CHAPTER 1

# Context for Medicare payment policy

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## Chapter summary

Sustaining Medicare fiscal solvency will be challenging. Medicare's Trustees estimate that the program's Hospital Insurance Trust Fund—which is primarily funded through a payroll tax—will be depleted by 2026. In part, this depletion will occur because the number of workers per Medicare beneficiary has been declining—falling from 4.6 workers around the program's inception to 3.0 in 2019 and projected to drop to 2.5 in the next 10 years. To keep the Trust Fund solvent over the next 25 years, the Trustees have advised that either the Medicare payroll tax needs to be immediately raised from its current rate of 2.9 percent to 3.7 percent or Part A spending needs to be immediately reduced by 18 percent.

Other parts of Medicare are funded through general tax revenues (and federal borrowing) and beneficiary premiums. As this spending grows, it increases deficits and the debt; assuming no other policy or legislative interventions, it also reduces the resources available to make investments that expand future economic output (e.g., investments in education, transportation, and research and development). In 2019, the country's debt was equivalent to 78 percent of our annual gross domestic product (GDP)—a higher share than at any point in U.S. history, except briefly around World War II.

Increasing Medicare spending also strains beneficiaries' household budgets. In 2019, Medicare Part B and Part D premiums and cost sharing consumed

## In this chapter

23 percent of the average Social Security benefit, up from 7 percent in 1980. The Medicare Trustees estimate that within the next 20 years, these costs will consume 31 percent of the average Social Security benefit. (Social Security benefits account for more than 60 percent of the income of the average senior and 100 percent of the income of more than a fifth of seniors.)

Some types of health care costs have grown more rapidly than others. The Commission has found that Medicare spending on drug and pharmacy services (including those provided at health care facilities) has increased particularly fast—growing from 20 percent of Medicare spending in 2007 to 23 percent in 2016. Not including premiums paid by beneficiaries, Medicare spent $83 billion, or $1,820 per beneficiary, on Part D drug coverage in 2018.

One of the most powerful ways Medicare controls spending growth is by setting prices. Over the last 10 years, although Medicare spending per enrollee has grown, private health insurance spending per enrollee has grown faster. Increasing prices were largely responsible for private sector spending growth, which occurred despite a *decline* in service use. One key driver of the private sector's growth in prices was provider market power (see Chapter 15). Hospitals and physician groups have increasingly consolidated, in part to gain leverage over insurers in negotiating higher payment rates. That consolidation contributed to per enrollee growth in spending on private health insurance of 4.3 percent annually from 2008 to 2018. By comparison, over that same period, Medicare spending per enrollee rose by 2.0 percent annually. This difference suggests that the effectiveness of the tools private plans have to constrain service use has been counteracted by the higher prices plans pay, relative to Medicare's lower payment rates under its administered pricing system.

Yet because of the aging of the population and increasing enrollment in Medicare, spending on the program is growing—from 15 percent of federal spending in 2018 to an expected 17 percent by 2027. Medicare spending also constitutes a growing share of the country's GDP—3.6 percent in 2018 and expected to grow to 4.7 percent by 2027.

Certain aspects of the Medicare program hamper its ability to achieve fiscal sustainability; however, the Commission has made numerous recommendations that, if implemented, could address these challenges and allow Medicare to improve payment accuracy and equity.

**MEDICARE CHALLENGE: Medicare's payments for some types of providers are excessive.**

***COMMISSION RECOMMENDATION:*** Better align Medicare payments with providers' costs, by freezing or reducing some providers' payment rates through the payment updates recommended in this report—estimated to save over $2 billion in 2021 and over $20 billion over the next five years. Also, create a market-based approach to paying for Part B drugs that would permit vendors to negotiate prices with drug manufacturers and would give providers opportunities to share in savings.

**MEDICARE CHALLENGE: Medicare pays higher prices in some care settings than others—for the same service.**

***COMMISSION RECOMMENDATION:*** Make payments site neutral by reducing or eliminating differences between hospital outpatient departments and physician offices in payment rates for evaluation and management office visits and selected other services. Eliminate differences in payment rates between inpatient rehabilitation facilities and skilled nursing facilities for selected conditions.

**MEDICARE CHALLENGE: Medicare undervalues primary care and overvalues specialty care.**

***COMMISSION RECOMMENDATION:*** Improve the accuracy of payments and increase payments to primary care providers by reducing the physician fee schedule's payments for overpriced services and establishing a prospective payment per beneficiary for primary care practitioners, funded by reducing fees for non-primary care services in the fee schedule.

**MEDICARE CHALLENGE: Providers have financial incentives to selectively treat some patients over others and to furnish certain types of services, regardless of clinical value.**

***COMMISSION RECOMMENDATION:*** Increase the equity of Medicare's payments and reduce provider incentives to selectively admit certain types of patients by establishing a unified prospective payment system for post-acute care that bases payments on patient characteristics, not the setting where care is furnished or the amount of services that are provided.

**MEDICARE CHALLENGE: Medicare is required to pay providers' claims, regardless of clinical appropriateness.**

***COMMISSION RECOMMENDATION:*** Scrutinize claims more closely, in part by reviewing home health agencies that exhibit unusual billing patterns and by implementing new safeguards—such as a moratorium on new providers, prior authorization, and suspension of prompt payment requirements—in areas that appear to be high risk. Establish a prior authorization program for practitioners who order a substantially greater number of advanced imaging services than their peers. Develop national guidelines for outpatient therapy services and ground ambulance transports, and implement payment edits based on these guidelines. Develop national guidelines for coding hospital emergency department visits instead of allowing hospitals to use their own internal guidelines.

**MEDICARE CHALLENGE: Medicare coverage interacts with beneficiaries' other coverage, sometimes resulting in fragmented care.**

***COMMISSION RECOMMENDATION:*** Encourage better integration with Medicaid by requiring Medicare Advantage (MA) dual-eligible special needs plans to assume clinical and financial responsibility for Medicare and Medicaid benefits.

**MEDICARE CHALLENGE: Medicare's benefit package does not protect against high out-of-pocket costs, and many beneficiaries have limited incentives to use care efficiently.**

***COMMISSION RECOMMENDATION:*** Modify beneficiary cost sharing to incentivize high-value care, such as by replacing the current Part A and Part B fee-for-service (FFS) benefit design with one that includes an out-of-pocket maximum, deductibles, and copayments that could vary by type of service and provider or be eliminated for high-value services. Discourage the purchase of Medigap plans through an additional charge on supplemental insurance. Modify Part D low-income subsidy copayments to encourage generic drugs, preferred multisource drugs, and biosimilars.

**MEDICARE CHALLENGE: Medicare Advantage data limitations prevent study of utilization and program effectiveness.**

***COMMISSION RECOMMENDATION:*** Collect more complete and accurate MA data, by giving robust feedback to MA plans on the completeness and accuracy of their encounter data, withholding some payments from MA plans and allowing plans to

earn back those payments if their encounter data meet thresholds for completeness and accuracy, and, if necessary, requiring providers to submit MA encounter data to Medicare administrative contractors as a means of ensuring more accurate encounter data submissions.

**MEDICARE CHALLENGE: FFS Medicare lacks strong incentives to improve population-based outcomes and the coordination of care.**

***COMMISSION RECOMMENDATION:*** Incentivize improving population-based outcomes by reducing payments to hospitals, skilled nursing facilities, and home health agencies with relatively high hospital readmission rates—which could in turn incentivize stronger coordination of care. Offer prospective care coordination payments funded by reducing fees for non-primary care services. Improve value-based programs for clinicians and hospitals by using a small set of population-based outcome, patient experience, and value measures. Implement a value-based purchasing program for ambulatory surgical center services.

As Medicare consumes a growing share of the federal budget, the country's GDP, and beneficiaries' incomes, the Commission will continue to identify policy changes that could put Medicare spending on a more sustainable path, including through recommendations contained in this report and future reports to the Congress. ■

## Introduction

Sustaining Medicare fiscal solvency will be challenging. Medicare's Trustees estimate that Medicare's Hospital Insurance Trust Fund—which funds Part A services, primarily through a payroll tax—will be depleted by 2026 (Boards of Trustees 2019). To keep the Trust Fund solvent over the next 25 years, the Trustees have advised that either the payroll tax needs to be immediately increased from its current rate of 2.9 percent to 3.7 percent or Part A spending needs to be immediately reduced by 18 percent (or $26.3 billion) (Boards of Trustees 2019).[1] Such a spending reduction could be achieved by reducing Part A utilization by 18 percent or lowering Part A prices by 18 percent, or by implementing a combination of volume and price reductions (see Table 1-1, p. 23). Beyond Part A, spending on the overall Medicare program is growing—from 15 percent of federal spending in 2018 to an expected 17 percent by 2027 (Congressional Budget Office 2019a). Medicare spending also constitutes a growing share of the country's gross domestic product (GDP)—from 3.6 percent in 2018 to an expected 4.7 percent by 2027 (Figure 1-1, p. 10). It is therefore important for policymakers to start considering more impactful changes to Medicare payment policy. The Commission will continue to engage in efforts to identify policy changes that could put Medicare spending on a more sustainable path, including through recommendations contained in this report and future reports to the Congress.

This chapter reviews the following key areas to help contextualize the Medicare payment policies discussed in the rest of this report:

- national health care spending;
- Medicare spending;
- Medicare's financing challenge;
- the impact of health care spending on state and family budgets;
- recent trends in morbidity, mortality, and life expectancy;
- the next generation of Medicare beneficiaries; and
- evidence of inefficient health care spending.

This chapter also reviews the challenges that Medicare faces and summarizes some of the Commission's recommendations that address those challenges.

## National health care spending

### Spending growth

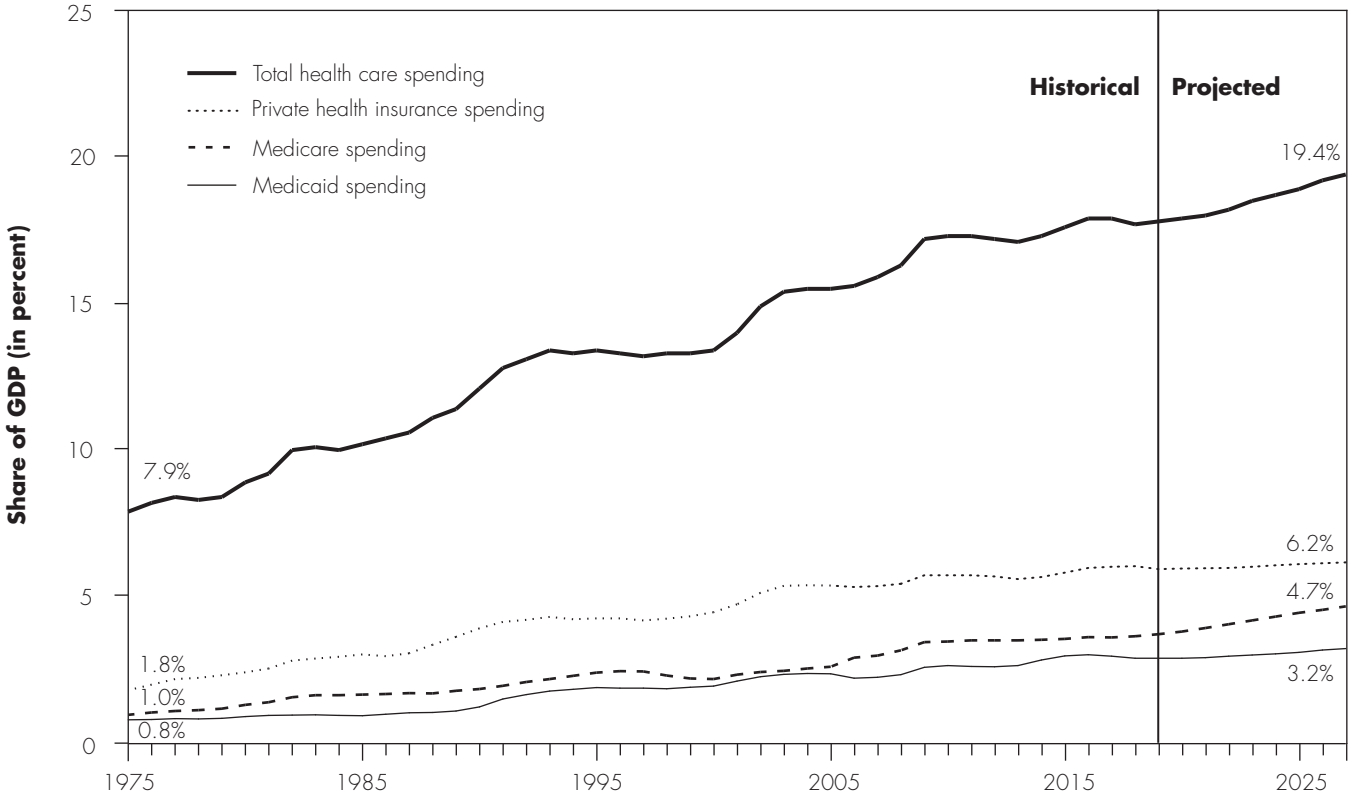
The relationship between health care spending growth and the nation's economic growth serves as a gauge for assessing spending trends. For decades, health care spending rose as a share of GDP. That general trend was true both for private health insurance spending and Medicare (Figure 1-1, p. 10). From 1975 to 2009, health care spending as a share of GDP more than doubled, from 7.9 percent to 17.2 percent ($133 billion to $2.5 trillion, respectively). Private health insurance spending as a share of GDP more than tripled over that period, from 1.8 percent to 5.7 percent ($31 billion to $828 billion). Medicare spending as a share of GDP also more than tripled over that period, from 1.0 percent to 3.5 percent ($16 billion to $499 billion, respectively). But in the recent past (from 2009 to 2013), the rate of increase in that share slowed. From 2009 through 2013, total health care, private health insurance, and Medicare spending as a share of GDP remained relatively constant. Then beginning in 2014, spending as a share of GDP for all three began rising again (Centers for Medicare & Medicaid Services 2017).

The slowdown from 2009 through 2013 in the rate of health care spending growth has not been fully explained. Contributing factors could include weak economic conditions, payment and delivery system reforms, lower Medicare payment rates for most types of providers as mandated by the Affordable Care Act of 2010 (ACA),[2] and the increased use of generic drugs as top-selling brand drugs lost patent protection (Boards of Trustees 2016, Centers for Medicare & Medicaid Services 2015, Cutler and Sahni 2013, Holahan et al. 2017).[3]

Medicare actuaries estimate that after the slowdown period that ended in 2013, spending growth increased both for private health insurance and for Medicare (Martin et al. 2019). From 2013 through 2018, growth rates for private health insurance averaged 5.8 percent per year and for Medicare averaged 5.0 percent per year. In 2018, total health care spending reached $3.6 trillion and accounted for 17.7 percent of GDP (Centers for Medicare & Medicaid Services 2019b).

**FIGURE 1–1**

**Health care spending has grown as a share of GDP**




Note: GDP (gross domestic product). First projected year is 2019. Beginning in 2014, private health insurance spending includes federal subsidies for both premiums and cost sharing for the health care exchanges created by the Affordable Care Act of 2010. Health care spending also includes the following expenditures (not shown): out-of-pocket spending; spending by other health insurance programs (the Children's Health Insurance Program (CHIP), the Department of Veterans Affairs, and the Department of Defense); and other third-party payers and programs and public health activity (including Indian Health Service; Substance Abuse and Mental Health Services Administration; maternal and child health; school health; workers' compensation; worksite health care; vocational rehabilitation; and other federal, state, and local programs).

Source: MedPAC analysis of National Health Expenditure Accounts from CMS, historical data released December 2019, projected data released February 2019.

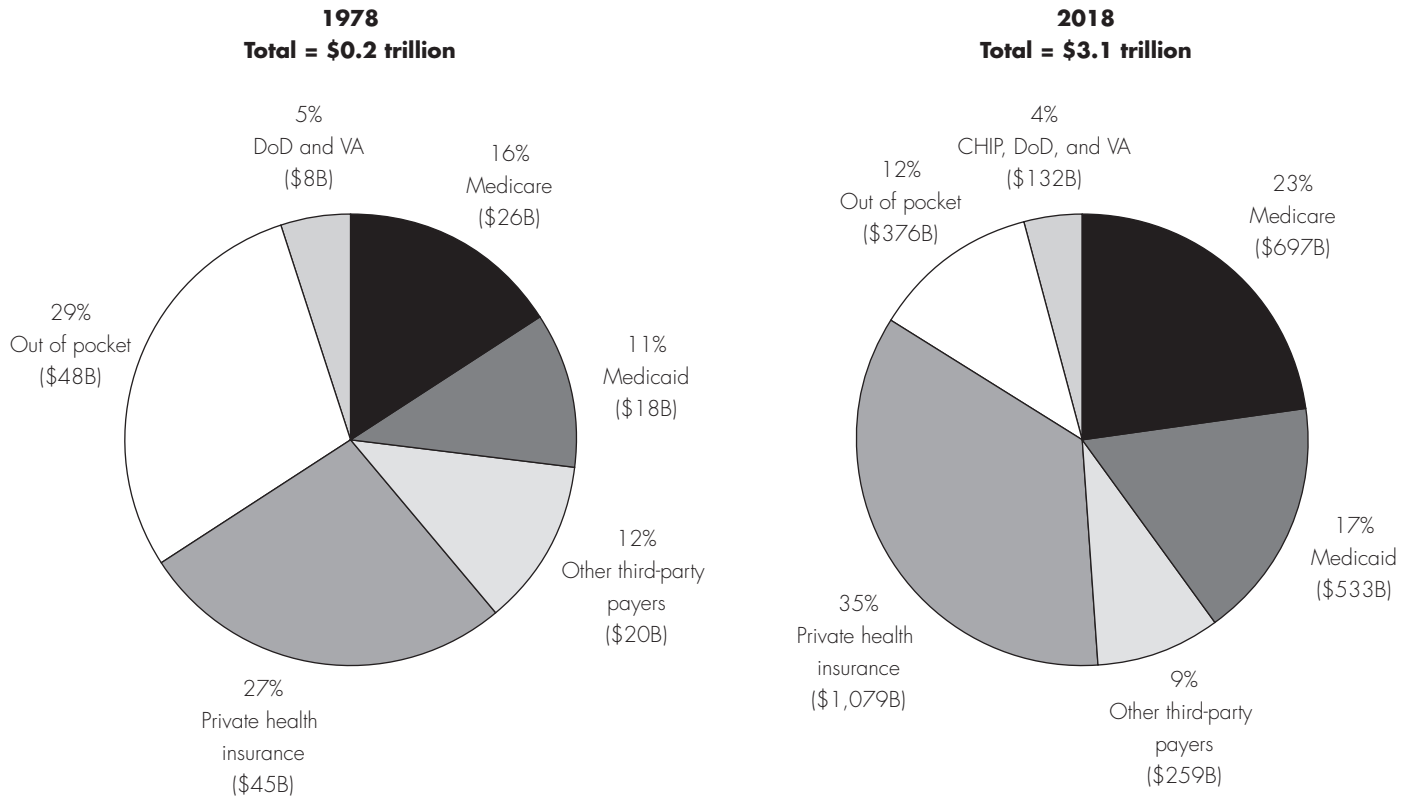
Over the next decade, Medicare actuaries project that growth in national health expenditures will be driven by "long-observed demographic and economic factors fundamental to the health sector" (Sisko et al. 2019). Spending growth is projected to be fastest for Medicare as enrollment continues to shift from private health insurance to Medicare because of the ongoing aging of the baby-boom generation into eligibility. Thus, growth rates for total health care spending will average 5.5 percent annually from 2018 to 2027, outpacing average growth in GDP by 0.8 percentage point (Sisko et al. 2019). By 2027, total health care spending as a share of GDP will grow to 19.4 percent (Sisko et al. 2019). In that year, private health insurance spending and Medicare spending are projected to reach 6.2 percent and 4.7 percent of GDP, respectively (Sisko et al. 2019).

