shatto and Clemens 2010). Similarly, under the alternative scenario for Part B physician reimbursement, the 10-year annual growth rate for Part B would be 8.1 percent, versus 5.8 percent if statutorily mandated reductions to physician payments required by the SGR had taken effect (Shatto and Clemens 2010).

The effect of Medicare growth on beneficiaries

In 2006, Medicare paid for approximately 55 percent of the average beneficiary's current health costs; out-of-pocket spending covered 19 percent; other sources (such as medigap and employer coverage) covered 19 percent; and Medicaid covered 7 percent (Federal Interagency Forum on Aging-Related Statistics 2010). According to consumer expenditure data from 2002, 21 percent (\$1,616) of total consumption (such as food, housing, and other amenities) among those age 65 or older was for out-of-pocket medical care (Social Security Administration 2007). Medicare's spending growth translates directly to higher cost-sharing amounts that will consume a larger

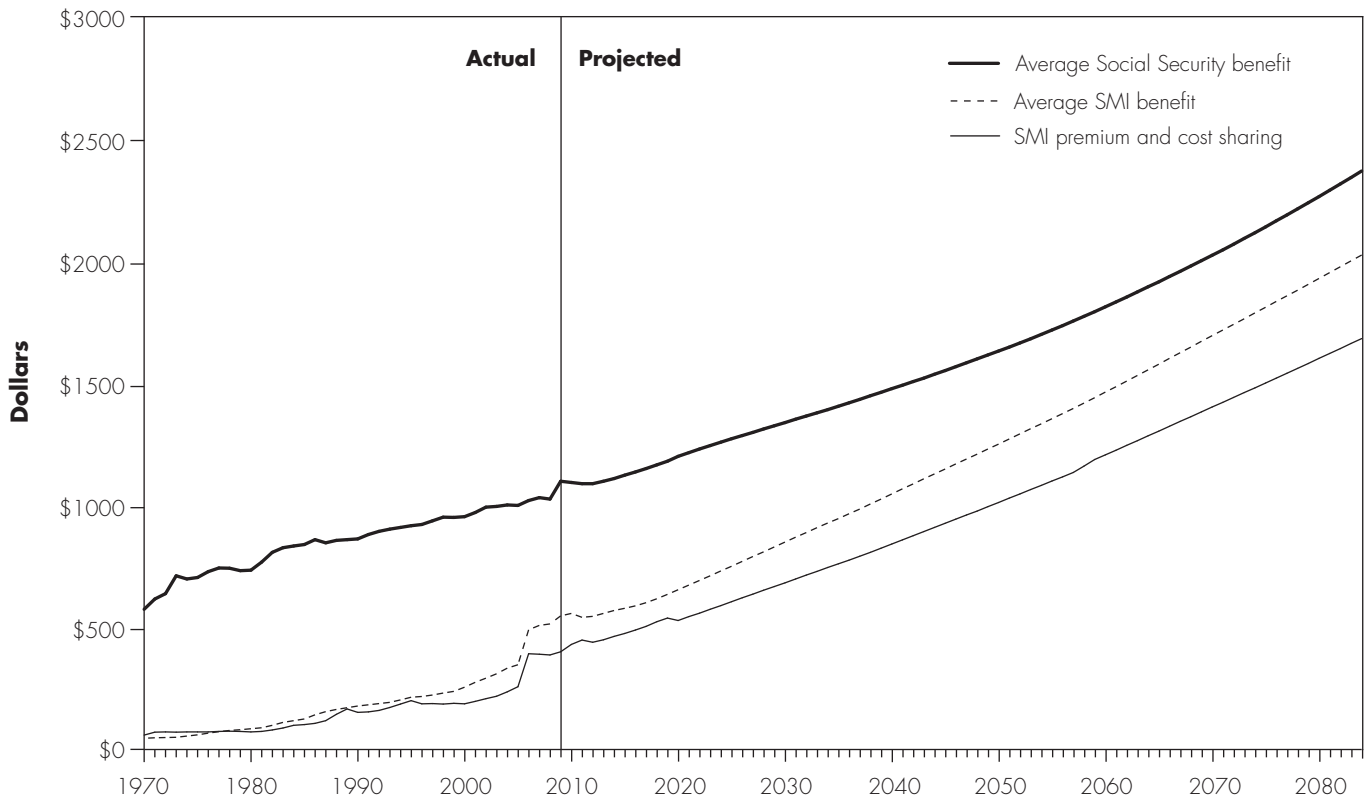
share of beneficiary resources.⁶ The average beneficiary contribution for Part B and Part D (including premium and cost sharing) amounts to 27 percent of the average Social Security benefit in 2010, and this amount is projected to grow to 50 percent of the average Social Security benefit by 2080 (Figure 1-6, p. 16) (Boards of Trustees 2010).

