



C H A P T E R 4

REFORMING THE HEALTH CARE SYSTEM

INTRODUCTION

The health care system has profound effects on Americans' lives. Access to high-quality health care contributes to good health, which helps Americans meet obligations to their families, succeed in the workplace and the classroom, and enjoy an overall high quality of life. At the same time, health care is a major expense for families and governments alike, so the health care system's ability to deliver needed care at a reasonable cost is an important determinant of Americans' overall standard of living.

When President Obama took office, he confronted a health care system that was falling short both in ensuring broad access to high-quality care and in providing care at a reasonable cost. These shortcomings were the result of large gaps in our health insurance system and a health care delivery system that too often provided inefficient, low-quality care. Through the Affordable Care Act (ACA) and other legislation enacted under this Administration, as well as accompanying administrative actions, the United States has made considerable progress in addressing these two major problems.

Turning first to the health insurance system, more than one-in-seven Americans—44 million people—lacked health insurance coverage in 2008, the year before the Obama Administration began. Many uninsured individuals were simply unable to afford coverage, while many others were locked out or priced out of the individual health insurance market because they had pre-existing health conditions. Their lack of insurance coverage kept them from being able to obtain the care they needed, and left them vulnerable to financial catastrophe if they became seriously ill. Meanwhile, even many Americans with health insurance faced similar risks due to significant gaps in their coverage.

In his first month in office, President Obama took an initial step toward ensuring that all Americans had access to affordable, high-quality

health insurance coverage by signing legislation improving the Children's Health Insurance Program (CHIP). Slightly more than a year later, the President signed the ACA, which reformed the individual health insurance market to ensure that all Americans could find affordable, high-quality coverage, provided generous financial support to states that wished to expand their Medicaid programs to cover more of their low-income residents, and allowed young adults to remain on a parent's plan until age 26. Together, these actions led to a historic expansion in the number of people with health insurance. Because of the coverage provisions of the ACA, an estimated 20 million additional adults now have health insurance. In addition, thanks in large part to the ACA and the improvements to CHIP that the President signed into law, the uninsured rate among children has fallen by almost half since the President took office, providing health insurance to more than 3 million additional children. Following these gains, the uninsured rate stands below 9 percent for the first time ever.

A growing body of evidence demonstrates that broader insurance coverage is generating major benefits for the newly insured and the health care system as a whole. Access to medical care has improved substantially; the share of people reporting that they have recently forgone medical care because they could not afford it has fallen by more than a third since the ACA became law. Expanded coverage has also reduced the burden of medical debt and generated corresponding reductions in the amount of uncompensated care. Nationwide, uncompensated care has fallen by more than a quarter as a share of hospital operating costs from 2013 to 2015, corresponding to a reduction of \$10.4 billion. Early evidence also suggests that expanded coverage is driving improvements in health that are consistent with those observed in prior research; if experience under the ACA matches what was observed under Massachusetts health reform, an estimated 24,000 deaths are already being avoided annually. Looking beyond the health care sector, the ACA has also sharply reduced income inequality, and it has achieved this broad range of benefits without the adverse near-term effects on the labor market that the ACA's critics predicted, while also helping to lay the foundation for a stronger labor market over the long term.

The ACA also introduced reforms to improve financial security and access to care for those who were already insured. These reforms are generating important benefits. Because of the law, private insurance plans are generally required to limit enrollees' annual out-of-pocket spending. Due to the spread of out-of-pocket limits since 2010, an estimated 22 million additional people enrolled in employer-sponsored plans are protected against catastrophic costs in 2016. Similarly, because of the ACA's provision phasing out the Medicare Part D coverage gap, more than 11 million Medicare

beneficiaries have received cumulative savings on prescription drugs averaging more than \$2,100 a person as of the middle of 2016.

Turning next to the health care delivery system, the United States devoted roughly a sixth of its gross domestic product (GDP) to health care when President Obama took office, a far larger share than peer nations. Yet health outcomes in the United States were, at best, no better. At the same time, health care spending and health outcomes varied widely across regions of the United States, with no evidence that higher-spending areas achieved better outcomes. This and other evidence showed that there were major opportunities to reform the health care delivery system in ways that could reduce the burden that health care spending placed on the U.S. economy, while improving health outcomes.