## Personal health care spending

To better understand who is paying for health care, we examine a subset of total national health expenditures: personal health care spending, which includes all medical goods and services provided for an individual's treatment and excludes spending on government public health activities (e.g., epidemiological surveillance and disease prevention programs); administration of private and public health insurance; and investments in medical research, equipment, and structures. In 2018, personal health care spending accounted for 84 percent of total health care

**FIGURE 1–2**

**Out-of-pocket spending as a share of personal health care spending declined, while the share of spending by payers—private, Medicare, and Medicaid—increased, 1978 and 2018**




Note: DoD (Department of Defense), VA (Department of Veterans Affairs), B (billion), CHIP (Children's Health Insurance Program). "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending, such as government administration, the net cost of health insurance, public health, and investment. Spending is in nominal dollars. "Out-of-pocket" spending includes cost sharing for both privately and publicly insured individuals. Only the portion of premiums used to pay for benefits are included in the shares of each program (e.g., Medicare and private insurance) rather than in the out-of-pocket category. "Other third-party payers" includes work-site health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, other federal programs such as the Substance Abuse and Mental Health Services Administration, other state and local programs, and school health.

Source: MedPAC analysis of National Health Expenditure Accounts historical data from CMS, released December 2019.

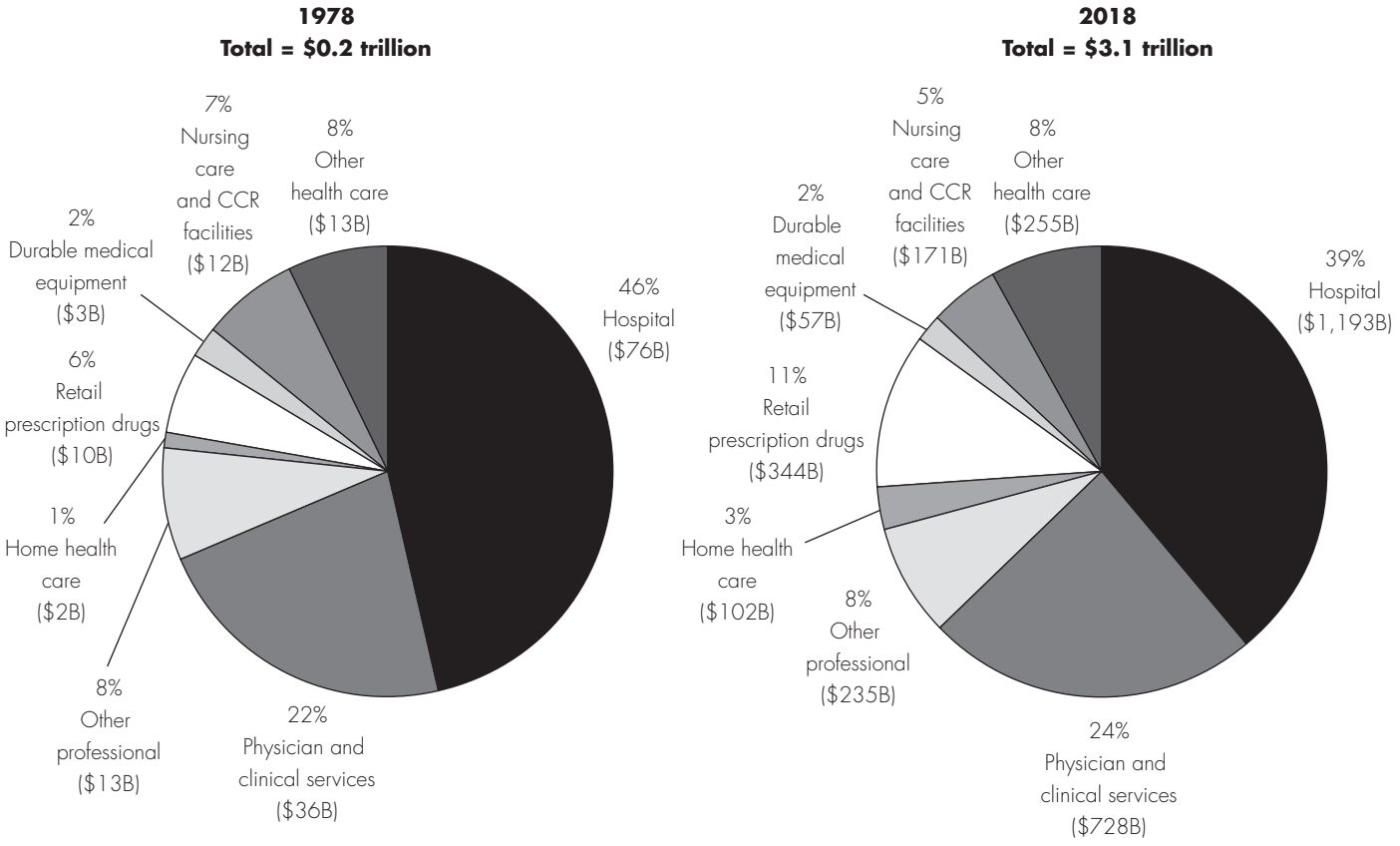
spending (Centers for Medicare & Medicaid Services 2019b).

Over the past four decades, total personal health care spending increased from $0.2 trillion to $3.1 trillion (Figure 1-2). During this period, out-of-pocket (OOP) spending (e.g., cost sharing, deductibles, and health care services not covered by insurance) as a share of total personal health care spending declined from 29 percent to 12 percent, while the shares accounted for by private health insurance, Medicare, and Medicaid all increased. At the same time, Medicare has remained the single largest purchaser of health care in the United States (Centers for Medicare & Medicaid Services 2019b).[4]

Despite the decline in the share of health care spending paid directly out of pocket by individuals and the increase in the share of health care spending paid by private and public insurance, people generally have not experienced real declines in the share of health care costs they pay.

**FIGURE 1–3**

## Hospital care and physician and clinical services accounted for the largest shares of personal health care spending in 1978 and 2018




Note: CCR (continuing care retirement), B (billion). "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending, such as government administration, the net cost of health insurance, public health, and investment. "Other health care" includes expenditures on nondurable medical products and other health, residential, and personal care. "Other professional" includes expenditures on dental and other professional services. "Nursing care and CCR facilities" includes nursing care facilities and continuing care retirement communities. "Hospital" includes all services provided in hospitals to patients: room and board, ancillary services such as operating room fees, inpatient and outpatient care, services of resident physicians, inpatient pharmacy, hospital-based nursing home care, hospital-based home health care, and fees for any other services billed by the hospital, such as hospice. "Physician and clinical services" includes services provided in physician offices, outpatient care centers, and in hospitals if the physician bills independently for those services, plus the portion of medical laboratory services that are billed independently by the laboratories.

Source: MedPAC analysis of National Health Expenditure Accounts historical data from CMS, released December 2019.

One reason is that in the commonly defined health care spending categories, the premiums people pay (which have grown over time) are not included in the OOP category but, rather, in the private health insurance and Medicare categories. Second, people receive lower salaries and reduced benefits in exchange for employer-sponsored health insurance (Baicker and Chandra 2006, Burtless and Milusheva 2012, Gruber 2000).

CMS actuaries estimate that, in 2018, Medicare covered about 59 million people, Medicaid covered about 73 million people, private health insurance covered 201 million people, and 31 million people were uninsured (Hartman et al. 2020).

Some people have coverage from more than one source. For example, about 10 million people are dually enrolled in both Medicare and Medicaid (Boards of Trustees 2018).

## Prescription drug spending trends

Spending on prescription drugs has increased significantly compared with other sectors, nearly doubling as a share of personal health care spending, from 6 percent in 1978 to 11 percent in 2018 (see Figure 1-3).

CMS's Office of the Actuary projects that national spending on prescription drugs will grow faster than spending on other health care goods and services in the coming years—growing at an average annual rate of 5.9 percent from 2018 to 2027 (Centers for Medicare & Medicaid Services 2019a). The Office explains that "this trend primarily reflects faster anticipated growth in drug prices, which is attributable to a larger share of drug spending being accounted for by specialty drugs over the coming decade" (Cuckler et al. 2018). The American Academy of Actuaries attributes prescription drug spending growth to both price and utilization, specifically driven by "delays in introducing generics, higher cost inflation in the United States for pharmaceuticals relative to other nations, and the compensation of numerous stakeholders throughout the pharmacy supply chain" (Hanna and Uccello 2018).

In 2016, across all payers, retail drug spending made up 10 percent of national health expenditures (Martin et al. 2019). However, retail drugs made up a greater share of Medicare spending—14 percent. Medicare's retail spending in 2016 reflects Part D program spending and prescription drugs billed separately under Part B.

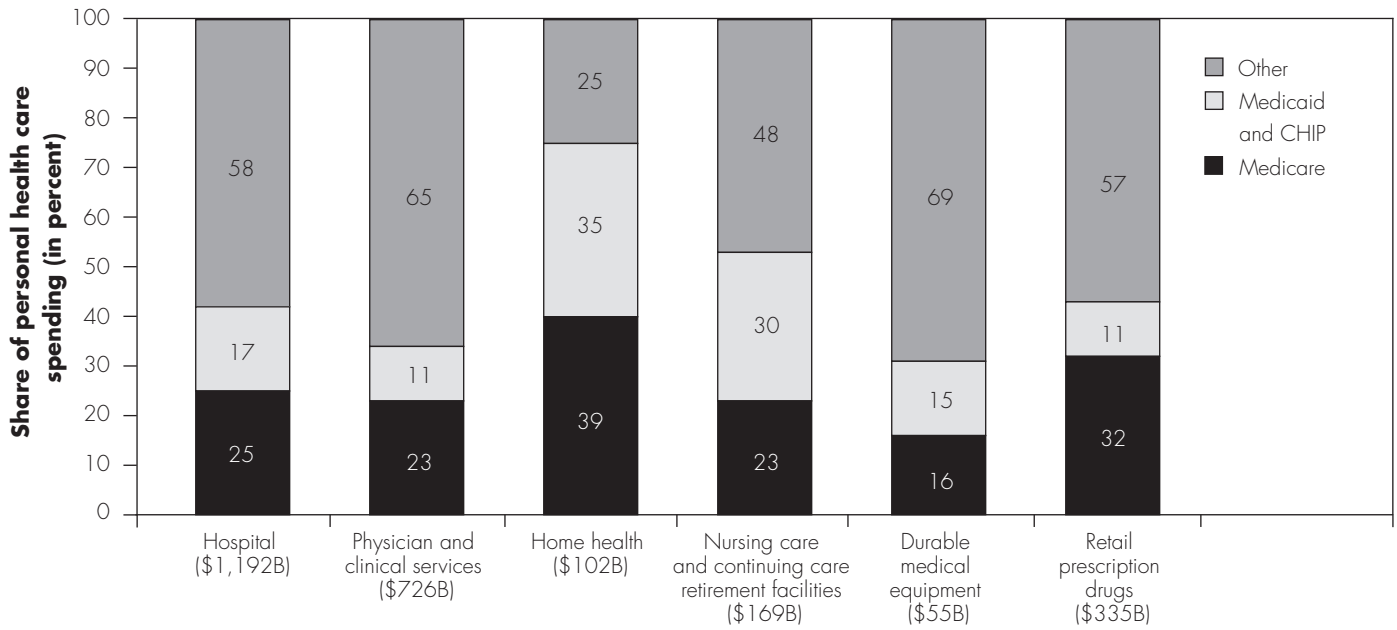
The Commission developed estimates of Medicare drug spending that include not only retail drug spending, which is the typical metric used to describe the magnitude of drug spending, but also spending for drugs and pharmacy services used as inputs at health care facilities, which is not typically included in measures of drug spending. These estimates are based on Medicare cost reports, Medicare claims, and estimates of program spending from the Trustees reports. The Commission estimates that, in 2016, total drug and pharmacy services, including those provided at health care facilities, accounted for 23 percent of Medicare spending (excluding beneficiary cost sharing). That total share was 20 percent in 2007. ■

Medicaid pays for either a portion or all of the Medicare premium and OOP health care expenses for those enrollees who qualify for dual enrollment based on limited income and resources. Enrollees in public health insurance programs may also have private health insurance. For example, Medicare beneficiaries typically also have supplemental insurance sold by private companies to pay some of the health care costs that Medicare does not cover, such as copayments, coinsurance, and deductibles.

In 2018 as well as in 1978, the largest shares of personal health care spending were for hospital care and physician and clinical services (Figure 1-3).[5] In 2018, hospital care accounted for 39 percent of spending ($1,193 billion), and physician and clinical services accounted for 24 percent ($728 billion). Smaller shares went to spending on retail prescription drugs (11 percent, or $344 billion), nursing care and continuing care retirement (CCR) facilities (5 percent, or $171 billion), and home health care services (3 percent, or $102 billion) (see text box on prescription drug spending trends). Between 1978 and 2018, the share of spending on hospital care declined (from 46 percent to 39 percent), while the share of spending for retail prescription drugs increased (from 6 percent to 11 percent) (Centers for Medicare & Medicaid Services 2019a).

In 2018, Medicare accounted for 23 percent of spending for personal health care services (Figure 1-2, p. 11), but its share varied by type of service, with a slightly higher share of spending on hospital care (25 percent) and retail prescription drugs (32 percent) and a much higher share of spending on home health services (39 percent) (Figure 1-4, p. 14). Medicare's share of spending on nursing care facilities was smaller than Medicaid's share because Medicare's benefit pays for skilled nursing or rehabilitation services only, whereas Medicaid pays for

**FIGURE 1–4** **Medicare's share of spending on personal health care varied by type of service, 2018**




Note: CHIP (Children's Health Insurance Program), B (billion). "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending such as government administration, the net cost of health insurance, public health, and investment. "Hospital" includes all services provided in hospitals to patients: room and board, ancillary services such as operating room fees, inpatient and outpatient care, services of resident physicians, inpatient pharmacy, hospital-based nursing home care, hospital-based home health care, and fees for any other services billed by the hospital, such as hospice. "Physician and clinical" includes services provided in physician offices, outpatient care centers, and in hospitals if the physician bills independently for those services, plus the portion of medical laboratory services that are billed independently by the laboratories. "Nursing care facilities and continuing care retirement communities" includes freestanding facilities primarily engaged in providing inpatient nursing, rehabilitative, and continuous personal care services to persons requiring nursing care and continuing care retirement communities with on-site nursing care facilities. "Other" includes private health insurance, out-of-pocket spending, and other private and public spending. Other service categories included in personal health care that are not shown here include other professional services; dental services; other health, residential, and personal care; and other nondurable medical products. Components may not total 100 percent because of rounding.

Source: MedPAC analysis of National Health Expenditure Accounts from CMS, historical data released December 2019.

custodial care (assistance with activities of daily living) provided in nursing homes for people with limited income and assets. Medicare's share of spending varies for other service categories included in personal health care that are not shown in Figure 1-4, namely, other professional services; dental services; other health, residential, and personal care; and other nondurable medical products.

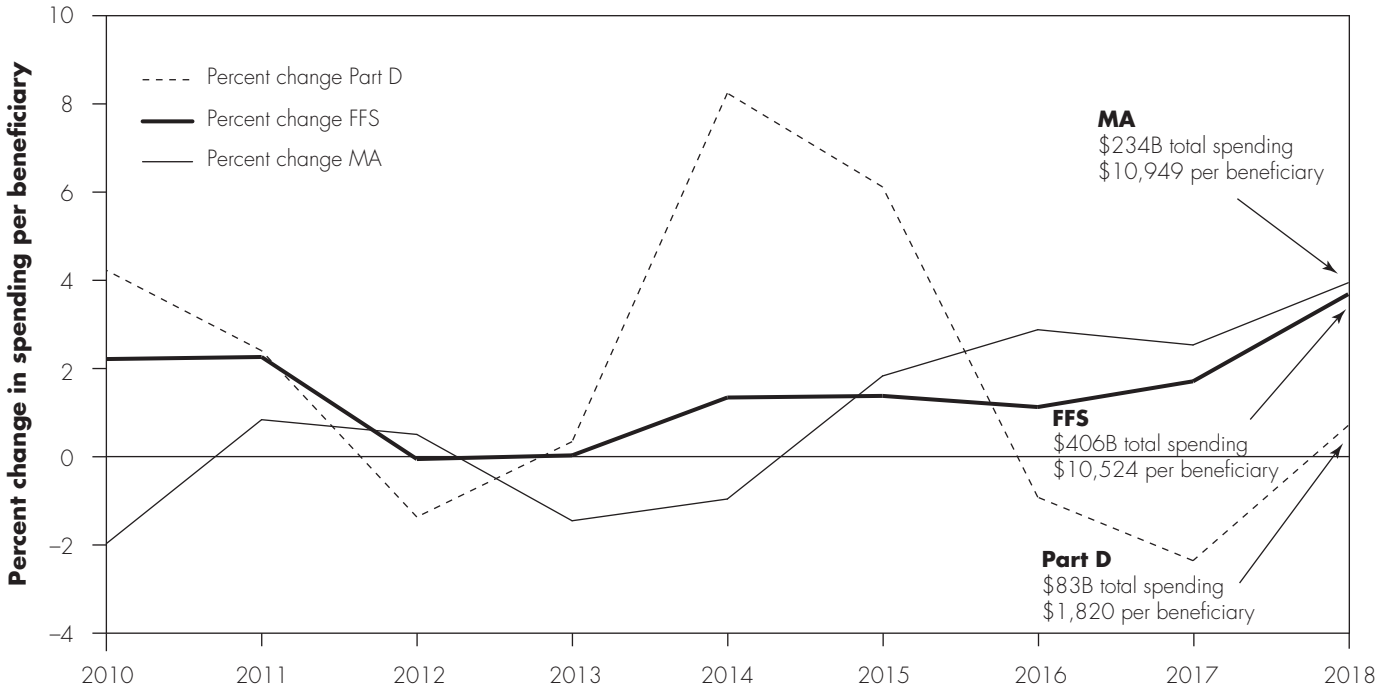
## Medicare spending

Medicare spending can be divided into three program components: the traditional fee-for-service (FFS) program, the Medicare Advantage (MA) program, and the Part D prescription drug program.

- **Medicare's traditional FFS program.** In FFS, Medicare pays health care providers directly for health care goods and services furnished to Medicare beneficiaries at prices set through legislation and regulation. In 2018, Medicare spent $406 billion, or $10,524 per beneficiary in traditional FFS (Boards of Trustees 2018).[6]
- **MA program.** Beneficiaries can choose, as an alternative to FFS, to enroll in MA, which consists of private health plans that receive capitated payments (per enrollee payments) for providing health care coverage for enrollees. MA plans pay health care

**FIGURE 1–5**

**Growth in per beneficiary Medicare spending differs across the three program components**




Note: FFS (fee-for-service), MA (Medicare Advantage), B (billion). Spending is on an incurred basis. Part D spending excludes total premiums paid to Part D plans by enrollees. We calculate per beneficary spending by dividing total spending for each category reported in the Trustees report by the appropriate enrollment number (i.e., for Part A, Part B, or Part D) reported in the Trustees report.

Source: MedPAC analysis of data from the 2019 annual report of the Boards of Trustees of the Medicare trust funds.

providers for health care goods and services furnished to their enrollees at prices negotiated between the plans and providers. In 2018, Medicare spent $234 billion, or $10,949 per beneficiary in MA.

- **Medicare Part D prescription drug program.** Through Part D, beneficiaries can obtain subsidized prescription drug coverage by voluntarily purchasing insurance policies from private stand-alone drug plans or MA prescription drug plans. Medicare heavily subsidizes the premiums established by those plans. In 2018, Medicare spent $83 billion, net of Part D premiums (mostly paid by beneficiaries), or $1,820 per beneficiary in Part D.

Growth in per beneficiary spending tends to differ across the three program components. From 2011 to 2013, growth was very slow across all three (Figure 1-5). More mixed trends emerged between 2014 and 2018. The lower growth rates were generally because of decreased use of health care services and restrained payment rate increases.

From 2013 to 2018, FFS per beneficiary spending growth averaged 1.9 percent annually. Part of this low growth reflects the ACA's lowered payment rate updates in FFS for many types of providers (other than physicians). However, beginning in 2014, FFS spending gradually grew because of an increase in per beneficiary spending on a wide range of outpatient services, including services received in hospital outpatient departments and physician services.