Part B premium hold-harmless provision

Since 2009, the Part B premium has remained at \$96.40 for about 75 percent of beneficiaries as a result of the hold-harmless provision that prevents the Part B premium increase from growing more than the cost-of-living adjustment (COLA) for a beneficiary's Social Security check. After a 5.8 percent COLA in December 2008, the COLA was zero in December 2009 and is projected to be zero in December 2010 and 1.2 percent in December 2011 (Boards of Trustees 2010). The hold-harmless provision does not apply to four groups: those dually eligible for Medicaid, new Medicare beneficiaries, those subject to the Part B income-related premium, and individuals who buy into Part A because they are not insured under Social Security. Although the pool of beneficiaries who are required to pay the premium increase is smaller, the amount of money needed to finance Part B is the same. As a result, the premium increase for those who pay the premium increase is about four times as large as it would have been had the hold-harmless provision not been in effect.

**FIGURE
1-6**

Monthly SMI benefits and out-of-pocket costs are projected to grow at a faster rate than monthly Social Security benefits



Note: SMI (Supplementary Medical Insurance). Average SMI benefit and average SMI premium plus cost-sharing values are for a beneficiary enrolled in Part B and (after 2006) Part D. Beneficiary spending on outpatient prescription drugs before 2006 is not shown.

Source: 2010 annual report of the Boards of Trustees of the Medicare trust funds.

PPACA changes designed to slow Medicare spending growth, modify beneficiaries' financial liabilities, and introduce health system reforms

PPACA made substantial changes to Medicare reimbursement by putting in place yearly adjustments to the payment updates as well as a productivity adjustment for most providers and revising payments for the Medicare Advantage program. PPACA also changed payroll taxes for current workers and premiums and cost-sharing amounts for current Medicare beneficiaries. Finally, it established a center to test different approaches to reforming the delivery system. (See text box for PPACA's changes affecting non-Medicare health insurance programs and payers.)

PPACA provisions affecting Medicare spending growth

PPACA made compounding changes in the payment updates for almost all Medicare providers. The law specifies yearly adjustments on varying schedules in the next 10 years for certain providers and a yearly reduction in the market basket equal to economy-wide productivity for most providers. The Medicare Trustees estimated in 2010 that the productivity adjustment, which would be applied to most providers' market basket updates, would equal 1.1 percent per year over the long term (Boards of Trustees 2010).

The law will also change the benchmarks for Medicare Advantage plans. The Commission has estimated that Medicare paid about \$14 billion more in 2009 for

Non-Medicare provisions of the Patient Protection and Affordable Care Act of 2010

The Patient Protection and Affordable Care Act of 2010 also made substantive changes to Medicaid and private health insurance that are likely to have wide-ranging effects on the entire health care system. The law expands Medicaid coverage and creates new health insurance subsidies. It establishes health insurance exchanges and institutes an individual mandate to purchase coverage.

Medicaid expansion and health insurance subsidies

The law expands Medicaid coverage up to 133 percent of the federal poverty threshold in 2014 for nearly all nonelderly individuals. States expanding coverage are eligible for a full federal match for 2014 and 2015 for these newly eligible individuals, and the share declines over time to 90 percent. The law establishes premium and cost-sharing subsidies to purchase health insurance for individuals and families at or below 400 percent of the federal poverty threshold. If individuals and families do not obtain creditable health insurance coverage, they may be subject to a penalty. The penalty is waived for certain groups, including those who are low income, those who cannot obtain affordable coverage, and those without insurance for less than three months.

Penalties are also applied to employers who do not offer affordable coverage and whose employees receive subsidized health insurance through the exchanges.