The ACA and related legislation have implemented comprehensive reforms to make the health care delivery system more efficient and improve the quality of care. The ACA achieved significant near-term savings by better aligning payments to medical providers and private insurers in Medicare with the costs of providing services. The law also set in motion a long-term effort to develop and deploy alternative payment models (APMs) that reward providers who deliver efficient, high-quality care, unlike existing fee-for-service payment systems, which base payment chiefly on the quantity of services delivered. Using the tools provided by the ACA, the Administration has made considerable progress in deploying APMs, including accountable care, bundled payment, and medical home models. As of early 2016, more than 30 percent of traditional Medicare payments were estimated to be associated with APMs, up from virtually none in 2010. The tools provided by the ACA, which were enhanced by the bipartisan physician payment reform legislation enacted in 2015, will drive further progress in the years ahead.

Changes in Medicare's payment systems appear to be catalyzing similar changes by private payers. Indeed, at the beginning of 2016, 17 million—or roughly one in ten—private insurance enrollees are estimated to have been covered under payment arrangements similar to the accountable care contracts being deployed in Medicare, up from virtually none as recently as 2011. Similarly, one large survey found that around a quarter of provider payments made by private insurers were associated with APMs in 2015. The Administration has also taken several steps to accelerate the diffusion of APMs in the private sector by directly engaging private payers in payment reform efforts in Medicare and Medicaid, facilitating information sharing across payers, and fostering the development of common standards. The ACA's excise tax on high-cost employer-sponsored coverage, scheduled to take effect in 2020, will provide an additional impetus for private sector plans to engage in payment reform efforts over the coming years.

The six years since the ACA became law have seen very encouraging trends in both health care costs and health care quality. Prices of health care goods and services have grown at a slower rate under the ACA than during any period of the same length since these data began in 1959. Recent years have also seen exceptionally slow growth in per enrollee spending in both public programs and private insurance. In parallel, there have been promising indications that quality of care is improving. The rate at which patients are harmed while seeking hospital care has fallen by 21 percent since 2010, which is estimated to have led to approximately 125,000 avoided deaths cumulatively through 2015. Medicare beneficiaries' risk of returning to the hospital soon after discharge has also declined substantially, corresponding to an estimated 565,000 avoided readmissions from April 2010 through May 2015.

A considerable body of research has aimed to understand the causes of these encouraging trends. The Great Recession does not appear to have been an important driver of the slow growth in health care costs in recent years. The recession had little effect on Medicare spending, and, while the Great Recession did dampen private sector spending growth in the years during and immediately after the downturn, its ability to explain slow growth over the last few years is limited. Similarly, neither demographic changes nor changes in cost sharing appear to explain much of the slow growth in health care costs under the ACA.

It therefore appears that recent years' favorable trends in health care costs and quality primarily reflect structural changes in the health care delivery system. While multiple factors are likely playing a role, payment reforms introduced in the ACA have made substantial, quantifiable contributions to slowing the growth of health care costs in both Medicare and private insurance. Congressional Budget Office (CBO) estimates imply that the ACA has reduced the growth rate of per beneficiary Medicare spending by 1.3 percentage points a year from 2010 through 2016. "Spillover" effects of the ACA's Medicare reforms on the prices that private insurers pay for care have likely subtracted between 0.6 and 0.9 percentage point a year from the growth rate of per enrollee private insurance spending over the same period. Moreover, there is reason to believe that the ACA has had systemic effects on trends in health care costs and quality that go beyond what can be directly quantified.

Recent positive developments in the health care delivery system are generating major benefits to families and the economy. The average premium for people who hold employer-based family coverage was nearly \$3,600 lower in 2016 than if premium growth since the ACA became law had matched the preceding decade, savings families will receive directly in the

form of lower premium costs and indirectly in the form of higher wages. Far from offsetting the slowdown in premium growth, growth in out-of-pocket costs has slowed as well, and accounting for out-of-pocket costs increases these savings to \$4,400 in 2016.

People who get coverage outside the workplace have also realized important savings on premiums and cost sharing. The typical Medicare beneficiary enrolled in traditional Medicare will incur around \$700 less in premiums and cost sharing in 2016 than if Medicare spending trends had matched what was projected in 2009 under the policies then in place. This figure does not include reductions in cost sharing on prescription drugs due to the combination of the ACA's provision closing the Medicare Part D coverage gap and slower-than-expected growth in prescription drug spending, so it actually understates the total savings to Medicare beneficiaries.