**FIGURE 1–6**

**Per beneficiary FFS spending growth increased in most settings following the 2009–2013 slowdown in growth of health care spending, 2009–2018**


Note: FFS (fee-for-service). We calculate per beneficiary spending by dividing total spending for each category reported in the Trustees report by the appropriate enrollment number (i.e., for Part A, Part B, or Part D) reported in the Trustees report. Outpatient hospital services and outpatient lab services are combined in the figure because a large portion of outpatient laboratory services were bundled into the outpatient prospective payment system effective January 1, 2014.

Source: MedPAC analysis of data from the 2019 annual report of the Boards of Trustees of the Medicare trust funds.

From 2013 to 2018, MA per beneficiary spending growth averaged 2.0 percent annually. Historically, Medicare generally has spent more for a beneficiary enrolled in MA than if that same beneficiary had been enrolled in FFS. To bring payments more in line with FFS, the ACA began lowering payments to plans in 2011. MA's growth rate would therefore have been lower, but the ACA payment reductions were offset somewhat by quality bonus payments and plans' increased coding of beneficiaries' medical conditions (payments to MA plans are higher when beneficiaries have more medical conditions, all other things being equal).

Of the three program components, Part D per beneficiary spending growth has fluctuated the most over the past decade.[7] From 2010 to 2012, average per beneficiary spending growth slowed, in part due to the increase in low-priced generic drugs on the market and plans' efforts to encourage beneficiaries to use generics and other low-priced drugs.

However, in both 2014 and 2015, spending growth per beneficiary in excess of 6 percent caused Part D spending to spike to $1,868 per beneficiary. Increased spending on high-priced specialty drugs to treat hepatitis C mainly accounts for this jump. After the high spending of 2015, the surge of hepatitis C drug spending tapered off while Part D enrollment continued to grow, which contributed to per Part D enrollee spending declining for two years and then growing to $1,820 by 2018 (Boards of Trustees 2019, Boards of Trustees 2018, Boards of Trustees 2017). The Medicare Trustees project

the annual growth in per beneficiary Part D spending from 2019 to 2027 to remain higher than growth in other categories of spending, averaging 4.9 percent per year (Boards of Trustees 2019).

Figure 1-6 provides a more detailed look at FFS spending growth over the past decade. Generally, all settings experienced an increase in per beneficiary spending growth after the 2009 through 2013 slowdown; however, the impact was not uniform. Two settings experienced greater reductions in the later period. For physician fee schedule services, the average annual growth in per beneficiary spending slowed from 1.9 percent in the period from 2009 to 2013 to 0.4 percent in the period from 2013 to 2018. For skilled nursing facilities, the average annual growth in per beneficiary spending fell from 0.6 percent during the slowdown period to -0.5 percent in the later period.

Despite the recent slowing of growth rates, cumulative growth in per beneficiary FFS spending over the past decade has increased in a majority of settings and increased substantially in one setting. Per beneficiary spending on outpatient hospital and lab services grew more than three percentage points faster than per capita GDP. In contrast, during this time, per beneficiary spending on durable medical equipment fell by an average of 2.0 percent per year. That decline was primarily due to the phasing in of a competitive bidding program for durable medical equipment in which suppliers submit bids to provide services to beneficiaries.

Prior Commission reports have explored the relationship between inpatient, outpatient, and physician services and found that growth in outpatient services in part reflects hospitals purchasing freestanding physician practices and billing the latter's services through the higher paying hospital outpatient prospective payment system (Martin et al. 2019, Medicare Payment Advisory Commission 2015, Medicare Payment Advisory Commission 2014, Medicare Payment Advisory Commission 2013, Medicare Payment Advisory Commission 2012).

## Comparison of private sector and Medicare spending trends

Over the past ten years, per enrollee spending on health care in the private sector grew (Centers for Medicare & Medicaid Services 2018b). Increased prices were largely responsible for spending growth, which occurred despite a decline in service use (Health Care Cost Institute 2018, Health Care Cost Institute 2016, Health Care Cost Institute 2015). One key driver of the private sector's higher prices was provider market power (Baker et al. 2014a, Baker et al. 2014b, Cooper et al. 2018, Gaynor and Town 2012, Medicare Payment Advisory Commission 2017a, Robinson and Miller 2014, Scheffler et al. 2018). Hospitals and physician groups have increasingly consolidated, in part to gain leverage over insurers in negotiating higher payment rates. That consolidation contributed to per enrollee growth in spending on private health insurance of 4.3 percent annually from 2008 to 2018. By comparison, over that same period, Medicare spending per enrollee increased by 2.0 percent annually (Centers for Medicare & Medicaid Services 2019b). This difference suggests that the effectiveness of the tools private plans have to constrain service use has been counteracted by the higher prices plans pay relative to the lower Medicare payment rates under the program's administered pricing system.

On average, since 2009, commercial insurance prices have grown faster than Medicare's prices (Health Care Cost Institute 2016, Medicare Payment Advisory Commission 2017a). The faster growth in provider prices contributed to HMO premiums for a single person growing by 41 percent and preferred provider organization premiums for a single person by 45 percent from 2009 to 2018 (Figure 1-7, p. 18).

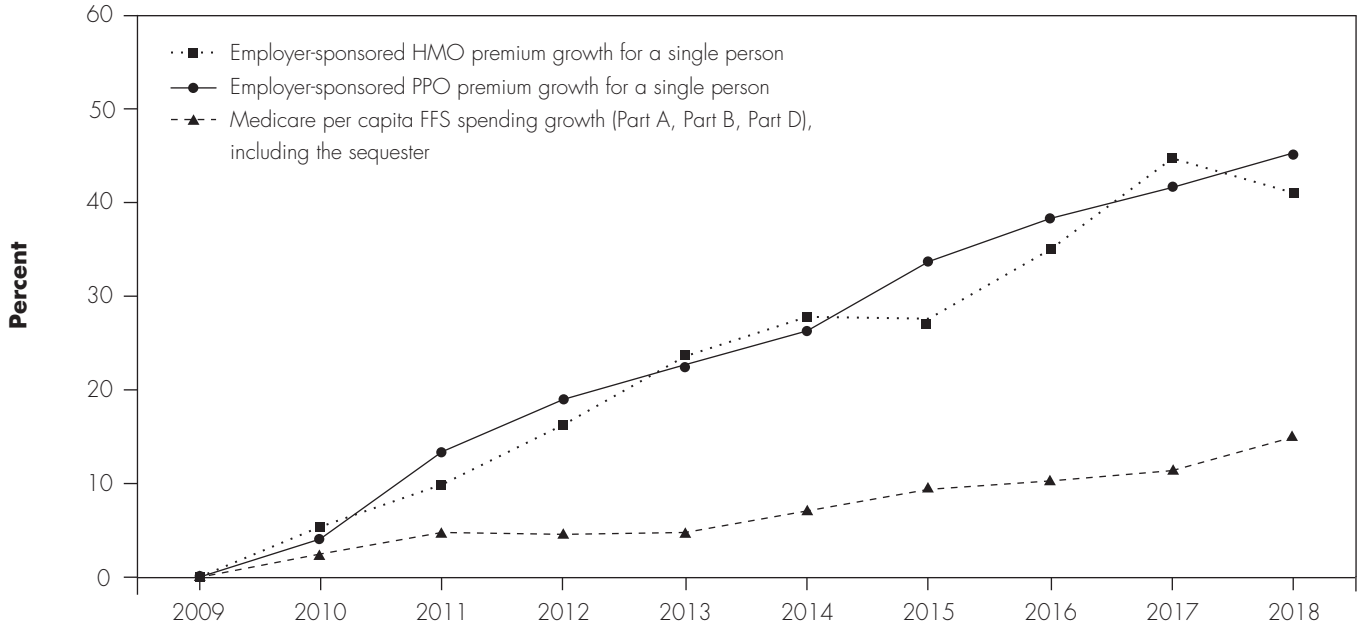
To compare employer-sponsored plans' premium growth with Medicare cost growth, we examined per capita spending for beneficiaries with FFS Medicare, including per capita spending on Part A, Part B, and Part D. Over the period from 2009 to 2018, combined Medicare per capita costs grew by about 15 percent. If FFS Medicare spending had followed growth in commercial pricing, Medicare costs would have grown substantially more.

Regulators and researchers have noted concerns about increased hospital consolidation and its effect on prices (Abelson 2018, Department of Justice and the Federal Trade Commission 1996, Federal Trade Commission 2016a, Federal Trade Commission 2016b). From 2003 to 2017, the share of hospital markets that were "super"-concentrated increased from 47 percent to 57 percent.[8] Super-concentrated markets all have one dominant system with a majority of hospital discharges. A summary of the literature stated:

> Mergers between rival hospitals are likely to raise the price of inpatient care and these effects are

**FIGURE 1–7**

**Premiums for employer-sponsored commercial insurance have grown more than twice as fast as Medicare costs, 2009–2018**




Note: HMO (health maintenance organization), PPO (preferred provider organization), FFS (fee-for-service). Medicare spending is reported including the effects of the sequester, which reduced program spending for most benefits by 2 percent beginning in 2013.

Source: Employer-sponsored premium data from Kaiser Family Foundation surveys, 2009 through 2018. Medicare spending figures from MedPAC analysis of data from the 2019 annual report of the Boards of Trustees of the Medicare trust funds.

larger in concentrated markets. The estimated magnitudes are heterogeneous and differ across market settings, hospitals, and insurers. (Gaynor et al. 2014)

While most of the literature suggests hospital systems with larger market shares are in a stronger bargaining position to negotiate higher prices, the hospital industry generally disputes the assertion that market power causes an increase in prices. For example, a recent study funded by the American Hospital Association (AHA) concluded that, after being acquired by another hospital or system, the acquired hospitals' revenue per discharge fell by 3.5 percent and the hospitals' costs per discharge fell by 2.3 percent on average (American Hospital Association 2019, Noether and May 2017). The AHA also asserts that readmission and mortality rates improved following mergers. However, a more recent study using almost identical data suggests that mortality and readmission rates did not improve and patient satisfaction declined slightly after mergers (Beaulieu et al. 2020). In addition, a recent study of commercial hospital prices and consolidation found that prices tend to increase faster in markets where consolidation increased (Health Care Cost Institute 2019). A third study, by the California Healthcare Foundation, used a different source of prices (IBM Health MarketScan claims data) and found higher prices for hospital services in California markets with higher levels of concentration (California Healthcare Foundation 2019). In sum, while the literature is mixed, most of the literature suggests hospital consolidation is associated with higher prices.

Consolidation of clinician practices has also increased: A study of available data found a steady increase in the

number of mergers and acquisitions involving physician medical groups in recent years, with 62 such deals in 2014 versus 252 deals in 2018 (Irving Levin Associates Inc. 2019). The American Medical Association's survey of physicians indicates that, over time, physicians have shifted from solo and small practices to larger practices (Kane 2015). The Government Accountability Office (GAO) found that, between 2007 and 2013, the number of physicians in "vertically consolidated" practices—hospital-acquired physician practices, physicians hired as salaried employees, or both—nearly doubled (Government Accountability Office 2015). In addition, the Federal Trade Commission observed that "providers increasingly pursue alternatives to traditional mergers such as affiliation arrangements, joint ventures, and partnerships, all of which could also have significant implications for competition" (Federal Trade Commission 2016b). After controlling for the level of horizontal concentration of physician services, three recent studies found that hospital–physician integration led to commercial price increases of 3 percent to 14 percent (Capps et al. 2018, Medicare Payment Advisory Commission 2017a, Neprash et al. 2015).

The Commission is concerned that market concentration effects will lead to higher Medicare spending if commercial prices are "imported" into Medicare. The Commission has tried to counteract these effects by recommending restrained payment updates and site-neutral payments (paying the same for a service regardless of the setting of care). Medicare beneficiaries have robust access to hospital and physician services in most markets. And with respect to hospital services, given the low occupancy rates and the positive marginal profits of taking a Medicare patient, access to care is unlikely to be of concern in the near term (Medicare Payment Advisory Commission 2017b).

Over time, private sector trends can influence Medicare trends. If the private sector is unable to constrain price growth, the profitability of caring for commercially insured patients will increase relative to the profitability of caring for Medicare beneficiaries. Eventually, the difference between commercial rates and Medicare rates will grow so large that more hospitals will have an incentive to focus primarily on patients with commercial insurance, which will exert pressure on the Medicare program to increase its payment rates. Thus, in the long term, Medicare beneficiaries' access to care may in part depend on commercial payers restraining rates paid to hospitals (Medicare Payment Advisory Commission 2009, Stensland et al. 2010, White and Wu 2014).

### Medicare spending projections

What do these current trends portend for Medicare? The growth in Medicare's per beneficiary spending has slowed from average annual rates of 5.6 percent and 7.0 percent in the 1990s and 2000s (respectively) to 1.5 percent over the past eight years (Figure 1-8, p. 20).

For the next 10 years, the Trustees and the Congressional Budget Office (CBO) project that growth in per beneficiary spending will be higher than the recent lows but lower than the historical highs, with an average annual growth rate of more than 5 percent (Boards of Trustees 2019, Congressional Budget Office 2019b).

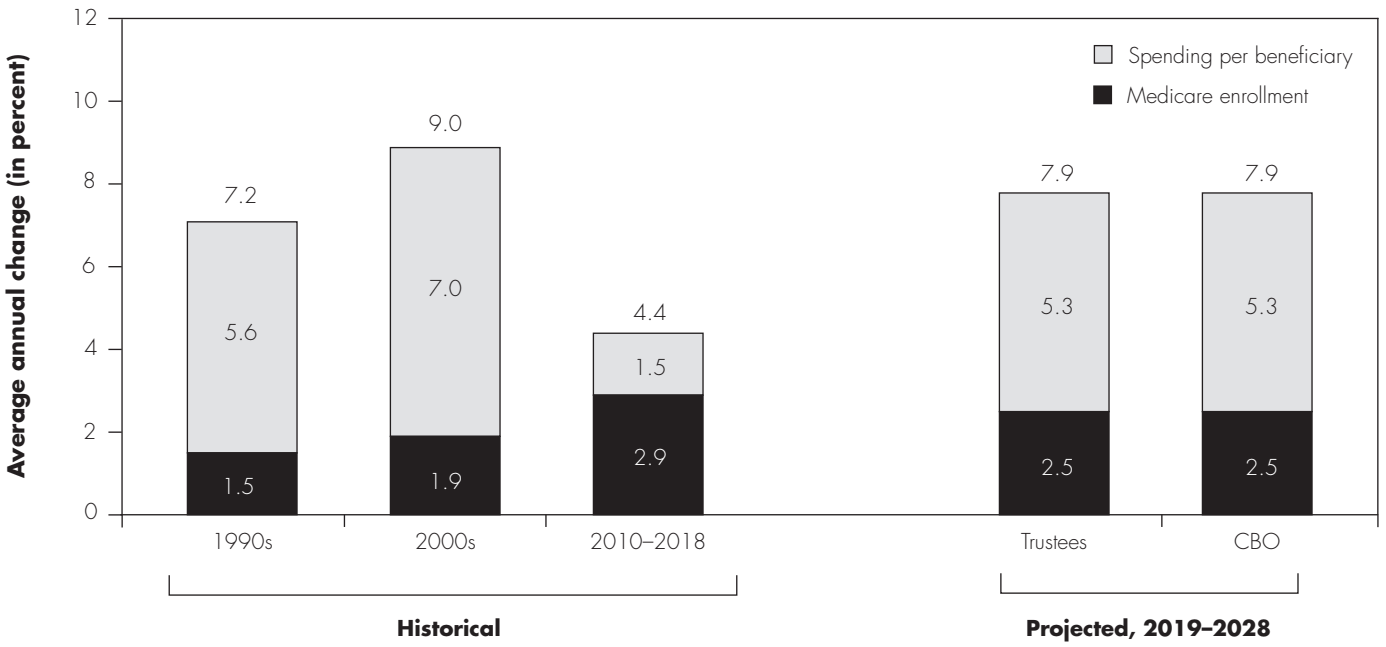
At the same time, the aging of the baby-boom generation is continuing to boost enrollment. Since 2010, the enrollment growth rate rose from about 2 percent per year historically to almost 3 percent and is projected to continue growing faster than historical rates throughout the next decade. So, despite the slowdown in spending per beneficiary (relative to historical standards), growth in total spending over the next decade is projected by the Trustees and CBO to average 7.9 percent annually, which outpaces the projected average annual GDP growth of about 4.7 percent by more than 3 percentage points. At those rates, Medicare annual spending would rise from $711 billion in fiscal year 2018 to $1 trillion by fiscal year 2022 under the Trustees' projection or by the following fiscal year under CBO's projection (Figure 1-9, p. 21) (Boards of Trustees 2019, Congressional Budget Office 2019b).

## Medicare's financing challenge

The aging of the baby-boom generation will have a profound impact both on the Medicare program and on the taxpayers who support it. Workers pay for the Medicare program through payroll taxes and taxes that are deposited into the general fund of the Treasury. The number of workers per Medicare beneficiary has already declined from about 4.6 around the time of the program's inception to 3.0 in 2019 (Figure 1-10, p. 22). Over the next decade, as Medicare enrollment surges, the number of workers per beneficiary is projected to decline further: by 2029,

**FIGURE 1–8**

**Despite recent slowdown in per beneficiary spending growth, total Medicare spending growth rate is projected to rise**




Note: CBO (Congressional Budget Office). Components of average annual changes may not sum to totals due to rounding. Trustees' numbers are reported by calendar year; CBO's numbers are reported by fiscal year.

Source: 2019 annual report of the Boards of Trustees of the Medicare trust funds and CBO's Medicare May 2019 baseline.

the Medicare Trustees project just 2.5 workers for each Medicare beneficiary.[9]

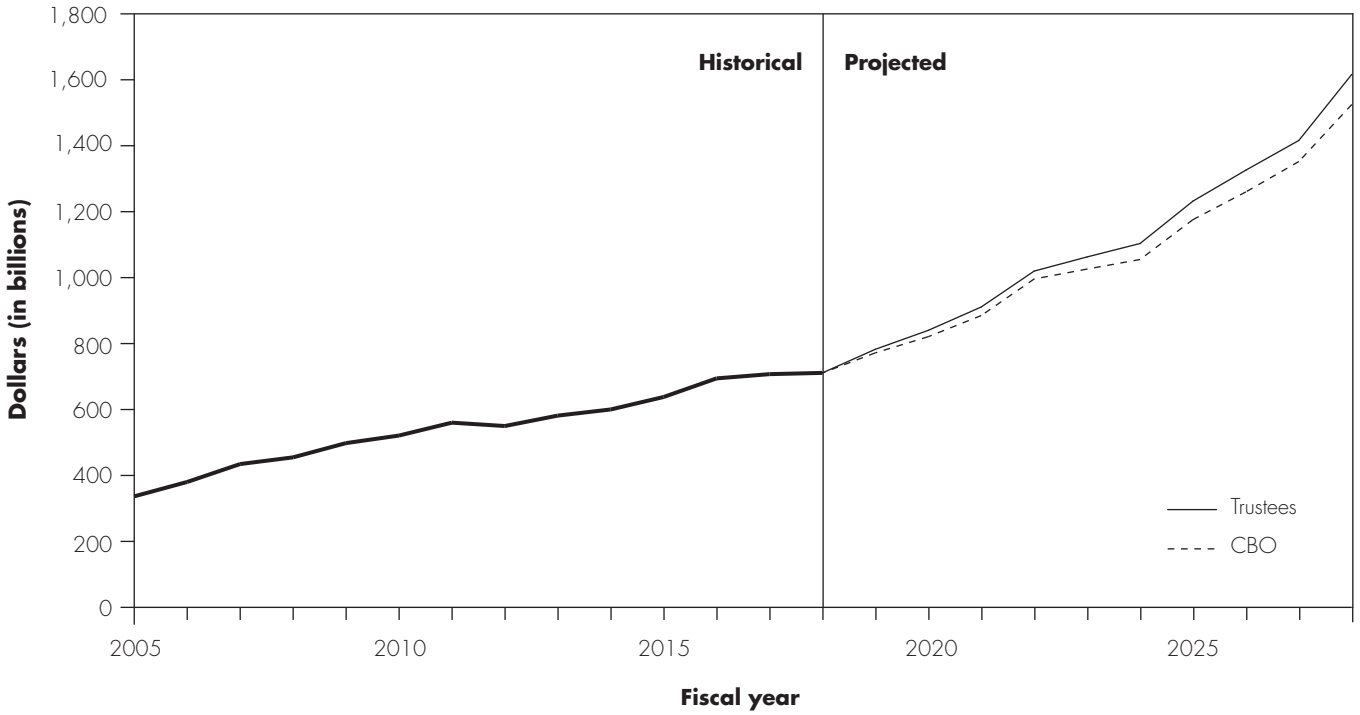
These demographics create a financing challenge for the Medicare program. Since payroll tax revenues are not growing as fast as Part A spending, the Trustees project that Medicare's Hospital Insurance (HI) Trust Fund will become depleted and unable to pay its bills in full by 2026, but that date does not tell the whole story (Boards of Trustees 2019). The HI Trust Fund covers less than half of Medicare spending (41 percent in 2018), and that share is projected to fall to 39 percent by 2024 (Figure 1-11, p. 23). The Supplementary Medical Insurance (SMI) Trust Fund covers the remainder. The HI Trust Fund pays for Medicare Part A services—such as inpatient hospital stays, skilled nursing facilities, and hospice—and is largely (87 percent in 2018) funded through a dedicated payroll tax (i.e., a tax on wage earnings).[10]

To keep the HI Trust Fund solvent over the next 25 years, the Trustees estimate that either the payroll tax would need to be increased immediately from its current rate of 2.9 percent to 3.7 percent, or Part A spending would need to be reduced immediately by 18 percent (Boards of Trustees 2019) (Table 1-1, p. 23).[11] (Projection periods of 50 years and 75 years also included in Table 1-1). Under current law, once the HI Trust Fund is depleted, payments to providers would be reduced to levels that could be covered by incoming tax and premium revenues. However, the Trustees note that:

> If the projections reflected such payment reductions, then any imbalances between payments and revenues would be automatically eliminated, and the [Trustees] report would not serve its essential purpose, which is to inform policymakers and the public about the size of any trust fund deficits that would need to be resolved

**FIGURE 1–9**

**Trustees and CBO project Medicare annual spending to more than double over the next decade**




Note: CBO (Congressional Budget Office).