Health insurance exchanges and changes to the private market

Each state may set up a health insurance exchange to offer health insurance plans in up to four benefit categories. Plans available through the exchanges will be eligible for the premium and cost-sharing subsidies. The law also imposes new federal requirements on established plans in the small group and individual market.

Tax changes

The law applies an excise tax to high-cost employer-sponsored health insurance plans beginning in 2018. The law also makes changes to medical savings accounts and flexible spending accounts and eliminates the tax deduction for subsidies employers receive under Medicare Part D's retiree drug subsidy program. Finally, a 3.8 percent tax is applied to unearned income above the \$200,000 and \$250,000 thresholds for taxpayers. ■

Medicare Advantage enrollees than if they had been enrolled in fee-for-service Medicare (Medicare Payment Advisory Commission 2010b). PPACA would reset the benchmarks for Medicare Advantage plans and introduce a bonus system based on quality. The law also establishes an Independent Payment Advisory Board, which is required to further modify Medicare if the growth in per capita spending exceeds thresholds set out in the law.⁷

PPACA changes to beneficiary cost sharing and taxation

PPACA has three main provisions affecting current Medicare beneficiaries. It freezes the income thresholds for the Part B income-related premium at 2010 values through 2019 and establishes an income-related premium for Part D that applies at the same income thresholds as the Part B income-related premium. The law phases out the Medicare Part D coverage gap by 2020 by reducing the coinsurance rate over time from 100 percent to 25 percent,

slowing the growth in the out-of-pocket threshold for catastrophic coverage, and allowing more costs to count toward meeting the catastrophic threshold. Finally, for current workers, the law expands the HI tax by 0.9 percent for individuals making more than \$200,000 and married couples making more than \$250,000 per year. These revenues are dedicated to the HI trust fund.

PPACA provisions on system reform

PPACA puts in place a number of studies and pilots to introduce elements of shared responsibility across providers, including bundling payments for inpatient hospital care; allowing providers to organize as ACOs; and establishing a shared savings program. PPACA also establishes the Center for Medicare and Medicaid Innovation, which is charged with piloting payment structures that could reduce program spending across Medicare, Medicaid, and private health insurance. Pilots

**TABLE
1-2**

Effect of PPACA on Medicare spending and revenues

Category	Change (in billions)	
	2010–2014	2010–2019
Market basket revisions and productivity adjustments	\$-30	\$-205
MA reductions	-41	-145
Other FFS provisions	-23	-135
Revenue provisions	-20	-90
Total	-114	-575

Note: PPACA (Patient Protection and Affordable Care Act of 2010), MA (Medicare Advantage), FFS (fee-for-service). The market basket total includes effects on the MA program as a result of the MA benchmarks being set relative to FFS rates, which are affected by the market basket revisions and productivity adjustments. Market basket revisions include all of Section 3401 as amended.

Source: Foster 2010.

that improve quality without increasing costs or reduce costs without harming quality can be expanded nationally by the Secretary.

The law also establishes an office in CMS to coordinate services for beneficiaries dually eligible for Medicare and Medicaid. Dual-eligible enrollees face special challenges in navigating two complex federal health care programs, neither of which is specifically charged with coordinating their care. Prior work by the Commission has illustrated that the population of dual-eligible beneficiaries is not homogeneous and that programs to coordinate care for them should recognize the different needs of distinct subgroups (Medicare Payment Advisory Commission 2010a).

Potential effect of PPACA depends on terms and assumptions used

National health expenditures are projected to grow by 6.3 percent on average during 2009–2019, compared with 6.1 percent if PPACA had not been enacted (Sisko et al. 2010). This total masks significant changes by payer: Medicare spending is expected to be lower by 9 percent in the 10th year as compared with prior law and Medicaid spending is projected to be higher by 12 percent in the 10th year (Sisko et al. 2010).

The CMS Office of the Actuary notes that two provisions—the productivity adjustment to Medicare

payment updates and the excise tax on high-cost employer health plans—are likely to lower the health spending growth rate over the longer term. The Office of the Actuary notes that the projected lower growth rate would “depend critically on the sustainability of both provisions” (Foster 2010).