Because State and Federal governments finance a substantial share of health care spending, slower growth in health care costs has also greatly improved the fiscal outlook. Due in large part to the ACA's provisions slowing the growth of health care costs, CBO projects that the law will reduce deficits by increasing amounts in the years ahead, rising to an average of 1 percent of GDP over the decade starting in 2026. Over the next two decades as a whole, the law is projected to reduce deficits by more than \$3 trillion. In addition, since just after the ACA became law, CBO has reduced its projections of Medicare spending under current policies by an additional \$125 billion in 2020 or around 0.6 percent of GDP in that year, further improving the fiscal outlook. The combination of the ACA and broader trends in the health care sector have also added 11 years to the life of the Medicare Trust Fund relative to 2009 projections.

The remainder of this chapter provides additional detail on the challenges the United States health care system faced when the President took office, the actions this Administration has taken to meet those challenges, and the progress that has been achieved to date. The first section of this chapter focuses on progress in expanding and improving health insurance coverage, and the second focuses on improvements in the health care delivery system. The final section concludes.

EXPANDING AND IMPROVING HEALTH INSURANCE COVERAGE

Prior to the Obama Administration, the United States last made substantial progress in expanding health insurance coverage in the years after

Medicare and Medicaid were created in 1965, as illustrated in Figure 4-1.¹ Over the decade that followed, the United States uninsured rate fell by more than half, from 24 percent in 1963 to 11 percent in 1974, driven by the ramp-up of Medicare and Medicaid, legislative improvements that expanded those programs to people with serious disabilities, and the continued spread of employer-based health insurance. But progress stalled by the mid-1970s, and the uninsured rate rose steadily through the 1980s before stabilizing in the 1990s. In 2008, the year before President Obama took office, 44 million people—nearly 15 percent of the U.S. population—lacked health insurance.

This section of the chapter reviews the progress that has been made under this Administration in expanding and improving health insurance coverage. The section begins by describing the features of the pre-ACA health insurance landscape that caused so many Americans to go without coverage. It then discusses the actions taken under this Administration to increase health insurance coverage and presents evidence that those actions have been highly effective. It closes by surveying early evidence demonstrating that expanded coverage is improving access to care, health, and financial security for the newly insured, reducing the burden of uncompensated care for the health care system, and reducing income inequality, all without the adverse effects on labor markets that the law's critics predicted.

Barriers to Obtaining Health Insurance Coverage Before the Obama Administration

Prior to the reforms introduced during this Administration, uninsured Americans faced a pair of often-insurmountable barriers to obtaining coverage. The first was the high cost of health insurance, which made coverage unaffordable for many. The second was the dysfunction of the pre-ACA individual health insurance market, which caused many people to be locked out or priced out of the market due to pre-existing health conditions and kept many others from finding high-quality coverage. The role of each of these factors is discussed in greater detail below.

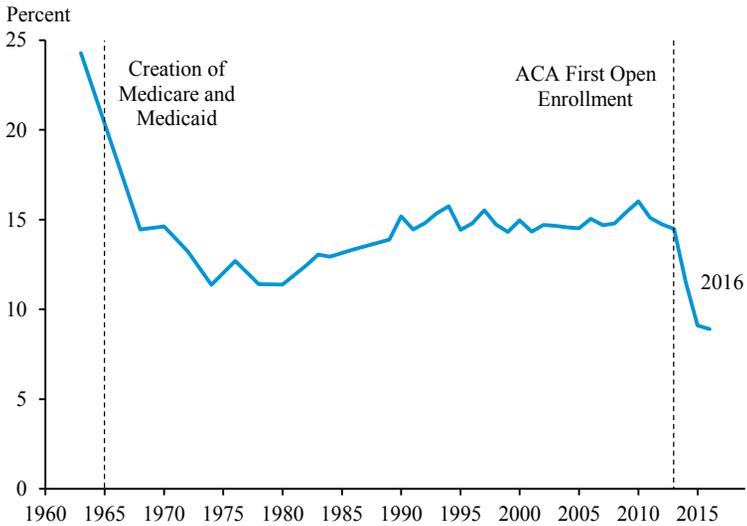
Cost Barriers to Obtaining Health Insurance Coverage

Health insurance has long been one of the most costly products that most families purchase. In 2008, the average premium for a policy offered in the employer market was \$4,700 for single coverage and \$12,700 for

¹ This discussion draws upon the historical health insurance series described in CEA (2014). The series is based primarily on analysis of data from the National Health Interview Survey. The methods described by Cohen et al. (2009) and Cohen (2012) were used to construct a consistent series over time. For 1980 and earlier, data from the NHIS were supplemented with information from other survey data sources and administrative data on enrollment in Medicare and Medicaid.