Source: 2019 annual report of the Boards of Trustees of the Medicare trust funds and CBO's Medicare May 2019 baseline.

> to avert program insolvency. To date, lawmakers have never allowed the assets of the Medicare HI Trust Fund to become depleted. (Boards of Trustees 2018)

The rest of Medicare benefit spending is covered by SMI. It covers services under Part B (physician services and other ambulatory care received in hospital outpatient departments) and Part D (prescription drug coverage). SMI is a trust fund in name only; it is not funded through dedicated taxes like the HI Trust Fund is. Specifically, Part B and Part D are financed by premiums paid by beneficiaries (covering 25 percent of spending) and general tax revenues plus federal borrowing (covering 75 percent of spending), which are reset each year to match expected Part B and Part D spending.[12]

Since premiums and transfers are set to grow at the same rate as Part B and Part D spending, the SMI Trust Fund is expected to remain solvent by construction. However, as SMI spending rises, premiums and transfers from the nation's Treasury to the Medicare program also grow, increasing deficits, the debt, and the strain on household budgets both of workers and retirees, and—assuming no other policy or legislative interventions—reducing the resources available to make investments that expand future economic output (e.g., investments in education, transportation, and research and development).

For a more complete financial picture, consider the combined spending and sources of income from the two trust funds. The top line of Figure 1-12 (p. 24) depicts total Medicare spending as a share of GDP. The layers below the line represent Medicare's three primary sources of income: payroll taxes, premiums paid by beneficiaries, and general revenue transfers. The white space below the total Medicare spending line in Figure 1-12 represents

**FIGURE 1–10** **Medicare enrollment is rising while number of workers per HI beneficiary is declining**

**Figure 1-10a. Medicare HI enrollment**

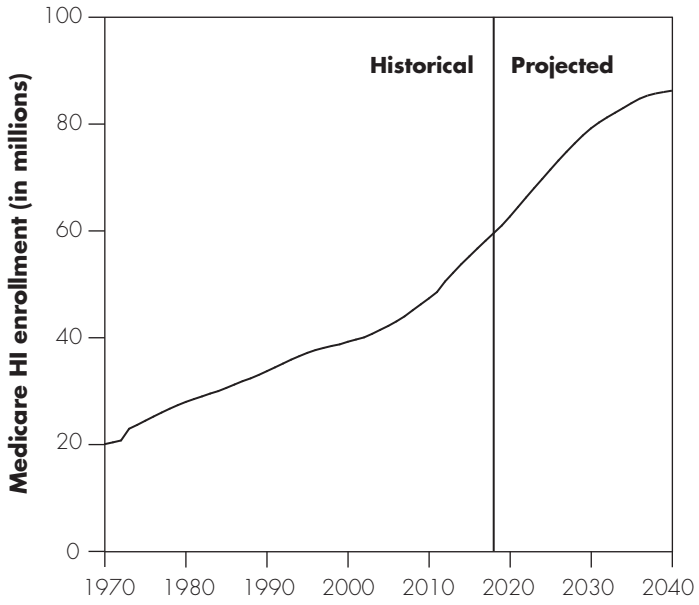
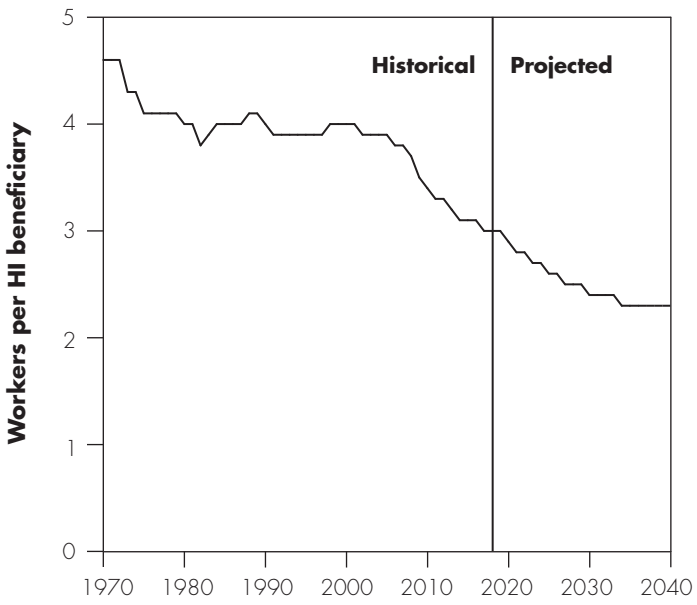



**Figure 1-10b. Workers per HI beneficiary**




Note: HI (Hospital Insurance). Hospital Insurance is also known as Medicare Part A.

Source: 2019 annual report by the Boards of Trustees of the Medicare trust funds.

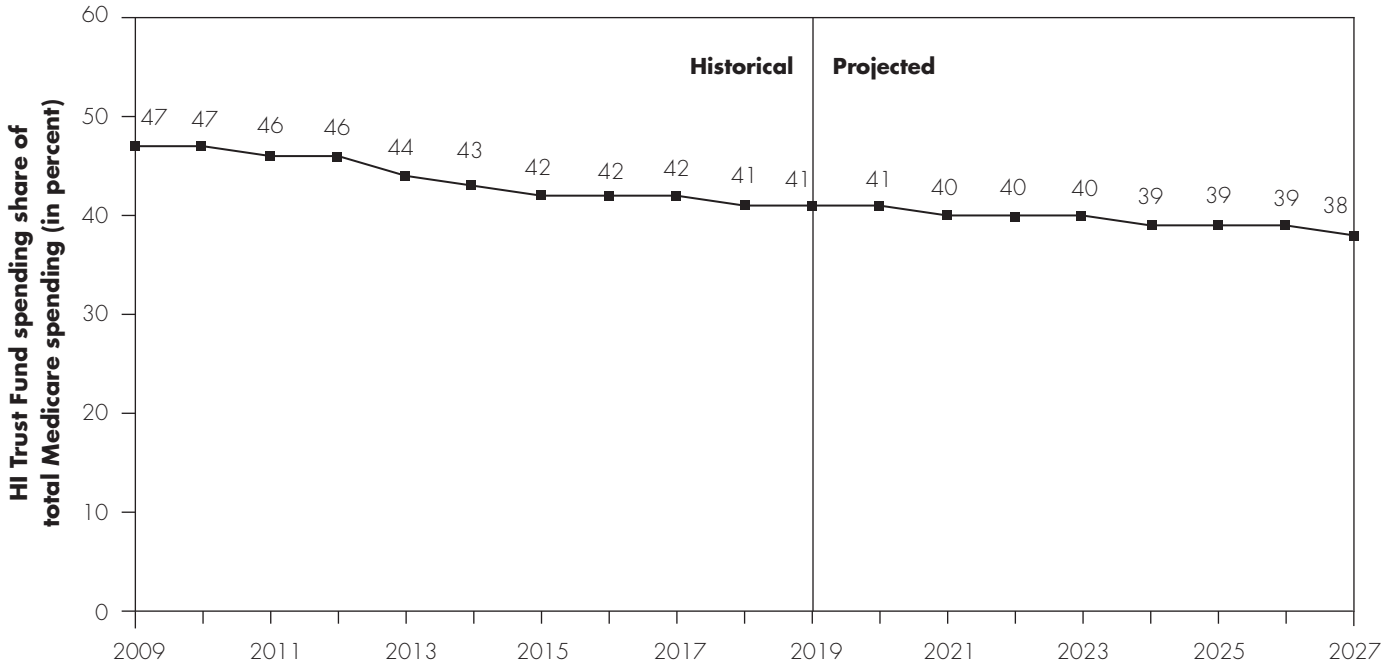
the Part A deficit created when payroll taxes fall short of Part A spending. Figure 1-12 reflects projections in the Medicare Trustees report, which are based on current law with the exception of disregarding payment reductions that would result from the projected depletion of the HI Trust Fund. Under current law, payments to Part A providers would be reduced to levels that could be covered by incoming tax and premium revenues when the HI Trust Fund becomes depleted. Thus, as Medicare actuaries and others have observed, total Medicare spending would be shifted down from the total projected spending by an amount equal to the Part A deficit (Aaron 2015, Spitalnic 2016). As noted by the actuaries, if the projections reflected such payment reductions, any imbalances between payments and revenues would be automatically eliminated. To date, lawmakers have never allowed the assets of the Medicare HI Trust Fund to become depleted (Boards of Trustees 2019).

Undeniably, the Part A deficit is a financing challenge, but so too is the large and growing share of Medicare spending funded through general revenues. General revenues account for 43 percent of Medicare funding today and, under current law, are projected to grow to 48 percent by 2030; notably, in this context, general revenues include both general tax revenue as well as federal borrowing since, with few exceptions, federal spending has exceeded federal revenues since the Great Depression.

The line at the top of Figure 1-13 (p. 25) represents total federal spending as a share of GDP; the line below spending represents total federal revenues. The difference between these two lines represents the budget deficit, which must be covered by federal borrowing. For most years over the past several decades, the federal government has spent more than it collects in revenues, increasing the federal debt to levels not seen since World War II. Federal revenues have remained relatively constant even though

**FIGURE 1–11**

**The HI Trust Fund covers a declining share of total Medicare spending**




Note: HI (Hospital Insurance). Hospital Insurance is also known as Medicare Part A. Figure reflects the Boards of Trustees' intermediate assumptions. The rest of Medicare spending (Part B and Part D) is paid for through the Supplementary Medical Insurance Trust Fund.

Source: 2019 annual report of the Boards of Trustees of the Medicare trust funds.

the federal government has taken responsibility for a broader array of services (e.g., Medicare Part D).

The layers below the top line in Figure 1-13 (p. 25) depict federal spending by program. Assuming no other policy or legislative interventions, spending on Medicare, Medicaid, the other major health programs, Social Security, and net interest payments are projected to reach 19 percent of the nation's economy by 2041 and, by themselves, will exceed total federal revenues.[13]

Moreover, the projection assumes that federal revenues will rise above 19 percent of GDP, above the historical average of 17 percent of GDP. The increase in revenues is projected to occur mainly because income is projected to grow more rapidly than inflation, pushing more income

**TABLE 1–1**

**Increase in payroll tax or decrease in HI spending needed to maintain HI Trust Fund solvency for specific time periods**

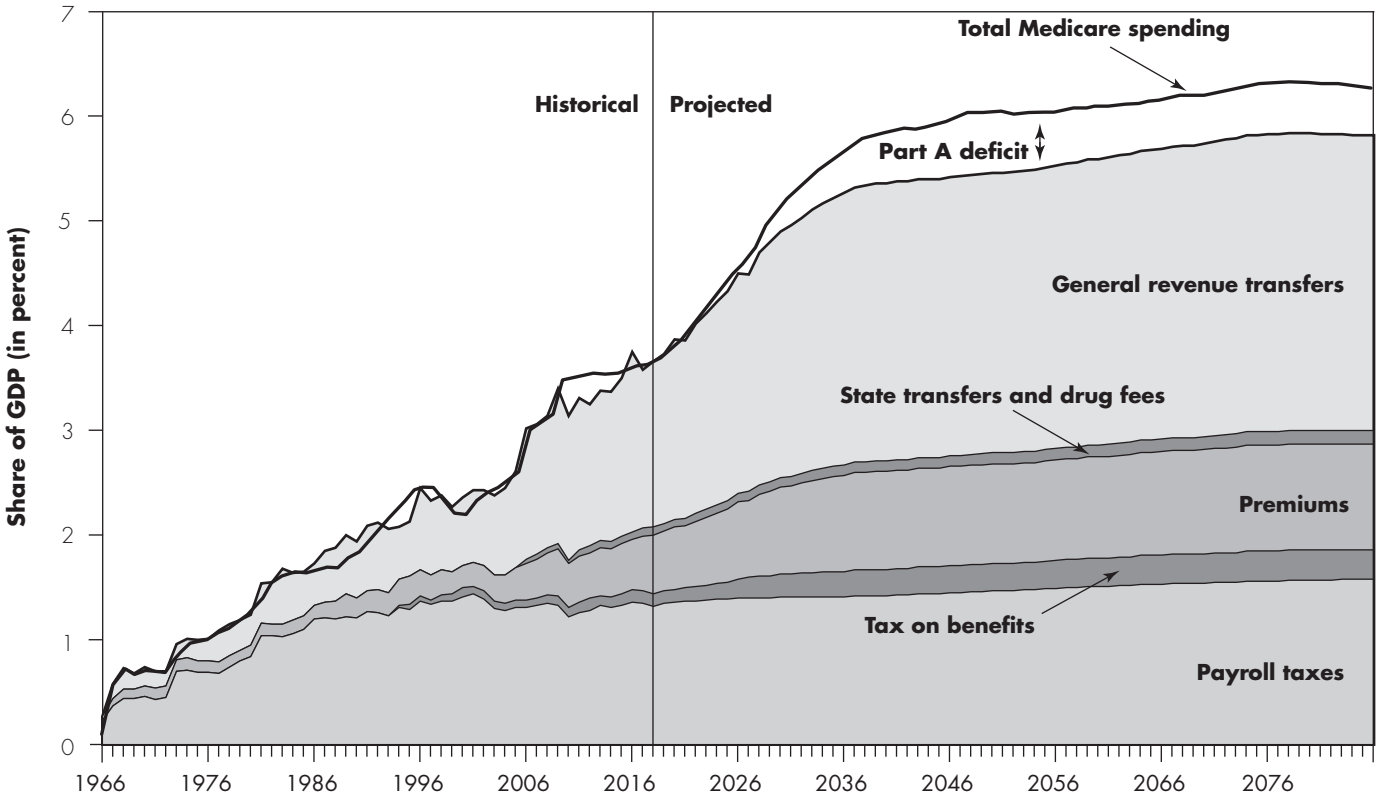
| To maintain HI Trust Fund solvency for: | Increase 2.9 percent payroll tax to: | Or decrease HI spending by: |
|---|---|---|
| 25 years (2019–2043) | 3.7% | 18% |
| 50 years (2019–2068) | 3.8 | 19 |
| 75 years (2019–2093) | 3.8 | 19 |

Note: HI (Hospital Insurance). Hospital Insurance is also known as Medicare Part A.

Source: MedPAC calculations based on Table III.B8 in the 2019 annual report of the Boards of Trustees of the Medicare trust funds.

**FIGURE 1–12**

## General revenue is paying for a growing share of Medicare spending




Note: GDP (gross domestic product). These projections are based on the Trustees' intermediate set of assumptions. "Tax on benefits" refers to the 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 from the states to Medicare, required by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, for assuming primary responsibility for prescription drug spending. "Drug fees" refers to the fee imposed by the Affordable Care Act of 2010 on manufacturers and importers of brand-name prescription drugs. These fees are deposited in the Part B account of the Supplementary Medical Insurance Trust Fund.

Source: 2019 annual report of the Boards of Trustees of the Medicare trust funds.

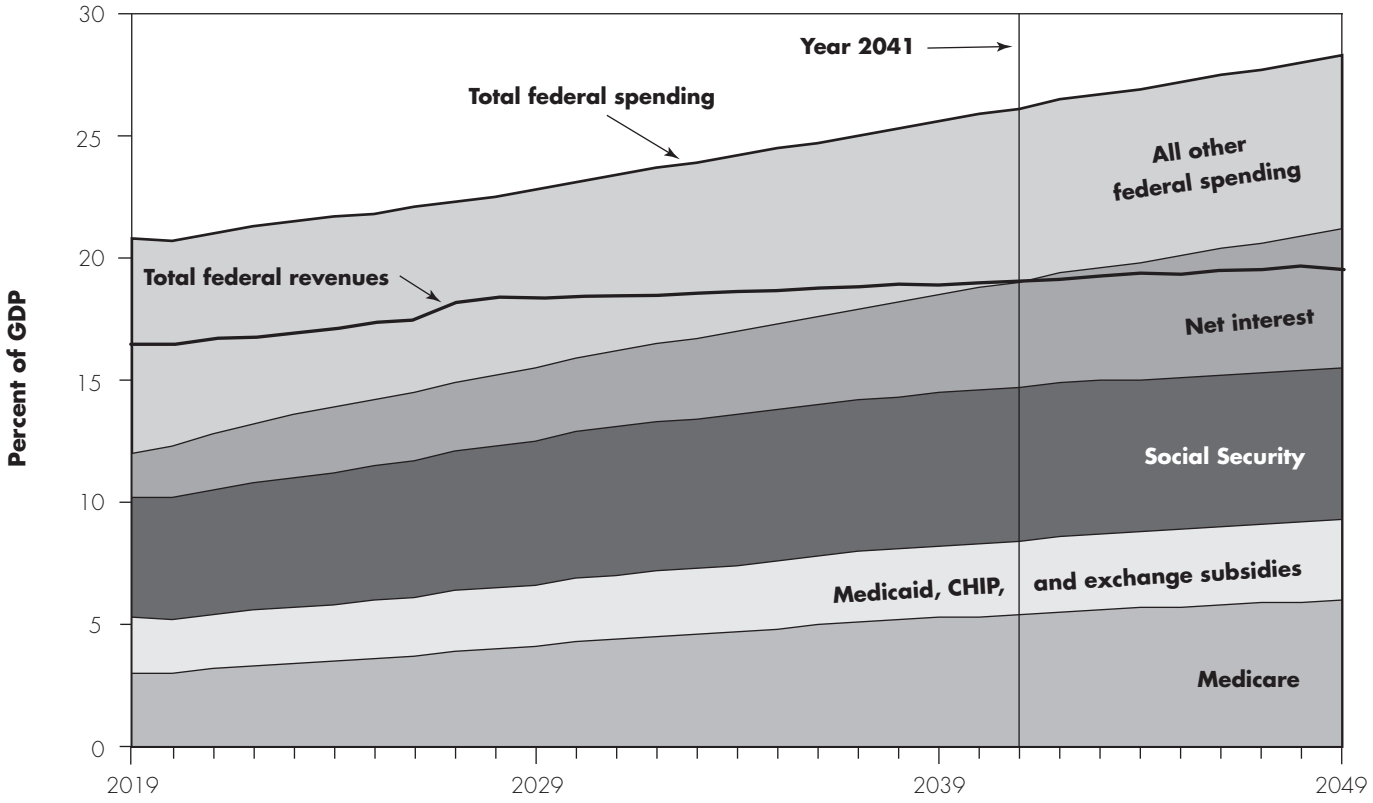
into higher inflation-indexed tax brackets over time. However, if federal revenues continue at their historical average of 17 percent of GDP, spending on these major programs and net interest payments would exceed total federal revenues even sooner.