Potential effect of PPACA on growth in Medicare spending

The provider-specific adjustments, the productivity adjustments, and the changes to Medicare Advantage plan payments are projected to substantially slow the rate of Medicare growth. Medicare would grow by 6.0 percent annually in 2010–2019 compared with 6.8 percent projected last year under prior law (Boards of Trustees 2009, Boards of Trustees 2010). Overall, PPACA is estimated to lower federal spending for Medicare by \$575 billion over 10 years (Table 1-2) (Foster 2010).⁸ The cost of the coverage expansions in Medicaid and establishment of the health insurance subsidies within the 10-year window were largely offset by the reduction in Medicare spending. Some observers have questioned whether the reduction in Medicare spending in PPACA can result in both an improvement in the solvency of the Part A trust fund and an offset for the cost of the PPACA coverage expansions (Congressional Budget Office 2010c).

Potential effect of PPACA on beneficiary cost sharing

PPACA’s changes to Medicare spending also will affect beneficiary premium and cost-sharing amounts. Compared with prior law, in 2019 PPACA is projected to reduce the monthly Part B premium amount by \$18.20 and to increase the monthly Part D premium amount by \$1.66. Annual coinsurance amounts are also projected to be lower in 2019 than under prior law—Part A coinsurance is projected to be \$47 lower, Part B coinsurance is projected to be \$160 lower, and Part D coinsurance is projected to be \$259 lower (Shatto 2010). These numbers illustrate the effect of slower growth in Medicare cost on beneficiaries’ out-of-pocket costs.

Medicare after PPACA

As the first PPACA provisions affecting the Medicare program take effect, there will be much more information about the likely effect of the Medicare provisions on beneficiaries and providers. Also, as the economy recovers, policymakers may focus on reducing the deficit,

resulting in further modifications to Medicare and other federal health programs. PPACA sets in place many experiments to test potential innovations for improving patient care at lower cost, such as facilitating the creation of ACOs and shared savings programs and setting up the Center for Medicare and Medicaid Innovation. These pilots and initiatives will demand rigorous analysis of their effect on spending and quality of care.

Despite the downward payment adjustments to Medicare providers in PPACA, the Medicare program is still projected to grow at rates in excess of GDP under either the current law scenario or the alternative scenario discussed in the 2010 Trustees' report, resulting in Medicare spending absorbing a larger share of additional federal revenues. Addressing the long-term spending trajectory of the program and assessing whether other payment models offer better outcomes for beneficiaries and providers remain urgent priorities for the Medicare program. Finally, while Medicare represents the health care system's largest single payer, reform of the delivery system would be more effective if Medicare partners or coordinates with other payers.

Medicare's ability to unilaterally drive wholesale behavior changes through performance and quality measurement or payment reforms is likely limited as a result of the multiple payers and providers involved in health care delivery. One option is to encourage a focus on collaboration across payers.

However, no matter how subtle and inventive an intervention, it is unlikely to succeed absent a coordinated effort among all entities involved in health care delivery—providers, patients, insurers, and other payers. Subjecting providers to multiple sets of reporting requirements or treatment guidelines for different groups of patients confounds practitioners' clinical decision making and increases the administrative burden of health care delivery.

Conflicting incentives and inconsistent reporting requirements create confusion for providers and dilute the effect of any one intervention (Lee et al. 2010). Experts contend that coordination of care is hampered by fragmentation at the payer level. A recent survey of health care opinion leaders found that most respondents believe lack of alignment of policies and practices between public and private payers is a very significant (36 percent of respondents) or extremely significant (39 percent of respondents) barrier to creating population-based, accountable care systems (Stremikis et al. 2010). Furthermore, coordination of care among physicians and other practitioners in the fee-for-service environment entails a significant burden. One study found that, for an average physician with 100 Medicare patients, care coordination would require interacting with 99 other physicians in 53 separate practices (Pham et al. 2009).

To be sure, coordination of reforms across payers will also be challenging, despite the clear potential for benefits. As long as participation in payment and delivery reforms by private payers is voluntary, Medicare will need to present compelling reasons for private insurers to participate. However, requiring private payers to participate in coordinated reform efforts may hamper innovation or run counter to the private payers' specific situation, such as their model of care delivery.