Figure 4-1

Uninsured Rate, 1963–2016



Note: Estimate for 2016 reflects only the first two quarters. Other estimates are full-year.
 Source: National Health Interview Survey and supplemental sources described in CEA (2014).

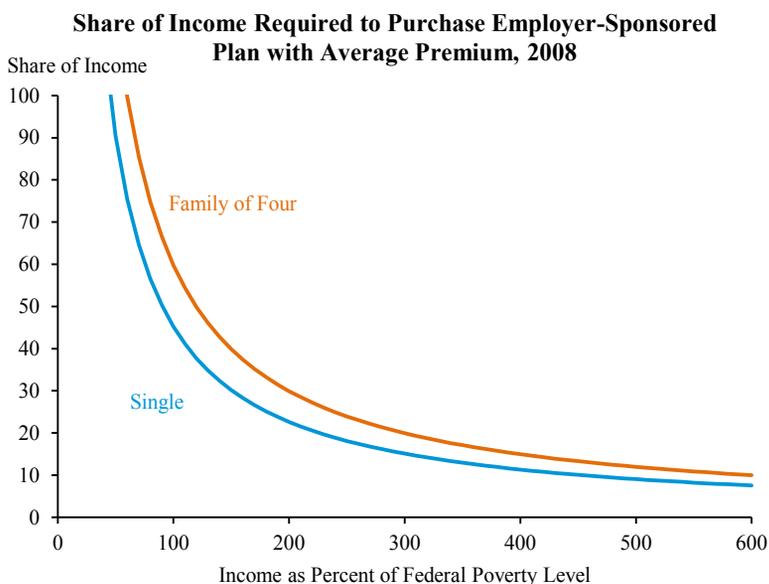
family coverage (KFF/HRET 2016). These amounts would have been a major expense for most families, but they represented a particularly heavy burden for low- and moderate-income families already struggling to meet other basic needs. As illustrated in Figure 4-2, for a family of four with an income below 200 percent of the Federal Poverty Level, the average premium for an employer-sponsored family policy would have consumed 30 percent or more of family income. For a family below the poverty line, it would have consumed 60 percent or more of family income, an essentially insurmountable barrier.²

Public policy played an important role in helping families meet these affordability challenges, but the adequacy of these efforts varied widely by age. For people age 65 and older, Medicare had succeeded in achieving nearly universal coverage at all income levels, as illustrated in Panel C of Figure 4-3. But individuals under age 65 were served by a patchwork of programs and incentives that left significant gaps.

For people with access to coverage through an employer, the tax code provided a large implicit subsidy for purchasing coverage. Unlike cash compensation, the compensation employers provide in the form of health

² Families bore these burdens whether they purchased coverage directly or, as was typically the case, obtained it through an employer. While employers typically pay around three-quarters of the total premium, economic theory and evidence indicate that employees ultimately bear the cost of that subsidy in the form of lower wages and salaries (for example, Summers 1989; Baicker and Chandra 2006).

Figure 4-2



Source: KFF/HRET Employer Health Benefits Survey; CEA calculations.

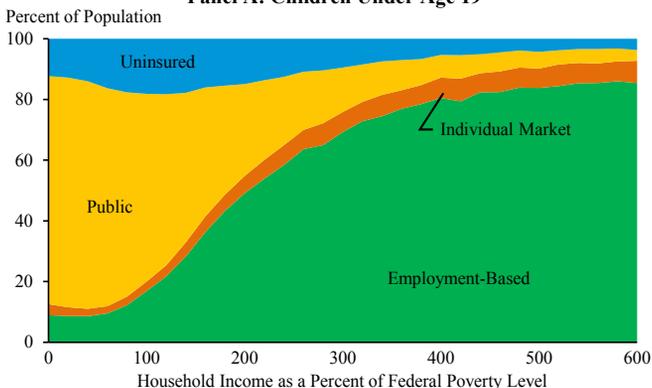
insurance is excluded from payroll and income taxation. The Federal marginal tax rate on labor income averages around 35 percent, so for each dollar of compensation a family received in the form of health insurance instead of wages, the family saved 35 cents in Federal taxes, reducing the effective cost of that dollar of health insurance coverage to just 65 cents.³ This favorable tax treatment played a central role in making coverage affordable for many middle- and upper-middle class families.⁴