With their reliance on general tax dollars and federal deficit spending, Medicare and the other major health care programs have a substantial effect on the federal debt. Debt equaled 35 percent of GDP at the end of 2007, when the economy entered the last recession (Figure 1-14, p. 26). In part because of the recession, the debt soared, reaching 78 percent of GDP in 2019—a higher share than at any point in U.S. history, except briefly around World War II.

Under baseline assumptions, which reflect current law, CBO projects the debt will reach 91 percent of GDP in 2028 and 144 percent of GDP by 2049. However, the CBO baseline assumes that per beneficiary spending for Medicare and Medicaid will increase more slowly in the future than it has during the past several decades. On the one hand, if per beneficiary spending growth were 1 percentage point higher than that of the baseline, the federal debt would be 198 percent of GDP by 2049. On the other hand, if per beneficiary spending growth were 1 percentage point lower, the federal debt would be 102 percent of GDP by 2049.

**FIGURE 1–13**

**Spending on Medicare, other major health programs, Social Security, and net interest is projected to exceed total federal revenues by 2041**




Note: GDP (gross domestic product), CHIP (Children's Health Insurance Program).

Source: *The 2019 Long-Term Budget Outlook* (published June 2018) from the Congressional Budget Office.

## The impact of health care spending on state and family budgets

Part of the Commission's mandate is to view Medicare in the context of the broader health care system. This section examines the effect of health care spending on state budgets and the budgets of individuals and families. States bear a significant share of Medicaid and other health care costs, so rising health care spending also has implications for state budgets. For individuals and families, increases in premiums and cost sharing have negated real income growth in the past decade. Likewise, premiums and cost sharing for Medicare beneficiaries are projected to grow faster than Social Security benefits, which make up a significant share of many beneficiaries' income.

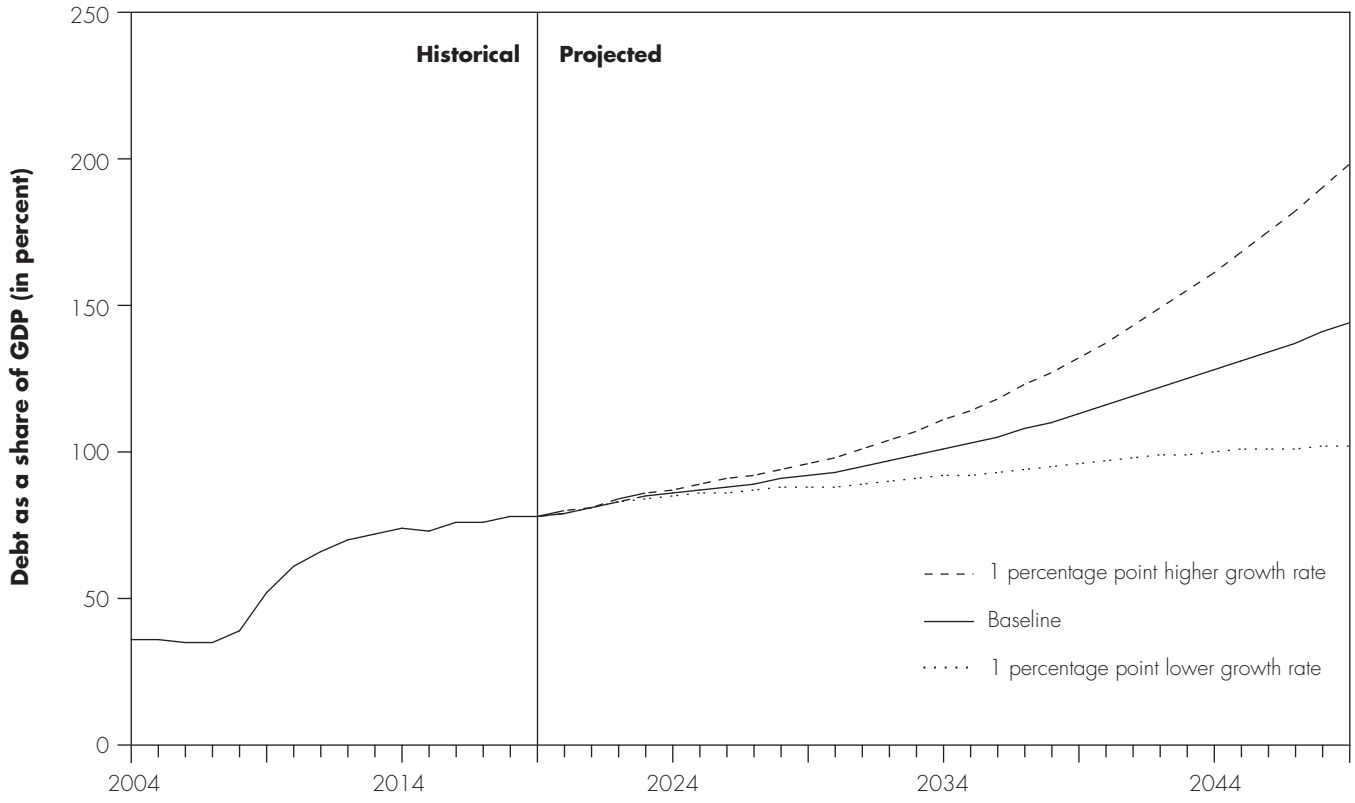
### Health care spending and state budgets

States and the federal government jointly finance Medicaid, a program that pays for health care services provided to people with low incomes. In fiscal year 2013, before the coverage expansions made by the ACA, monthly enrollment in Medicaid averaged almost 60 million people, and total spending was $455.6 billion, with the states paying 42 percent on average and the federal government paying the remainder (Centers for Medicare & Medicaid Services 2016). Medicaid spending accounted for an estimated 19.3 percent of state expenditures in that year (Centers for Medicare & Medicaid Services 2014).

The ACA gave states the option to expand Medicaid coverage—beginning in 2014—to nonelderly individuals

**FIGURE 1–14**

**Health care spending growth impacts future debt levels**




Note: GDP (gross domestic product).

Source: *The 2019 Long-Term Budget Outlook* (published June 2019) from the Congressional Budget Office.

with total family income of less than 138 percent of the federal poverty threshold. States received full federal financing to cover this expansion population in 2014, phasing down to 90 percent federal financing by 2020.

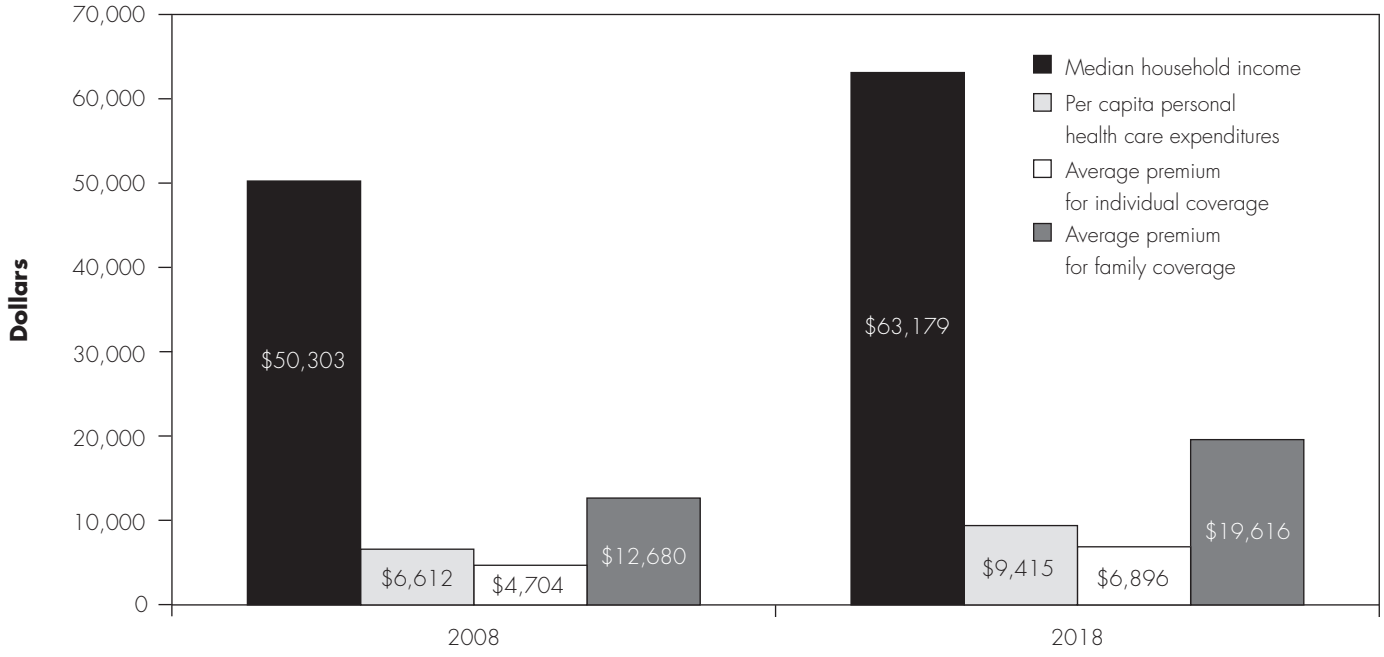
CMS actuaries estimate that, by fiscal year 2017, monthly enrollment in Medicaid increased to cover about 74 million people, and total spending increased to more than $592 billion (Centers for Medicare & Medicaid Services 2018a). Because the federal government paid for 100 percent of the costs of newly eligible enrollees, the states' share of all Medicaid expenditures decreased to 37 percent in 2015 and has remained at that level through 2017 (Centers for Medicare & Medicaid Services 2018a, Centers for Medicare & Medicaid Services 2016). Government actuaries project that the states' share will remain lower than 40 percent over the next 10 years as more states expand coverage (from 2017 to 2026, the states' share is projected to range between 37 percent and 38 percent).

The ACA also increased the payment amount primary care providers received for seeing Medicaid patients in 2013 and 2014 so that it equaled Medicare's payment. This policy represented a significant increase in payments to providers since Medicaid primary care FFS payment rates averaged 59 percent of Medicare fee levels in 2012. The federal government incurred 100 percent of the cost of the payment increase. Even though the federal subsidies expired at the end of 2014, as of 2016, 19 states continued to pay primary care providers rates at least equal to Medicare (Zuckerman et al. 2017).

A provision also established under the ACA authority allows state demonstrations for beneficiaries dually eligible for Medicare and Medicaid (referred to as "dual

**FIGURE 1–15**

**Growth in health care spending and premiums outpaced growth in household income, 2008 and 2018**




Note: Household income, health expenditures, and premiums are all measured in nominal dollars. Average premiums for individual and family coverage are for employer-sponsored health insurance and include contributions from workers and employers.

Source: MedPAC analysis of Census Bureau, Current Population Survey, Annual Social and Economic Supplements; National Health Expenditure Accounts from CMS; and Kaiser Family Foundation and Health Research & Educational Trust annual surveys of employer health benefits.

eligibles"). Under a financial alignment initiative, CMS has approved 14 demonstrations in 13 states, and 11 demonstrations are still in operation. Most demonstrations are scheduled to last for five to eight years, but some could be extended. Nearly 450,000 dual eligibles are currently enrolled in what is one of the largest demonstration projects that CMS has ever conducted related to dual-eligible beneficiaries. Most demonstrations (11 of 14) are testing a "capitated" model, using health plans known as Medicare–Medicaid Plans to provide all Medicare benefits and all or most Medicaid benefits to dual-eligible individuals (Medicare Payment Advisory Commission 2018).

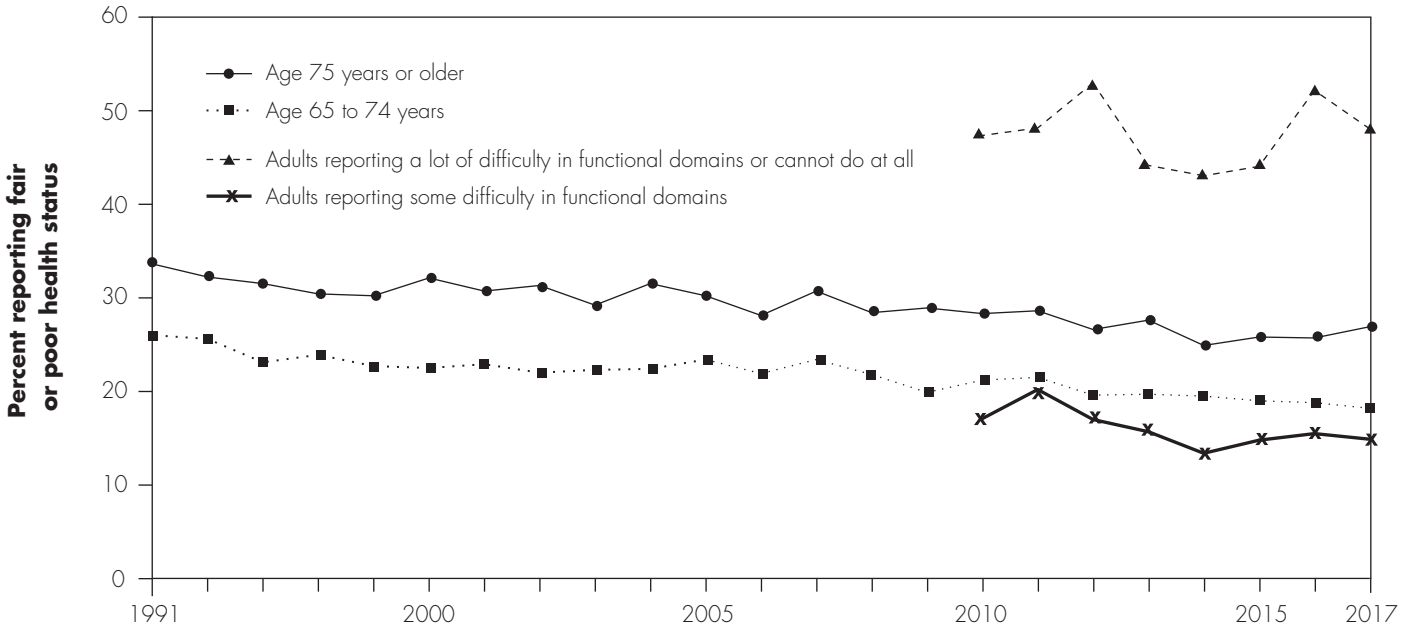
## Health care spending and individual and family budgets

For individuals and families, growth in health care spending has meant higher health insurance premiums and a larger proportion of tax revenue devoted to health care (Auerbach and Kellermann 2011). Additionally, for those covered by employer-sponsored health insurance, an increase in premiums results in lower wage growth because, through wage reductions, employers offset their increased costs of providing health insurance to their employees (Baicker and Chandra 2006, Gruber 2000). As health care spending increases, an increasing share of income from individuals and families is transferred to insurers, hospitals, physicians, and other providers of health care services.

In the past decade, per capita health care spending and premiums have grown nearly twice as fast as median household incomes and thus account for a greater share of income (Figure 1-15). In 2008, per capita personal health care spending was $6,612, accounting for 13 percent of median household income, which was $50,303. Insurance premiums for individuals and families were $4,704 and $12,680, respectively; family premiums accounted for

**FIGURE 1–16**

**The share of Medicare eligibles reporting fair or poor health status changed over time, available years 1991–2017**




Note: "Adults reporting a lot of difficulty in functional domains or cannot do at all" and "Adults reporting some difficulty in functional domains" include people 18 years and older who report one or more of the following six functional limitations: seeing (even if wearing glasses), hearing (even if wearing hearing aids), mobility (walking or climbing stairs), communication (understanding or being understood by others), cognition (remembering or concentrating), and self-care (such as washing all over or dressing). These measures of functional limitations among adults 18 years and older did not begin being reported until 2010.

Source: National Center for Health Statistics, National Health Interview Survey.

25 percent of median household income (Census Bureau 2019, Centers for Medicare & Medicaid Services 2019b, Claxton et al. 2019).[14] By 2018, per capita personal health care spending had grown to $9,415, accounting for 15 percent of median household income, which was $63,179. The premiums for typical individual and family health insurance were $6,896 and $19,616, respectively; family premiums accounted for 31 percent of median household income. From 2007 to 2014, middle-income households' health care spending grew by 25 percent, while their spending fell for categories such as food, housing, clothing, and transportation (Baily and Holmes 2015).

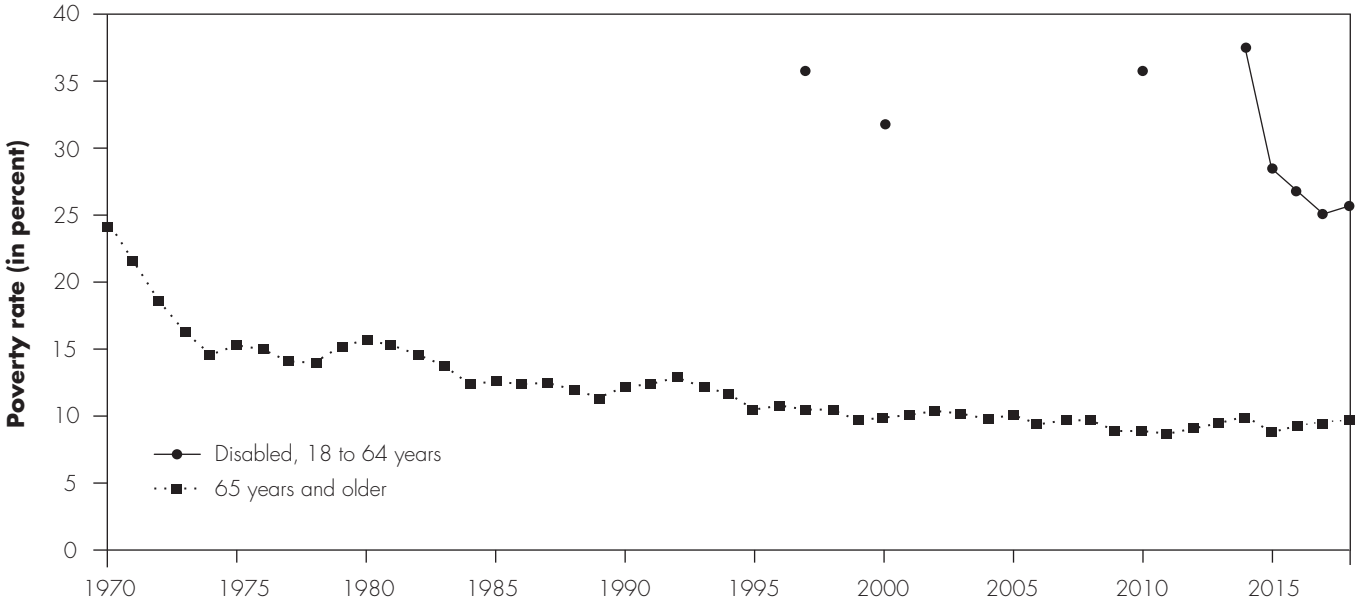
Many Medicare beneficiaries are not exempt from the financial challenges of the program's ever-growing cost-sharing liabilities.[15] In 2019, SMI (Medicare Part B and Part D) premiums and cost sharing likely consumed 23 percent of the average Social Security benefit, up from 7 percent in 1980 (Boards of Trustees 2019). (Those percentages do not include beneficiary spending on premiums for Medicare supplemental insurance.) The Medicare Trustees estimate that those costs will consume 31 percent of the average Social Security benefit by 2039. On average, Social Security benefits account for more than 60 percent of income for seniors. For more than one-fifth of seniors, Social Security benefits account for 100 percent of income (Social Security Administration 2016).