Efforts to achieve coordination of the health care delivery system across payers are intended to ensure that reforms are coherent and that they consider payers' individual circumstances, such as the populations they cover. Coordinated reforms are also intended to minimize the burden on providers by establishing exactly what is expected of them and reducing inconsistent requirements. Without a coordinated approach, reforms to improve outcomes for beneficiaries, providers, and payers are not likely to succeed. ■

Endnotes

- 1 Throughout this report, the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act are jointly referred to as PPACA.
- 2 This figure calculates the growth in the consumer price index for all urban consumers from December 2008 through December 2009, not seasonally adjusted.
- 3 These figures are projections and incorporate the effects of PPACA.
- 4 These figures are adjusted for purchasing power by comparing prices for a fixed basket of goods.
- 5 G8 countries include Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States.
- 6 Average Social Security benefits generally grow with average wage growth, and the Part B premium and cost-sharing amounts are projected to grow significantly faster.
- 7 From 2014 to 2019, the per capita threshold is the five-year moving average of consumer price index and medical consumer price index. The measurement starts in 2013, with the first proposals due from the Independent Payment Advisory Board January 2014, to take effect in 2015.
- 8 All Medicare provisions in total (including the revenue provisions) are estimated to save \$575 billion over 10 years.

References

- Aaron, H., and P. Ginsburg. 2009. Is health spending excessive? If so, what can we do about it? September 2009. *Health Affairs* 28, no. 5 (September–October): 1260–1275.
- Agency for Healthcare Research and Quality, Department of Health and Human Services. 2010. *National healthcare disparities report 2009*. Rockville, MD: AHRQ. March.
- 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., 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: 903–914.
- Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2009. *2009 annual report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Insurance Trust Funds*. Washington, DC: Boards of Trustees.
- Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2010. *2010 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, Department of Labor. 2009. *Career guide to industries, 2010–11 edition*. Washington, DC: BLS.
- Bureau of Labor Statistics, Department of Labor. 2011. *Consumer price index—all urban consumers*. Washington, DC: BLS. <http://www.bls.gov/cpi/>.
- Centers for Disease Control and Prevention. 2006. Influenza and pneumococcal vaccination coverage among persons aged ≥ 65 years—United States, 2004–2005. *Morbidity and Mortality Weekly Report* 55, no. 39: 1065–1068.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2010. *2010 CMS statistics*. Baltimore, MD: CMS. https://www.cms.gov/ResearchGenInfo/02_CMSStatistics.asp.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2011. *National health expenditure historical and projected spending data*. Baltimore, MD: CMS. http://www.cms.gov/NationalHealthExpendData/01_Overview.asp#TopOfPage.
- Congressional Budget Office. 2008a. *Key issues in analyzing major health insurance proposals*. Washington, DC: CBO.
- Congressional Budget Office. 2008b. *Technological change and the growth of health care spending*. Washington, DC: CBO.
- Congressional Budget Office. 2010a. *The budget and economic outlook: An update*. Washington, DC: CBO.
- Congressional Budget Office. 2010b. *The long-term budget outlook*. Washington, DC: CBO.
- Congressional Budget Office. 2010c. Letter to the Honorable Jeff Sessions, January 22.
- Cutler, D. M. 1995. Technology, health costs, and the NIH. Paper prepared for the National Institutes of Health Economics Roundtable on Biomedical Research. September.
- Cutler, D. M. 2008. Are we finally winning the war on cancer? *Journal of Economic Perspectives* 22, no. 4 (fall): 3–26.
- Daviglus, M. L., K. Liu, L. Yan, et al. 2004. Relation of body mass index in young adulthood and middle age to Medicare expenditures in older age. *Journal of the American Medical Association* 292, no. 22: 2743–2749.
- DeNavas-Walt, C., B. Proctor, and J. Smith. 2010. *Current population reports, P60–236, income, poverty, and health insurance coverage in the United States: 2009*. Washington, DC: Government Printing Office.
- Docteur, E., and R. Berenson. 2009. *How does U.S. health care compare internationally?* Washington, DC: Urban Institute. August.
- Federal Interagency Forum on Aging-Related Statistics. 2010. *Older Americans 2010: Key indicators of well-being*. Hyattsville, MD: Federal Interagency Forum on Aging-Related Statistics.
- Feldstein, M. 1973. The welfare loss of excess health insurance. *Journal of Political Economy* 81, no. 2 (March–April): 251–280.
- Finkelstein, A. 2007. The aggregate effects of health insurance: Evidence from the introduction of Medicare. *Quarterly Journal of Economics* 122, no. 1: 1–37.
- Fisher, E., D. Wennberg, T. 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., D. Wennberg, T. 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.