## Recent trends in morbidity, mortality, and life expectancy

Over the past few decades, the reported health status of Medicare beneficiaries has gradually improved. Between 1991 and 2017, the share of people ages 65 to 74 reporting fair or poor health status declined from 26 percent to 18 percent (Figure 1-16); the share of people ages 75 and older reporting fair or poor health status also declined, from 34 percent to 27 percent. Between 2010 (the first

**FIGURE 1–17**

**The poverty rate has fallen over time among people ages 65 years and older and adults with disabilities, available years 1970–2018**




Note: Data on the poverty rate among people with disabilities has been reported for only eight years: 1997, 2000, 2010, 2014, 2015, 2016, 2017, and 2018.

Source: Data on income and poverty from the Census Bureau.

year the measure was reported) and 2017, among adults who report "some" difficulty in functional domains, the share reporting fair or poor health status declined slightly from 17 percent to 15 percent. However, among adults who report "a lot" of difficulty in functional domains or not being able to perform them at all, a higher share reported fair or poor health status: 48 percent in 2017, comparable to 47 percent in 2010.

Declines in the share of people reporting fair or poor health occurred despite rising shares of people ages 65 and older having chronic conditions such as diabetes, hypertension, and high cholesterol—perhaps because these increases have coincided with increases in the share of people who have such conditions *under control* (Federal Interagency Forum on Aging-Related Statistics 2016, National Center for Health Statistics 2015). (Comparable information for the Medicare population under age 65 is not readily available.)

One factor that may have contributed to improved health status over time is rising income levels, which could in turn make it easier for people to afford to access health care. Between 1970 and 2018, the poverty rate among people ages 65 years and older fell, with the support of the Social Security program, from almost 25 percent to about 9.5 percent, potentially having a substantial effect on individual and population health for that age group (Figure 1-17). Between 1997 and 2018, the poverty rate for younger adults with disabilities has also declined, from 36 percent to 26 percent.

Although the reported health status of Medicare beneficiaries has improved, several recent studies have highlighted increasing morbidity and mortality among some populations of Americans, particularly middle-aged non-Hispanic Whites (see text box, p. 31).

## Life expectancy by sex, race, and Hispanic origin

In general—with some notable exceptions—life expectancy in the U.S. has been rising over the past century (although more slowly than in other Organisation

**TABLE 1–2** **Life expectancy at birth, in years, by race/ethnicity and sex, 2008 to 2017**

| | 2008 | 2016 | 2017 | Change 2008–2017 (in years) | Change 2016–2017 (in years) |
|---|---|---|---|---|---|
| All races and ethnicities, both sexes | 78.2 | 78.7 | 78.6 | 0.4 | –0.1 |
| White, not Hispanic, both sexes | 78.4 | 78.6 | 78.5 | 0.1 | –0.1 |
| African American, not Hispanic, both sexes | 73.9 | 74.9 | 74.9 | 1.0 | 0 |
| Hispanic, both sexes | 80.8 | 81.8 | 81.8 | 1.0 | 0 |
| All races and ethnicities, female | 80.6 | 81.1 | 81.1 | 0.5 | 0 |
| White, not Hispanic, female | 80.7 | 81.0 | 81.0 | 0.3 | 0 |
| African American, not Hispanic, female | 77.0 | 78.0 | 78.1 | 1.1 | 0.1 |
| Hispanic, female | 83.3 | 84.3 | 84.3 | 1.0 | 0 |
| All races and ethnicities, male | 75.6 | 76.2 | 76.1 | 0.5 | –0.1 |
| White, not Hispanic, male | 76.0 | 76.2 | 76.1 | 0.1 | –0.1 |
| African American, not Hispanic, male | 70.5 | 71.6 | 71.5 | 1.0 | –0.1 |
| Hispanic, male | 78.0 | 79.1 | 79.1 | 1.1 | 0 |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

for Economic Co-operation and Development (OECD) countries).[16] This increasing longevity is influenced by a range of factors, including health behavior changes, greater disease prevention efforts, and advances in medical treatments. In 2017, average life expectancy at birth for an individual living in the U.S. was 78.6 years (Table 1-2). However, an individual's life expectancy can vary significantly from this average based on certain characteristics, including race, sex, socioeconomic status, and geographic location. Variations have existed ever since official data have been collected. For example, in 2017, women on average had a longer life expectancy than men (81.1 years vs. 76.1 years, respectively) (Table 1-2). Though this longevity gap has lessened in recent years (data not shown), researchers speculate that these differences are caused by a combination of genetics, reductions in infections, and behavioral and lifestyle factors (Beltran-Sanchez et al. 2015).

Race and ethnicity are also associated with variations in life expectancy. The Hispanic population in the U.S. in 2017 had a higher life expectancy at birth (81.8 years) than the non-Hispanic White and African American populations, at 78.5 and 74.9 years, respectively (Table 1-2). Although these differences have shifted somewhat over time, the general trend—that the Hispanic population has the longest life expectancy and non-Hispanic African Americans have the shortest—has persisted (Arias 2016).

## Life expectancy by geographic areas

Life expectancy in the United States varies based on an array of geographic characteristics, including urban and rural location and among states. A 2017 study by Zolot found a greater than 20-year difference in life expectancy by county and a trend that these geographic disparities have been growing over the past few decades (Zolot 2017). A 2014 study by Singh and Siahpush found that life expectancy was inversely related to levels of rurality and that rural African Americans and Whites had lower life expectancies than their urban counterparts (Singh and Siahpush 2014).[17] From 2005 through 2009, those in large metropolitan areas had a life expectancy of 79.1 years compared with 76.9 years for those in small towns and 76.7 years for those in rural areas. Compared with their urban peers, people in rural areas had higher rates of both smoking and lung cancer, along with obesity. Additionally, rural residents on average had a lower median family income and higher poverty rate, and fewer had college degrees, which may contribute to the difference in life expectancy. Another study by Chetty and colleagues

## Increasing mortality and morbidity trends for particular populations

Several recent studies and news reports have highlighted aspects of increasing mortality and morbidity among some Americans (Arias 2016, Case and Deaton 2017, Case and Deaton 2015, Montez et al. 2016, Zolot 2017). These aspects include—for specific groups—decreases in life expectancy; increasing rates of suicide and deaths from drug poisonings; and troubling health indicators and behaviors, such as greater alcohol consumption, smoking, and obesity. These trends interact with longstanding underlying variations in life expectancy, mortality, and morbidity by sex, income, race and ethnicity, and geographic location. While researchers have applied diverse methods and reported various aspects of these trends, two key findings are (1) increases in mortality in groups of Whites, especially those with only a high school diploma or less, and (2) lower and decreasing life expectancy for residents of certain geographic areas.

One population that has experienced a recent increase in mortality is the middle-aged (45 to 54 years old) non-Hispanic White population (Case and Deaton 2015, Kochanek et al. 2015). An analysis by Case and Deaton found no similar mortality rate increase in other industrialized countries or in the non-Hispanic African American or Hispanic population of this age group (Case and Deaton 2015). Case and Deaton note that three causes of death have risen dramatically among this group in the past decade: suicides, intentional and unintentional poisonings, and chronic liver disease. Additionally, this group's rise in midlife mortality is paralleled by increases in self-reported midlife morbidity and troubling health indicators and behaviors, such as increased alcohol consumption, smoking, and obesity. Case and Deaton's findings indicate that the increase in reports of poor health by this group has been matched by increasing reports of physical pain and psychological distress.

As with any population-level trend, the causes of increased midlife morbidity and mortality among non-Hispanic Whites are difficult to identify. A recent study found that varying inequalities in women's mortality across states may be partially explained by macro-level socioeconomic and political factors—for example, policies that shape access to health care, use of tobacco, availability of affordable housing, children's health care, and financial safety nets (Montez et al. 2016). Some researchers point to the availability of opioid drugs as a possible source of rising mortality rates. Increased reports of pain combined with the greater availability of opioid prescriptions for pain that began in the late 1990s have been widely noted, as well as the associated mortality (Rudd et al. 2016). Studies have also found that recent restrictions of opioid prescriptions may lead to unintended negative consequences such as increased use of heroin (Compton et al. 2016). There is concern that those affected by opioid and substance use in midlife include current Medicare beneficiaries under 65 and others who will age into Medicare in worse health than current beneficiaries. Researchers have found that patients with a diagnosed opioid dependency are high users of health care services, including office visits, lab tests, and related treatments (FAIR Health 2016). However, this use may be related to the underlying conditions for which opioids were used as much as the consequences of opioid abuse or related effects. Addiction is hard to treat, chronic pain is challenging to control, and these conditions appear to be potential problems among the next generation of Medicare beneficiaries. ■

exploring the association between life expectancy and income found that low-income individuals' life expectancy varied substantially based on where they lived (Chetty et al. 2016). The study found that individuals in the lowest income quartile often lived longer and had more healthful behaviors if they resided in urban areas with highly educated populations, high incomes, and high levels of government expenditures. Some potential explanations for these findings are that these areas may have public policies that improve health (e.g., smoking bans) or they may have greater funding for public services. However, the Commission's research has found little difference between

**TABLE 1–3** **Life expectancy at age 65, in years, by race/ethnicity and sex, 2008 to 2017**

| | 2008 | 2016 | 2017 | Change 2008–2017 (in years) | Change 2016–2017 (in years) |
|---|---|---|---|---|---|
| All races and ethnicities, both sexes | 18.8 | 19.4 | 19.4 | 0.6 | 0 |
| White, not Hispanic, both sexes | 18.8 | 19.4 | 19.3 | 0.5 | –0.1 |
| African American, not Hispanic, both sexes | 17.4 | 18.1 | 18.1 | 0.7 | 0 |
| Hispanic, both sexes | 20.4 | 21.5 | 21.4 | 1.0 | –0.1 |
| All races and ethnicities, female | 20.0 | 20.6 | 20.6 | 0.6 | 0 |
| White, not Hispanic, female | 20.0 | 20.5 | 20.5 | 0.5 | 0 |
| African American, not Hispanic, female | 18.8 | 19.5 | 19.5 | 0.7 | 0 |
| Hispanic, female | 21.6 | 22.7 | 22.7 | 1.1 | 0 |
| All races and ethnicities, male | 17.4 | 18.1 | 18.1 | 0.7 | 0 |
| White, not Hispanic, male | 17.4 | 18.0 | 18.0 | 0.6 | 0 |
| African American, not Hispanic, male | 15.4 | 16.2 | 16.2 | 0.8 | 0 |
| Hispanic, male | 18.7 | 19.8 | 19.7 | 1.0 | –0.1 |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

rural and urban beneficiaries' experience with access to care and amount of service use. With respect to quality of care, quality is similar for most types of providers in rural and urban areas; however, rural hospitals tend to have below-average rankings on mortality and some process measures (Medicare Payment Advisory Commission 2012).

A recent study by Montez and colleagues examined variation in women's mortality rates across states (Montez et al. 2016).[18] The study found that a state's economic and social environment (e.g., welfare policies, tobacco tax rate, level of economic inequality) had a significant effect on women's mortality rate. The researchers found that many of the states with the best economic and social indicators had some of the lowest mortality rates among women. The same correlation was not seen among males. These findings imply that geographic inequities in women's mortality rates may not be fully explained just by women's personal characteristics; rather, the influence of socioeconomic and political contexts must also be considered.

## Life expectancy at age 65

Recent decreases in life expectancy and increases in mortality are mostly isolated to the under-65 population. Between 2008 and 2017, life expectancy at 65 (i.e., remaining years of life) increased for all groups (Table 1-3).

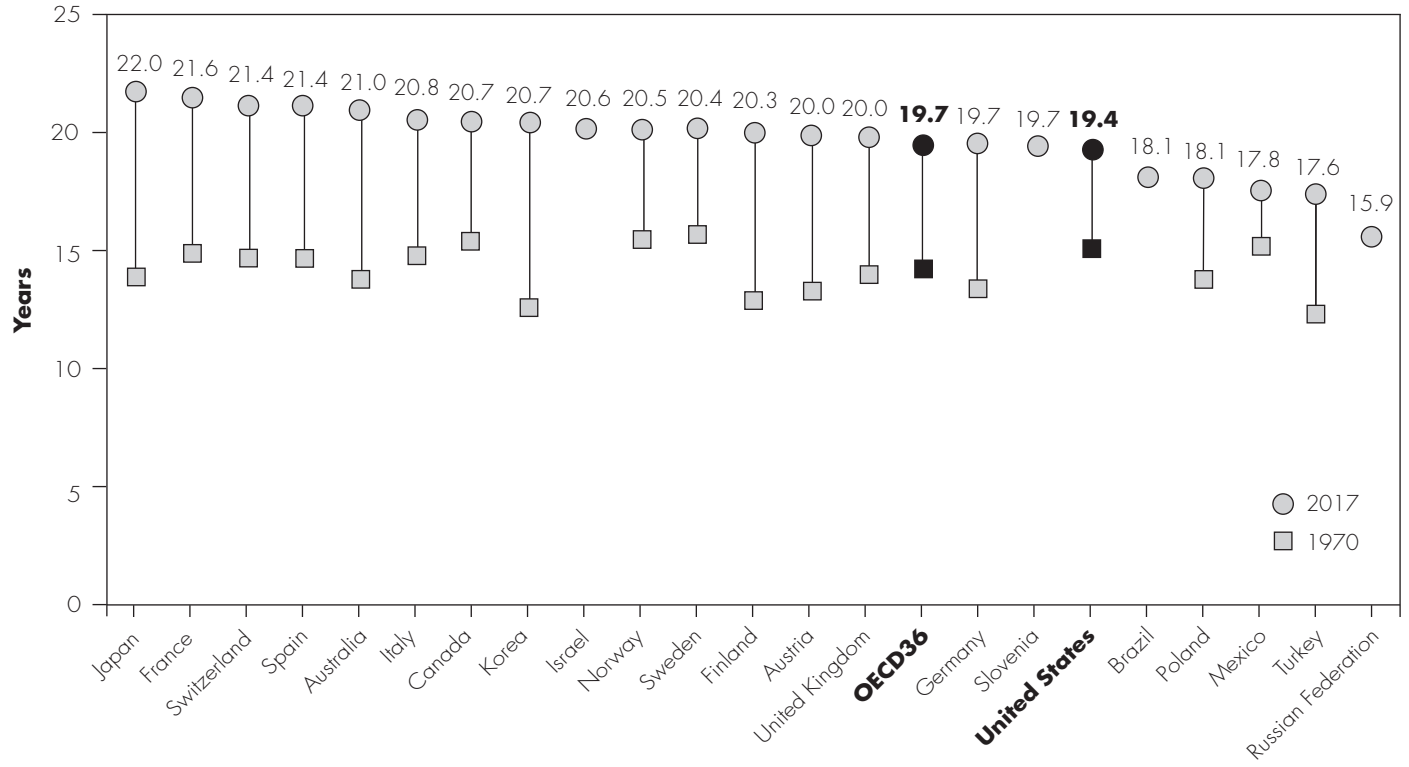
Life expectancy at age 65 has increased since the introduction of Medicare. Individuals who reached age 65 in 2017 had a remaining life expectancy of 19.4 years, compared with 15.1 years for this age group in 1970. However, these beneficiaries' gains in longevity are outpaced by their peers' gains in other OECD countries. From 1970 to 2017, U.S. life expectancy at age 65 improved by 4.3 years (Figure 1-18), compared with an average gain of 5.5 years for the 36 OECD countries.[19] (Comparable information for the Medicare population under age 65 is not readily available.)

## Leading causes of death

Over the past few decades, there has been little change in the leading causes of death in the United States, both for all Americans and those 65 and older (Table 1-4, p. 34, and Table 1-5, p. 34). Heart disease and cancer have remained the first and second leading causes of death, respectively, for both age groups for more than 75 years (Hoyert 2012, National Center for Health Statistics 2018). In each year between 1935 and 2017, three causes—heart disease, cancer, and stroke—remained among the five leading

**FIGURE 1–18**

**Life expectancy at age 65 is lower and increased less in the United States than in other OECD countries, 1970 and 2017**




Note: OECD (Organisation for Economic Co-operation and Development). "OECD36" refers to the average of all 36 OECD countries. Selected OECD countries are shown. Early life expectancy figures for Italy, Canada, and Finland are as of 1971 rather than 1970. For Brazil, the recent life expectancy figure is as of 2015. Data are not available for 1970 for Brazil, Israel, and the Russian Federation.

Source: 2019 data on life expectancy at age 65 from the Organisation for Economic Co-operation and Development.

causes. Suicide was the 10th leading cause of death among all Americans in both 1980 and 2017.

Compared with other OECD countries, lower shares of deaths in the United States are caused by cancer and cerebrovascular diseases (e.g., stroke), while higher shares of deaths are caused by ischemic heart diseases; diseases of the respiratory system (e.g., chronic obstructive pulmonary diseases, influenza); diseases of the nervous system (e.g., Parkinson's, Alzheimer's); mental and behavioral disorders (e.g., dementia); endocrine, nutritional, and metabolic diseases (e.g., diabetes); diseases of the genitourinary system; and external causes of mortality (e.g., transport accidents, intentional self-harm, accidental poisonings). Many of these diseases are exacerbated by obesity, in which the United States leads all other developed countries (Organisation for Economic Co-operation and Development 2019). That said, it is important to note that health care use is not generally higher in the U.S. than in other countries; instead, the higher spending per person in the U.S. has been attributed to higher prices and higher administrative costs (Anderson et al. 2019, International Federation of Health Plans 2019, Papanicolas et al. 2018).

Some of the leading causes of death in the United States overlap with the most prevalent and most expensive chronic conditions among Medicare FFS beneficiaries (Table 1-6, p. 35). In Table 1-6, the Medicare total per capita spending amounts represent all Medicare spending for FFS beneficiaries with the specified condition (i.e., the spending cannot be attributed strictly to the specified

**TABLE 1–4**

## Leading causes of death, 1980 and 2017

**Table 1-4a. Leading causes of death, 1980**

| Cause of death | Share of deaths |
|---|---|
| 1. Heart disease | 38.2% |
| 2. Cancer | 20.9 |
| 3. Stroke | 8.6 |
| 4. Unintentional injuries | 5.3 |
| 5. Chronic lower respiratory diseases | 2.8 |
| 6. Pneumonia and influenza | 2.7 |
| 7. Diabetes mellitus | 1.8 |
| 8. Chronic liver disease and cirrhosis | 1.5 |
| 9. Atherosclerosis | 1.5 |
| 10. Suicide | 1.4 |

**Table 1-4b. Leading causes of death, 2017**

| Cause of death | Share of deaths |
|---|---|
| 1. Heart disease | 23.0% |
| 2. Cancer | 21.3 |
| 3. Unintentional injuries | 6.0 |
| 4. Chronic lower respiratory disease | 5.7 |
| 5. Stroke | 5.2 |
| 6. Alzheimer's disease | 4.3 |
| 7. Diabetes mellitus | 3.0 |
| 8. Pneumonia and influenza | 2.0 |
| 9. Nephritis, nephrotic syndrome, and nephrosis | 1.8 |
| 10. Suicide | 1.7 |

Note: "Chronic lower respiratory diseases" was formerly known as "chronic obstructive pulmonary diseases." Starting with 1999 data, the rules for selecting "chronic lower respiratory diseases" (CLRD) and "pneumonia" as the underlying cause of death changed, resulting in an increase in the number of deaths for CLRD and a decrease in the number of deaths for pneumonia. Therefore, trend data for these two causes of death should be interpreted with caution. Also, starting with 2011 data, the rules for selecting renal failure as the underlying cause of death were changed, affecting the number of deaths in the "nephritis, nephrotic syndrome, and nephrosis" and "diabetes mellitus" categories. The result is a decrease in the number of deaths attributed to nephritis, nephrotic syndrome, and nephrosis and an increase in the number of deaths attributed to diabetes mellitus. Therefore, trend data for these two causes of death should be interpreted with caution.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

**TABLE 1–5**

## Leading causes of death at age 65 and older, 1980 and 2017

**Table 1-5a. Leading causes of death at age 65 and older, 1980**

| Cause of death | Share of deaths |
|---|---|
| 1. Heart disease | 44.4% |
| 2. Cancer | 19.3 |
| 3. Stroke | 10.9 |
| 4. Pneumonia and influenza | 3.4 |
| 5. Chronic lower respiratory diseases | 3.2 |
| 6. Atherosclerosis | 2.1 |
| 7. Diabetes mellitus | 1.9 |
| 8. Unintentional injuries | 1.9 |
| 9. Nephritis, nephrotic syndrome, and nephrosis | 1.0 |
| 10. Chronic liver disease and cirrhosis | 0.7 |

**Table 1-5b. Leading causes of death at age 65 and older, 2017**

| Cause of death | Share of deaths |
|---|---|
| 1. Heart disease | 25.1% |
| 2. Cancer | 20.7 |
| 3. Chronic lower respiratory diseases | 6.6 |
| 4. Stroke | 6.1 |
| 5. Alzheimer's disease | 5.8 |
| 6. Diabetes mellitus | 2.9 |
| 7. Unintentional injuries | 2.7 |
| 8. Pneumonia and influenza | 2.3 |
| 9. Nephritis, nephrotic syndrome, and nephrosis | 2.0 |
| 10. Septicemia | 1.5 |

Note: "Chronic lower respiratory diseases" was formerly known as "chronic obstructive pulmonary diseases." Starting with 1999 data, the rules for selecting "chronic lower respiratory diseases" (CLRD) and "pneumonia" as the underlying cause of death changed, resulting in an increase in the number of deaths for CLRD and a decrease in the number of deaths for pneumonia. Therefore, trend data for these two causes of death should be interpreted with caution. Also, starting with 2011 data, the rules for selecting renal failure as the underlying cause of death were changed, affecting the number of deaths in the "nephritis, nephrotic syndrome, and nephrosis" and "diabetes mellitus" categories. The result is a decrease in the number of deaths attributed to nephritis, nephrotic syndrome, and nephrosis and an increase in the number of deaths attributed to diabetes mellitus. Therefore, trend data for these two causes of death should be interpreted with caution.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

**TABLE 1–6**

**Selected chronic conditions by prevalence and total per capita spending among Medicare FFS beneficiaries, 2017**

| Chronic condition | Prevalence among Medicare FFS beneficiaries | Total per capita spending for beneficiaries with the specified condition |
|---|---|---|
| **Five chronic conditions most prevalent among Medicare FFS beneficiaries:** | | |
| Hypertension | 58.7% | $14,997.92 |
| Hyperlipidemia | 48.3 | 15,623.96 |
| Rheumatoid arthritis/osteoarthritis | 34.2 | 16,414.08 |
| Diabetes mellitus | 28.0 | 16,646.10 |
| Ischemic heart disease | 27.8 | 20,384.57 |
| **Five chronic conditions with highest total per capita spending among Medicare FFS beneficiaries:** | | |
| Stroke | 3.9 | 33,485.39 |
| Heart failure | 14.4 | 30,051.46 |
| COPD | 12.1 | 26,394.90 |
| Hepatitis (chronic viral B and C) | N/A | 26,376.30 |
| Atrial fibrillation | 8.7 | 26,210.35 |

Note: FFS (fee-for-service), COPD (chronic obstructive pulmonary disease), N/A (not available). Data include all Medicare beneficiaries who were eligible for or enrolled in Medicare on or after January 1, 2017. Period prevalence is calculated for these rates: beneficiaries with full or nearly full FFS coverage (i.e., 11 or 12 months of Medicare Part A and Part B (or coverage until time of death) and 1 month or less of HMO coverage) during the year who received treatment for the condition within the condition-specified look-back period (chronic conditions have a 1- to 3-year look-back period). Beneficiaries may be counted in more than one chronic condition category. The Medicare utilization and spending information presented above represents total Medicare FFS spending for beneficiaries with the condition. The information should not be used to attribute utilization or payments strictly to the specific condition selected because beneficiaries with any of the specific conditions presented may have had other health conditions that contributed to their Medicare utilization and spending amounts.

Source: 2019 data from the Chronic Conditions Warehouse from the Centers for Medicare & Medicaid Services.

condition because beneficiaries could have other health conditions that contribute to their total Medicare use and spending amounts).

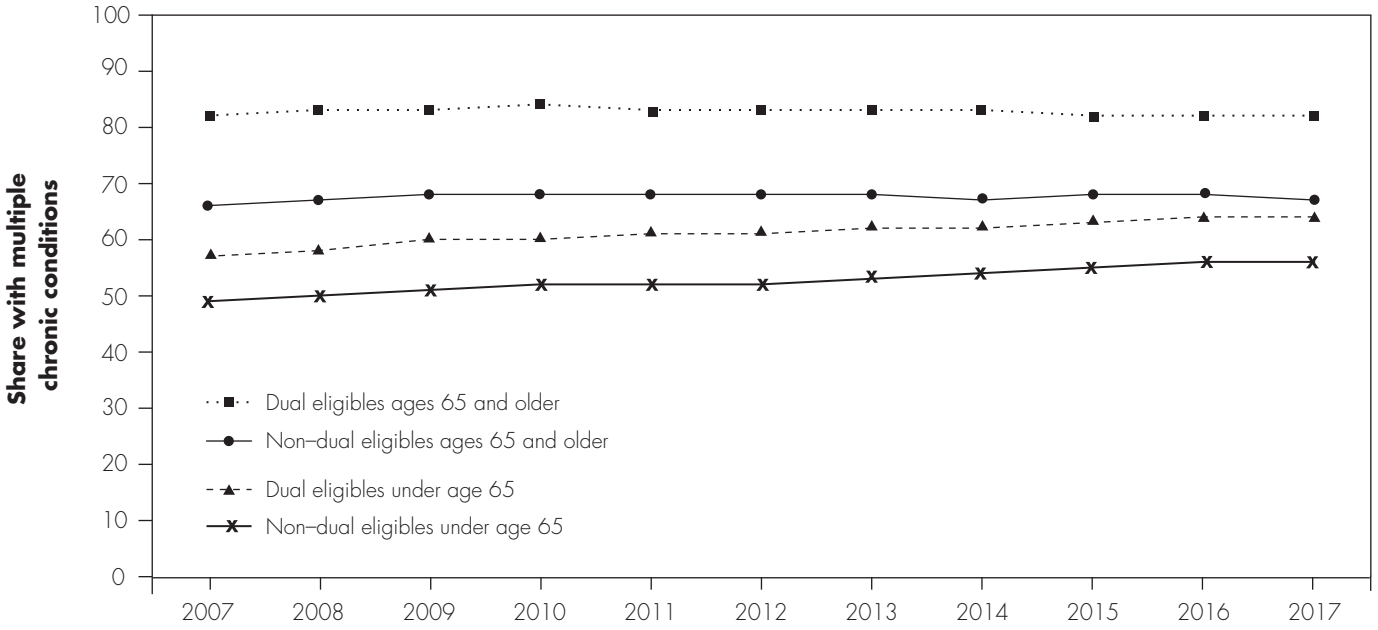
It is unclear how the prevalence of these and other acute and chronic conditions contributes to Medicare spending trends in part because treatments for conditions are influenced by changes in technology and definitions of what constitutes disease shift over time. The Commission explored this question in 2007 and found upward pressure on Medicare costs because of a greater proportion of beneficiaries being treated for multiple chronic conditions (Medicare Payment Advisory Commission 2007). This increase reflected growth in the prevalence of obese beneficiaries, advances in technology for diagnosing and treating conditions, and changes in disease definitions. More recently, CBO found that, while ample evidence exists of increased health care spending associated with obesity, evidence about the effects of weight loss on the health and health care spending of obese people is inconclusive at best (Congressional Budget Office 2015). Between 2007 and 2017, the percentage of *nonelderly* Medicare beneficiaries (who are eligible for the program due to disability) who have multiple chronic conditions has increased slightly. Meanwhile, the share of *elderly* Medicare beneficiaries with multiple chronic conditions has not meaningfully changed, remaining high throughout this period (Figure 1-19, p. 36).

## The next generation of Medicare beneficiaries

By 2030, the entire baby-boom generation will be eligible for Medicare (Figure 1-20, p. 37).[20] That year, Medicare is

**FIGURE 1–19**

**The prevalence of multiple chronic conditions is higher among elderly Medicare beneficiaries than non-elderly beneficiaries**




Source: CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service program, available from the CMS Chronic Condition Data Warehouse, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/MCC_Main.

projected to have nearly 80 million beneficiaries—up from 60 million beneficiaries in 2018 (Figure 1-10a, p. 22)—almost 90 percent of whom will be of the baby-boom generation (Boards of Trustees 2019). These individuals will define the upcoming Medicare population in terms of age distribution, health status, health insurance experiences before Medicare enrollment, and financial security.

The Medicare population over the next 10 years will be relatively younger, as members of the baby-boom generation join and increase the number of beneficiaries in younger age categories (Figure 1-21, p. 38).

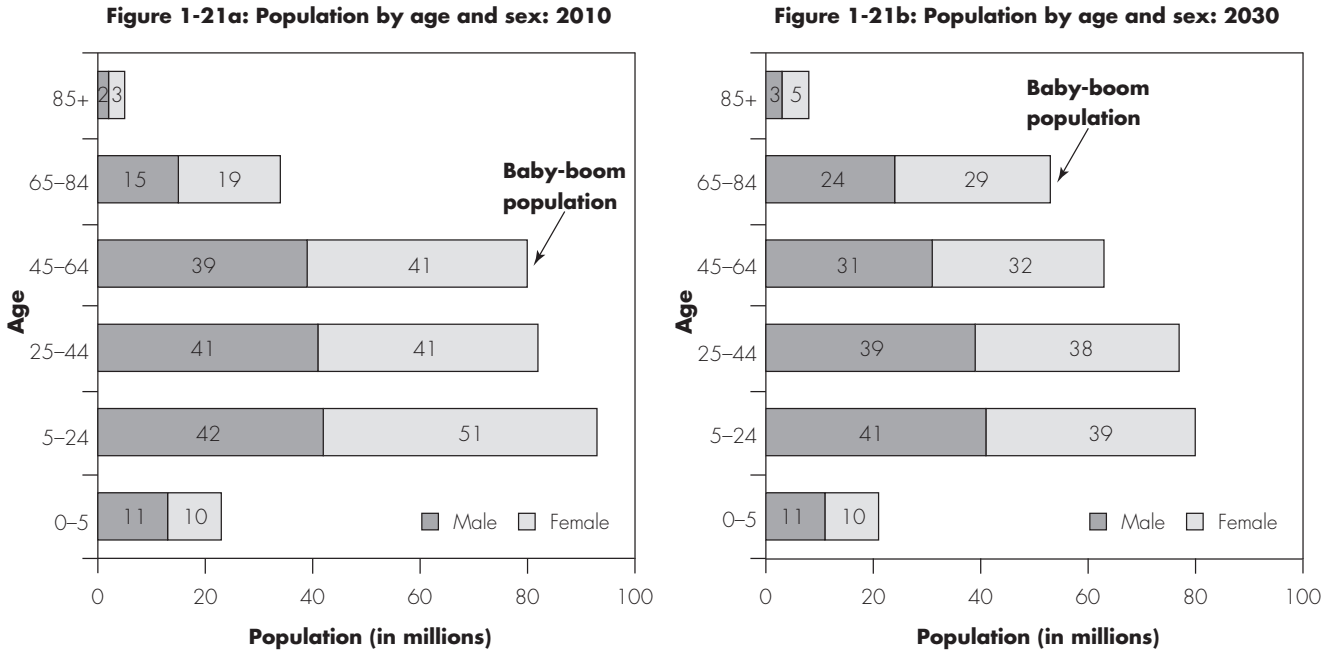
The share of the Medicare population ages 85 years or older is projected to decline slightly through 2025 and then grow as baby boomers continue to age (Boards of Trustees 2014, Census Bureau 2014). In 2013, per beneficiary spending for those ages 85 and older was about twice that of those ages 65 to 74. So, the changing age structure of the Medicare population will exert somewhat less pressure on spending in the very near term, at least on a per capita basis, and then pressure will increase again over the longer term.[21]

## Evidence of inefficient health care spending

With few exceptions throughout modern history, health care spending in the United States has grown robustly, outpacing the growth in the economy. Even if Medicare's recent low growth in per beneficiary spending is sustained, enrollment growth from the aging of the baby boomers will contribute to growth in total spending regardless. And yet, ever-increasing health care spending is not inevitable. There is strong evidence that a sizeable share of current

**FIGURE 1–20**

**By 2030, the entire baby-boom generation will be eligible for Medicare**




Source: Census Bureau, 2010 Census; 2017 National Population Projections, main series.

health care spending—both overall and by Medicare—is inefficient or unnecessary, providing an opportunity for policymakers to reduce spending, extend the life of the program, and reduce pressure on the federal budget.

## Geographic variation within and outside United States indicates some share of spending is inefficient

Research on Medicare spending shows that areas with higher spending or more intensive use of services do not necessarily have higher quality of care or improved patient outcomes (Fisher et al. 2003a, Fisher et al. 2003b). Measures of service use, adjusted for health status and standardized prices, also show considerable variation (Medicare Payment Advisory Commission 2011b). Services that have been widely recognized as low value continue to be performed regularly (Schwartz et al. 2014).

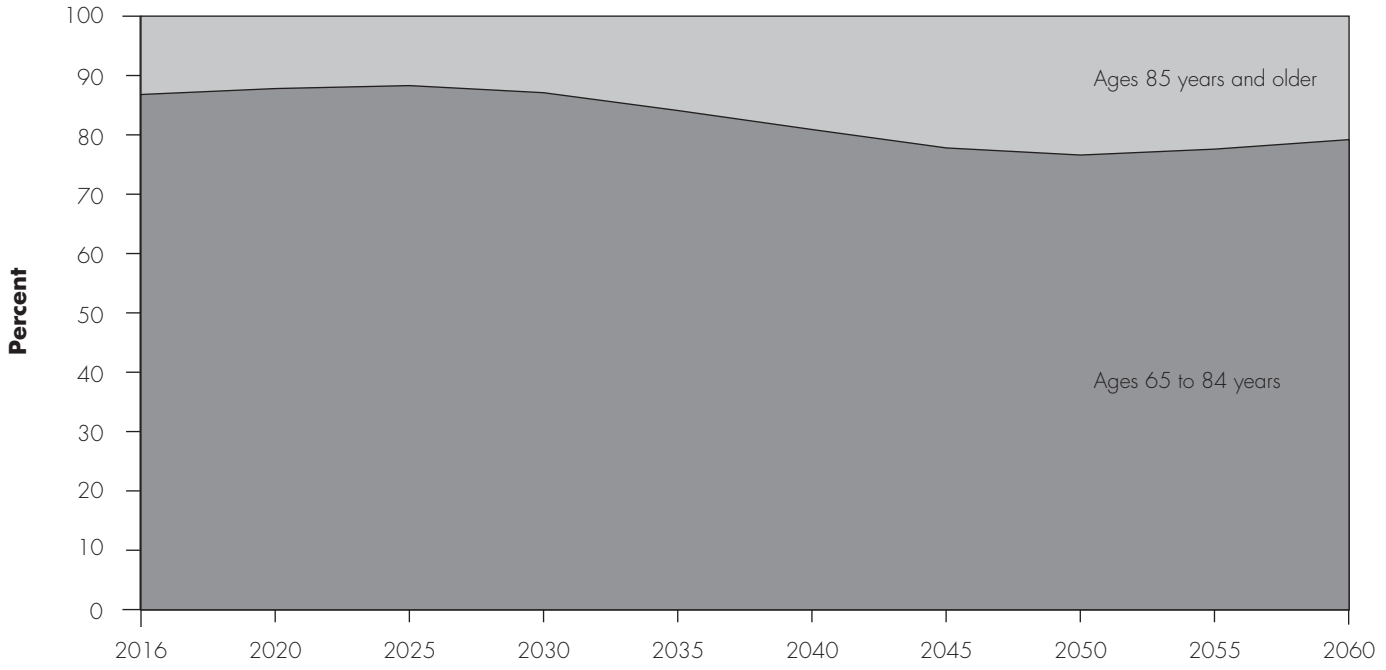
The United States spends more on health care than any other country in the world (both on a per capita basis and as a share of GDP), but studies consistently show it ranks poorly on indicators of efficiency, equity, and outcomes. According to a 2017 study by the Commonwealth Fund, the U.S. ranks last of 11 nations on 2 indicators of healthy lives—mortality amenable to health care and life expectancy at age 60 (Schneider et al. 2017).

## The Commission's approach to addressing spending inefficiencies in Medicare

The Medicare program is a complex and fragmented system. It consists of multiple paths to entitlement; multiple types of coverage (Part A, Part B, Part C, and Part D); and different rules for different care settings. The Medicare program sets prices for thousands of services at different levels of aggregation (e.g., inpatient hospital payments are paid based on the stay, while physician payments are based on the service) and in different labor markets across the country. The program sets payment rates each year for at least nine health care settings or provider types: acute care hospitals, physician and other health professional services, home health agencies, skilled nursing facilities, long-term care facilities, hospice,

**FIGURE 1–21**

**The Medicare population will become younger as it expands, and then grow older as the baby boom generation ages**




Source: Census Bureau, 2017 National Population Projections.

inpatient rehabilitation facilities, ambulatory surgical centers, and end-stage renal disease dialysis facilities. In addition to the yearly rulemaking process involved in setting these rates, administrators oversee other parts of the program that operate on fee schedules (ambulances, outpatient lab facilities, federally qualified health centers) or on cost-based payment (critical access hospitals). Payment rates for Part C (Medicare Advantage) are set using plan bids relative to an administratively set benchmark, and Part D payments (prescription drug plans) are generally set by a competitive process. The Medicare program statute and rulemaking include a substantial number of exceptions, adjustments, and modifications to its general policies.

The complexity of the Medicare program makes it vulnerable to inappropriate care, waste, and fraud. GAO annually designates Medicare as a high-risk program because of its size, complexity, and susceptibility to mismanagement and improper payments (which include fraud and errors but not overuse of services) (Government Accountability Office 2019). In 2018, CMS estimated that 8.1 percent of payments in FFS Medicare and 8.1 percent of payments in Medicare Advantage were improper, as were 1.7 percent of payments to Part D plans (Department of Health and Human Services 2019b). Within FFS Medicare, some payment systems have higher improper payment rates than others: for example, the rate of improper payments for inpatient rehabilitation facilities was 41.5 percent; for durable medical equipment, prosthetics, orthotics, and supplies was 35.5 percent; and for home health services was 17.6 percent (Department of Health and Human Services 2019a).

In recent years, CMS has gained new authorities to exclude potentially fraudulent providers from the program and apply different levels of scrutiny to new providers based on their fraud potential. CMS has also further developed its ability to identify potentially fraudulent billing patterns. However, all of CMS's activities in this area are constrained by resources and are subject to statutory requirements that limit its ability to use the same tools as private insurers to reduce fraud (Government Accountability Office 2013).

Beyond the general complexity of the program, several of Medicare's specific features complicate efforts to achieve

spending efficiencies and improve payment accuracy and equity. The following sections identify some of Medicare's key challenges, along with Commission recommendations that would address them.

**MEDICARE CHALLENGE: Medicare's payments for some types of providers are excessive.** Some types of providers enjoy especially high profits on services delivered to Medicare beneficiaries—suggesting some types of payments could be reduced without materially impacting the supply of providers willing to treat Medicare beneficiaries. For example, Medicare profit margins in 2018 were as high as 15.3 percent for freestanding home health agencies, 14.7 percent for inpatient rehabilitation facilities, 12.6 percent for hospice providers, and 10.3 percent for freestanding skilled nursing facilities. In addition, concern has existed about Medicare payment for Part B drugs furnished by hospitals that participate in the 340B Drug Pricing Program: Such hospitals qualify for deeply discounted prices from manufacturers, and historically, Medicare payments for Part B drugs have substantially exceeded 340B hospitals' drug acquisition costs. The Commission is also concerned about the overall price Medicare Part B pays for drugs that are administered by infusion or injection in physicians' offices and hospital outpatient departments, and the lack of price competition among drugs with similar health effects.