- Foster, R. 2010. *Estimated financial effects of the “Patient Protection and Affordable Care Act,” as amended*. Memorandum from the Centers for Medicare & Medicaid Services, Office of the Actuary. April 22.
- Lee, P., R. Berenson, and J. Tooker. 2010. Payment reform—the need to harmonize approaches in Medicare and the private sector. *New England Journal of Medicine* 362, no. 1 (January 7): 3–5.
- Liebman, J., and R. Zeckhauser. 2008. Simple humans, complex insurance, subtle subsidies. Working paper no. W14330. National Bureau of Economic Research, Cambridge, MA. September.
- Manning, W., J. Newhouse, N. Duan, et al. 1987. Health insurance and the demand for medical care: Evidence from a randomized experiment. *The American Economic Review* 77, no. 3: 251–277.
- McGlynn, E., S. Asch, J. Adams, et al. 2003. The quality of health care delivered to adults in the United States. *New England Journal of Medicine* 348, no. 26 (June 26): 2635–2645.
- 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.
- Medicare Payment Advisory Commission. 2009a. *Improving incentives in the Medicare program*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2009b. *Report to the Congress: Measuring regional variation in service use*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2010a. *Report to the Congress: Aligning incentives in Medicare*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2010b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- New England Healthcare Institute. 2008. *How many more studies will it take?* Cambridge, MA: New England Healthcare Institute.
- 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. 2010. *OECD health data 2010: How does the United States compare*. Paris: OECD.
- Pauly, M. 1986. Taxation, health insurance, and market failure in the medical economy. *Journal of Economic Literature* 24, no. 2 (June): 629–675.
- Pham, H. H., A. S. O’Malley, P. B. Bach, et al. 2009. Primary care physicians’ links to other physicians through Medicare patients: The scope of care coordination. *Annals of Internal Medicine* 150, no. 4 (February 17): 236–242.
- Reid, P. P., W. D. Compton, J. H. Grossman, et al. 2005. *Building a better delivery system: A new engineering/health care partnership*. Washington, DC: National Academies Press.
- Schuster, M., E. McGlynn, and R. Brook. 2005. How good is the quality of care in the United States? *Milbank Quarterly* 83, no. 4: 843–895.
- Shatto, J. D. 2010. *Estimated effects of the “Patient Protection and Affordable Care Act,” as amended, on out-of-pocket payments for Medicare beneficiaries*. Memorandum from the Centers for Medicare & Medicaid Services, Office of the Actuary. October 5.
- Shatto, J. D., and M. K. Clemens. 2010. *Projected Medicare expenditures under an illustrative scenario with alternative payment updates to Medicare providers*. Memorandum from the Centers for Medicare & Medicaid Services, Office of the Actuary. August 5.
- Sisko, A., C. Truffer, S. Keehan, et al. 2010. National health spending projections: The estimated impact of reform through 2019. *Health Affairs* 29, no. 10: 1933–1941.
- Smith, S. D., S. K. Heffler, and M. S. Freeland. 2000. The impact of technological change on health care cost spending: An evaluation of the literature. Working paper. Health Care Financing Administration, Baltimore, MD. July 19.
- Smith, S. D., J. P. Newhouse, and M. S. Freeland. 2009. Income, insurance and technology: Why does health spending outpace economic growth? *Health Affairs* 25, no. 2 (September–October): 1276–1284.
- Social Security Administration. 2007. *Expenditures of the aged chartbook*. Baltimore, MD: SSA.
- Stensland, J., Z. R. Gaumer, and M. E. Miller. 2010. Private-payer profits can induce negative Medicare margins. *Health Affairs* 29, no. 5: 1045–1051.
- Stremikis, K., K. Davis, and A. Audet. 2010. Health care opinion leaders’ views on delivery system innovation and improvement. Data brief. New York: The Commonwealth Fund. July.
- 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. February.