***COMMISSION RECOMMENDATIONS: Better align Medicare payments with providers' costs.*** The Commission has recommended that Medicare:

- *March 2016*—reduce payment rates for 340B hospitals' separately payable 340B drugs by 10 percent of the average sales price (ASP), and direct these program savings to hospitals with high uncompensated care costs. (In 2018, CMS reduced payment rates for some Part B drugs furnished by 340B hospitals.)
- *June 2017*—improve Part B drug payment in the short term by spurring competition, protecting Medicare beneficiaries and taxpayers from substantial price increases over time for individual drug products, and improving the accuracy of CMS's drug prices. The recommendation included the following elements:
  - Improve ASP data reporting by requiring all manufacturers of Part B drugs to report ASP data and impose civil monetary penalties for failure to report. (Noting the Commission's concerns about manufacturers not reporting ASP data for Part B drugs, as of 2020, CMS conditioned the payment of a transitional drug add-on payment under the Part B end-stage renal disease prospective payment system on the availability of ASP data for the drug in question.)
  - Implement an ASP inflation rebate as protection against the potential for rapid price increases by manufacturers.
  - Use consolidated billing codes to pay for Part B products with a reference biologic and its associated biosimilars to spur price competition.
- *June 2017*—improve Part B drug payment in the long term by creating a voluntary market-based alternative to the current average sales price payment system: the Part B Drug Value Program (DVP). The DVP's intent is to obtain lower prices for Part B drugs by permitting private vendors to use tools to negotiate prices with manufacturers and by improving incentives for provider efficiency through shared savings opportunities. The recommendation included the following elements:
  - Medicare contracts with a small number of private vendors to negotiate prices for Part B drugs and biologicals.
  - Vendors use tools including a formulary and, for products meeting selected criteria, binding arbitration.
  - Providers purchase all DVP products at the price negotiated by their selected DVP vendor.
  - Medicare pays providers the DVP-negotiated price and pays vendors an administrative fee, with opportunities for shared savings.
  - Medicare payments under the DVP cannot exceed 100 percent of average sales price.
- *March 2020*—freeze or reduce some providers' payment rates, as we recommend in this report (which would decrease federal Medicare spending by over $2 billion in 2021 and over $20 billion over the next five years).

**MEDICARE CHALLENGE: Medicare pays higher prices in some care settings than others—for the same service.** Because of the different payment systems used for different care settings, Medicare in some cases has

different payment rates for the same or similar services. Under these circumstances, providers have an incentive to shift care to the more profitable setting, which leads to increased program spending and higher beneficiary cost sharing, often without any corresponding increase in quality.

***COMMISSION RECOMMENDATIONS: Make payments site neutral.*** The Commission supports equalizing payments when the same services are delivered in different care settings, and we have made the following recommendations:

- *March 2012 and March 2014*—Reduce or eliminate differences between hospital outpatient departments (HOPDs) and physician offices in payment rates for evaluation and management office visits and selected other services. (This recommendation was partially implemented: The Congress required CMS to reduce payment rates for HOPD services provided at off-campus HOPDs that began billing Medicare on or after November 2, 2015.)
- *March 2014*—Set long-term care hospital base payment rates for non-chronically critically ill cases equal to those of acute care hospitals, and redistribute the savings to create additional inpatient outlier payments for chronically critically ill cases in inpatient prospective payment system hospitals. (In 2013, Congress directed CMS to pay the standard long-term care hospital payment rate for certain beneficiaries and lower payments for beneficiaries with lower severity illnesses.)
- *March 2015*—Eliminate the differences in payment rates between inpatient rehabilitation facilities and skilled nursing facilities for selected conditions.

**MEDICARE CHALLENGE: Medicare undervalues primary care and overvalues specialty care.** In the process of setting rates for thousands of services, certain services are undervalued relative to others, providing incorrect incentives for their use. For example, the Commission has raised concerns that the Medicare physician fee schedule overpays for services provided by clinicians in procedural specialties and underpays for services provided by clinicians in primary care specialties (Medicare Payment Advisory Commission 2011a). This imbalance results in significantly higher income for clinicians in procedural specialties relative to those in primary care specialties, contributing to a corresponding imbalance in the clinician supply.

***COMMISSION RECOMMENDATIONS: Improve the accuracy of payments and increase payments to primary care providers.*** The Commission has recommended that Medicare:

- *October 2011*—Regularly collect data from a cohort of efficient practices to establish more accurate relative value units (RVUs) for physician fee schedule services. Use this information to identify overpriced services and reduce their RVUs. Congress should also specify an annual numeric goal for RVU reductions. (This recommendation was partially implemented: The Congress specified an annual numeric goal for reductions to the RVUs of overpriced services.)
- *March 2015*—Establish a prospective payment per beneficiary for primary care practitioners, funded by reducing fees for non-primary care services in the fee schedule.

**MEDICARE CHALLENGE: Providers have financial incentives to selectively treat some patients over others and to furnish certain types of services, regardless of clinical value.** Another consequence of Medicare's payment structure is its vulnerability to providers admitting patients with certain care needs because they are more profitable to treat than others. For example, until the skilled nursing facility and home health agency payment systems were revised, it was financially advantageous for providers to admit patients with rehabilitation care needs (and to furnish more, rather than less, therapy) and to avoid medically complex patients.

***COMMISSION RECOMMENDATIONS: To reduce incentives to treat certain types of patients and to furnish certain types of services,*** the Commission recommended that Medicare:

- *March 2008 (and subsequent years)*—Revise the prospective payment system for skilled nursing facilities to reduce incentives to treat rehabilitation patients over medically complex patients. (This recommendation has been implemented.)
- *March 2011 (and subsequent years)*—Revise the prospective payment system for home health agencies to eliminate the use of the number of therapy visits as a factor in payment determination. (This recommendation has been implemented.)
- *March 2016*—Expand the inpatient rehabilitation facility outlier pool to redistribute payments more

equitably, to ease the financial burden for facilities that have a relatively high share of costly cases.

- *June 2016*—Implement a unified prospective payment system for post-acute care (in place of the separate payment systems for skilled nursing facilities, home health agencies, inpatient rehabilitation facilities, and long-term care hospitals) that would base payments on patient characteristics, not the setting of care or the amount of therapy furnished to patients.

**MEDICARE CHALLENGE: Medicare is required to pay providers' claims, regardless of clinical appropriateness.** In Medicare's FFS program, providers can augment their revenue by increasing the volume of services they provide. The program's lack of utilization management can lead to overuse of services because the program pays claims for care that is "reasonable and necessary" even if that care might be considered inappropriate for a given patient. Under Medicare's statute, the FFS program generally covers services delivered by any provider who is willing to meet Medicare's participation requirements. As a result, FFS Medicare does not have the authority to develop provider networks or to credential providers—tools that private payers (including Medicare Advantage plans) can use to reduce the potential for overutilization as well as fraud and abuse. In some cases, the FFS Medicare program even has difficulty removing providers or suppliers whose claims histories clearly demonstrate aberrant patterns of billing, care, or both.

***COMMISSION RECOMMENDATIONS: Scrutinize claims more closely.*** The Commission has recommended that Medicare:

- *March 2010*—Review home health agencies that exhibit unusual billing patterns and implement new safeguards—such as a moratorium on new providers, prior authorization, and suspension of prompt payment requirements—in areas that appear to be high risk.
- *June 2011*—Establish a prior authorization program for practitioners who order a substantially greater number of advanced imaging services than their peers.
- *June 2013*—Develop national guidelines for physical, occupational, and speech therapy services and implement payment edits based on these guidelines to target implausible amounts of therapy. Also use existing authorities to target high-use geographic areas and aberrant providers.
- *June 2013*—Promulgate national guidelines to more precisely define medical necessity requirements for ground ambulance transports and develop national edits for claims processors based on those guidelines. Identify geographic areas and ambulance suppliers and providers that display aberrant patterns of use and address clinically inappropriate use of ground transports that are non-emergency and require only basic life support.
- *March 2016*—Conduct focused medical record review of inpatient rehabilitation facilities that have unusual patterns of case mix and coding.
- *June 2019*—Develop and implement national guidelines for coding hospital emergency department visits, instead of allowing hospitals to use their own internal guidelines, which would give CMS a firmer foundation for assessing and auditing the coding behavior of hospitals.

**MEDICARE CHALLENGE: Medicare coverage interacts with beneficiaries' other coverage, sometimes resulting in fragmented care.** While Medicare is the single largest payer in the health care sector, the policy signals from multiple payers can interact in ways that sometimes result in unintended consequences. For example, if a dual-eligible nursing home resident is hospitalized for three days, he or she would potentially qualify for a Medicare-covered skilled nursing facility stay, shifting responsibility from the state Medicaid program to the federal Medicare program. Other care for beneficiaries who are dually eligible for Medicare and Medicaid can also be fragmented.

***COMMISSION RECOMMENDATION: Encourage better integration with Medicaid.*** The Commission has recommended that Medicare:

- *March 2013*—Require Medicare Advantage dual-eligible special needs plans to assume clinical and financial responsibility for Medicare and Medicaid benefits.

**MEDICARE CHALLENGE: Medicare's benefit package does not protect against high out-of-pocket (OOP) costs, and many beneficiaries have limited incentives to use care efficiently.** Beneficiaries face differential cost sharing by service (for example, coinsurance for physician services is 20 percent, while home health has no coinsurance). In addition, the cost-

sharing amounts, percentages, and deductibles vary by setting, and some services are not covered (for example, Medicare does not generally cover long-term care). Medicare Part A and Part B lack a cap on OOP costs (a feature that exists in Medicare Advantage plans and nearly all private insurance policies). In response, many beneficiaries purchase supplemental coverage that includes an OOP maximum. Most supplemental policies also substantially reduce or eliminate most of the beneficiary liability for coinsurance and deductibles, thereby blunting the impact of cost sharing. As a result, there is little incentive for many beneficiaries to be cost conscious—that is, to select only those services that are necessary and to choose providers who practice efficiently (Medicare Payment Advisory Commission 2012).

***COMMISSION RECOMMENDATIONS: Modify beneficiary cost sharing to incentivize high-value care.*** The Commission has recommended that the Medicare program:

- *June 2012*—Replace the current Part A and Part B FFS benefit design with one that would include an OOP maximum, deductibles for Part A and Part B services, and copayments that could vary by type of service and provider or be eliminated for high-value services. The Commission also recommended discouraging the purchase of Medigap plans through an additional charge on supplemental insurance.
- *March 2012 and June 2016*—Modify the Part D low-income subsidy copayments to encourage the use of generic drugs, preferred multisource drugs, and biosimilars.

**MEDICARE CHALLENGE: Medicare Advantage data limitations prevent study of utilization and program effectiveness.** Having complete, detailed encounter data about the one-third of Medicare beneficiaries enrolled in MA plans could inform improvements to MA payment policy, provide a useful comparator with the FFS Medicare program, and generate new policy ideas that could be applied more broadly to the Medicare program. However, given the data errors and omissions that the Commission found in a recent analysis, we cannot use MA encounter data for such purposes at present.

***COMMISSION RECOMMENDATION: Collect more complete and accurate MA data.*** The Commission has recommended that Medicare:

- *June 2019*—give robust feedback to MA plans on the completeness and accuracy of their encounter data; withhold some payments from MA plans and allow plans to earn back those payments if their encounter data meet thresholds for completeness and accuracy; and, if necessary, require providers to submit MA encounter data to Medicare administrative contractors as a means of ensuring more accurate encounter data submissions.

**MEDICARE CHALLENGE: FFS Medicare lacks strong incentives to improve population-based outcomes and the coordination of care.** Some key challenges for the Medicare FFS program are that providers are usually paid more for providing more services, and lack strong incentives to improve population-based outcomes or the coordination of their patients' care.

***COMMISSION RECOMMENDATIONS: Incentivize improving population-based outcomes.*** The Commission has recommended holding providers accountable for hospital readmissions, which could in turn incentivize stronger coordination of care, by having Medicare:

- *June 2008*—Reduce payments to hospitals with relatively high readmission rates for select conditions, and allow gainsharing between hospitals and physicians.
- *March 2012*—Reduce payments to skilled nursing facilities with relatively high rates of rehospitalization.
- *March 2014*—Reduce payments to home health agencies with relatively high rates of hospital readmission.

As noted earlier, the Commission has also recommended new payments for care coordination:

- *March 2015*—Establish a prospective payment per beneficiary for primary care practitioners, funded by reducing fees for non-primary care services in the fee schedule.

The Commission has also recommended adopting value-based payment programs based on meaningful measures, through recommendations that Medicare:

- *March 2012*—Implement a value-based purchasing program for ambulatory surgical center services.
- *March 2018*—Eliminate the current Merit-based Incentive Payment System for Medicare FFS

clinicians and replace it with a new voluntary value program in which clinicians in voluntary groups can qualify for a value payment based on their group's performance on a set of population-based measures.

- *March 2019*—Replace Medicare's current hospital quality programs with a new hospital value incentive program that:
  - includes a small set of population-based outcome, patient experience, and value measures;
  - scores all hospitals based on the same absolute and prospectively set performance targets; and
  - accounts for differences in patients' social risk factors by distributing payment adjustments through peer grouping.

## Conclusion

The high and growing level of health care spending as a share of the economy means that—absent substantial changes in spending or the economy—an ever-increasing amount of the country's economic activity and gain will be dedicated to purchasing health care. Medicare is the single largest payer in the health care sector and will expand with the aging of the baby-boom generation, greatly increasing program spending. Significant cross-sectional variation in use and spending, which does not correspond to better quality, raises concern that higher health care use and spending are not improving overall health and are putting beneficiaries at risk, both medically and financially.

Because of its size and because other payers use its payment methods, Medicare is an important influence on the nation's health care delivery system and its evolution. Reciprocally, trends in the private health insurance market can influence whether Medicare's payment reforms are ultimately successful. Because of this interaction between public and private payers, the alignment of incentives across payers is an important consideration for delivery system reforms.

Despite the relatively lower rates of spending growth recently experienced by Medicare, the program is projected to continue to absorb increasing amounts of federal revenue. Absent changes to current policy, other public investments such as 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 health care spending trends. In light of strained federal, state, family, and individual budgets, the Medicare program must urgently pursue reforms that decrease spending and improve quality.

The goal of Medicare payment policy is to obtain good value for the program's expenditures, which means maintaining beneficiaries' access to high-quality services while encouraging efficient use of resources. Anything less does not serve the interests of the taxpayers and beneficiaries who finance Medicare through their taxes and premiums. To obtain good value, the Commission will continue to advocate for Medicare payment and delivery system reforms that have the potential to encourage high-quality care, better care transitions, and more efficient provision of care for all patients. ■

## Endnotes

1 Workers and their employers split the cost of the payroll tax (workers pay 1.45 percent and employers pay the remaining 1.45 percent). Meanwhile, self-employed people pay both the worker's and the employer's share of this tax, totaling 2.9 percent of their net earnings. High-income workers pay an additional 0.9 percent of their earnings above $200,000 for single workers or $250,000 for married couples filing joint income tax returns.

2 The "Affordable Care Act" refers to two pieces of legislation: the Patient Protection and Affordable Care Act (PPACA) enacted on March 23, 2010; and the Health Care and Education Reconciliation Act enacted on March 30, 2010, which amended PPACA.

3 Going forward, the Medicare Trustees project that opportunities for further generic use may diminish. Growth in the use and development of high-cost specialty drugs is beginning to overtake the moderating price influence of generics (Medicare Payment Advisory Commission 2016).

4 Figure 1-2 shows that the share of spending accounted for by private health insurance (35 percent in 2018) is greater than Medicare's share (23 percent in 2018). However, in contrast to Medicare, private health insurance is not a single purchaser of health care; rather, it includes many payers, such as traditional managed care, self-insured health plans, and indemnity plans.

5 "Hospital" includes all services provided in hospitals to patients: room and board, ancillary services such as operating room fees, inpatient and outpatient care, services of resident physicians, inpatient pharmacy, hospital-based nursing home care, hospital-based home health care, and fees for any other services billed by the hospital, such as hospice. "Physician and clinical services" includes services provided in physician offices, outpatient care centers, and in hospitals, if the physician bills independently for those services, plus the portion of medical laboratories services that are billed independently by the laboratories.

6 The Trustees' Report's estimates of spending in the traditional FFS Medicare program include but do not break out spending on accountable care organizations, which have grown to represent a significant share of program spending.

7 The Commission's calculations are based on aggregate Part D reimbursements to plans and employers on an incurred basis as shown in Table IV.B10 of the 2019 annual report of the Boards of Trustees of the Medicare trust funds. Per beneficiary spending excludes premium payments.

8 The most concentrated markets have a Herfindahl–Hirschman Index above 5,000, meaning in a market with two systems, one of the systems has more than a 50 percent market share; these have been referred to as "super concentrated" markets (Fulton et al. 2018).

9 The Medicare Trustees project enrollment and costs for each of the three categories of Medicare enrollees: aged, disabled, and end-stage renal disease (ESRD). While the numbers of under-65 and ESRD beneficiaries are projected to increase, this growth is outpaced by the influx of baby boomers turning 65. Aged beneficiaries accounted for about 83 percent of FFS enrollees in 2007, and their number is projected to grow to about 88 percent by 2026.

10 In addition to payroll taxes, the HI Trust Fund's income derives from several sources, such as taxation of Social Security benefits (8 percent in 2018), interest earned on the trust fund investments (2 percent in 2018), and premiums collected from voluntary participants (1 percent in 2018).

11 Workers and their employers split the cost of the payroll tax (workers pay 1.45 percent and employers pay the remaining 1.45 percent). Meanwhile, self-employed people pay both the worker's and the employer's share of this tax, totaling 2.9 percent of their net earnings. High-income workers pay an additional 0.9 percent of their earnings above $200,000 for single workers or $250,000 for married couples filing joint income tax returns.

12 For Part D, the beneficiary premium share is based on 25.5 percent of the average cost of the basic benefit.

13 Other major health programs include Medicaid, the Children's Health Insurance Program, and federal subsidies for the federal and state exchanges legislated under the ACA.

14 Household income, health expenditures, and premiums are all measured in nominal dollars.

15 In contrast, other beneficiaries receive financial assistance. Medicare beneficiaries with low income and assets have their premiums and, in some cases, their cost sharing paid for by Medicaid, and some others have retiree coverage or Medigap policies that cover cost sharing.

16 The National Center for Health Statistics defines life expectancy as the average number of years that a hypothetical group of infants would live at each attained age if the group were subject, throughout its lifetime, to the age-specific death rates prevailing in the actual population in a given year (Arias 2016).

17 The authors noted limitations to their study: "Life expectancy estimates for Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives should be interpreted with caution as vital statistics–based mortality rates for these groups tend to be underestimated by 5 percent, 7 percent, and 30 percent, respectively."

18 The measures of life expectancy and mortality rate are not interchangeable. However, the two measures are closely related. The National Center for Health Statistics life expectancy estimate represents the average number of years of life remaining if a group of persons were to experience the mortality rates for that specific year of calculation over the course of their remaining life.

19 Researchers at the Commonwealth Fund attribute this difference to the effects of the U.S.'s poorer performance on access to care (measured in terms of timeliness and affordability), administrative efficiency (as reported by patients and doctors), and income-related disparities in access to care and quality (Schneider and Squires 2017).

20 Baby boomers are people born between the years 1946 and 1964.

21 For example, the Medicare Trustees estimate hospital inpatient admissions per beneficiary will decline through 2022 and begin increasing later in the projection period with the aging of the baby-boom population (Boards of Trustees 2014). CBO also projects comparatively slow growth in per beneficiary spending in part because of the influx of younger beneficiaries, who tend to use fewer health care services and therefore lower Medicare's average spending per beneficiary (Congressional Budget Office 2015).

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