However, the tax benefit for employer-sponsored coverage was inadequate to make coverage affordable for many low- and moderate-income families. As depicted in Panels A and B of Figure 4-3, the likelihood of having private insurance from any source fell sharply with income. Bipartisan efforts during the 1980s and 1990s had made significant progress in filling these gaps for low- and moderate-income children by broadening eligibility for Medicaid and creating the Children’s Health Insurance Program (CHIP).

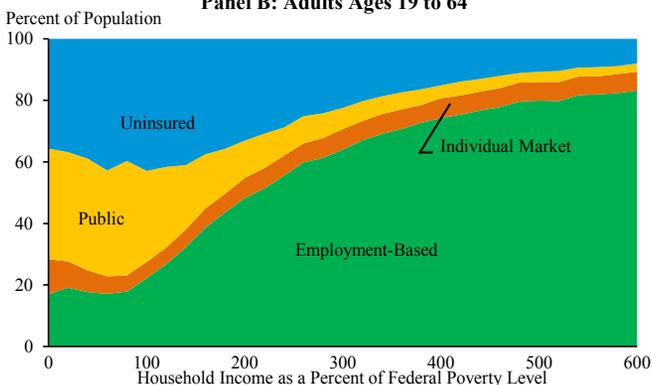
³ The Federal marginal tax rate reported here was estimated using data from Urban-Brookings Tax Policy Center Tables T13-0253 and T14-0091. States also generally exclude employer-provided health insurance coverage from taxation, so the value of the tax subsidy is somewhat larger than reported here.

⁴ While this favorable tax treatment played an important role in making coverage affordable for many families, its unlimited nature also encouraged some employers to offer inefficient and overly generous plans. The ACA introduced a tax reform that maintains this tax benefit, but mitigates the inefficiencies created by its unlimited nature; this reform is discussed in the second half of the chapter.

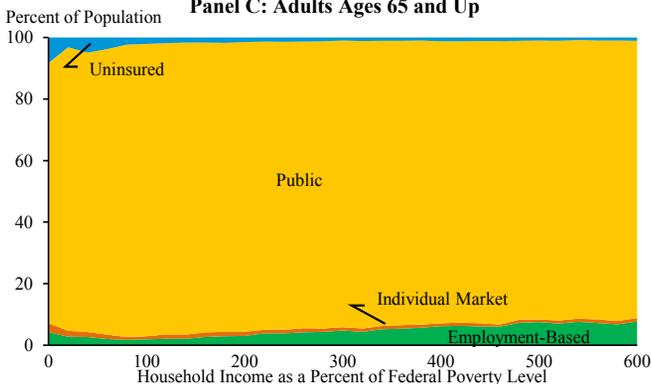
Figure 4-3
Health Insurance Coverage Status by Household Income, 2008
Panel A: Children Under Age 19



Panel B: Adults Ages 19 to 64



Panel C: Adults Ages 65 and Up



Note: Employment-based coverage is defined as coverage from a current or former employer, including military and VA coverage. Public coverage is defined as Medicare, Medicaid, and other government coverage for people with low-incomes or a disability. Individuals reporting multiple sources of coverage were assigned to a single insurance type using the following hierarchy: Medicare; military health coverage; VA health coverage; Medicaid and other government coverage for people with low-incomes or disabilities; coverage through a current or former employer; and coverage purchased directly from an insurance company. This hierarchy was applied prior to categorizing individuals into the coverage groups described above.

Source: American Community Survey; CEA calculations.

But these efforts left significant gaps even for children. They left even larger gaps for adults. Prior to the ACA, most state Medicaid programs did not cover adults without children, no matter how low their incomes, and the median state only covered working parents with incomes below 61 percent of the Federal Poverty Level (Heberlein, Brooks, and Alker 2013). As a result, low- and moderate-income non-elderly adults were by far the age and income group most likely to lack health insurance, as illustrated in Panel B of Figure 4-3.

Failures of the Individual Health Insurance Market

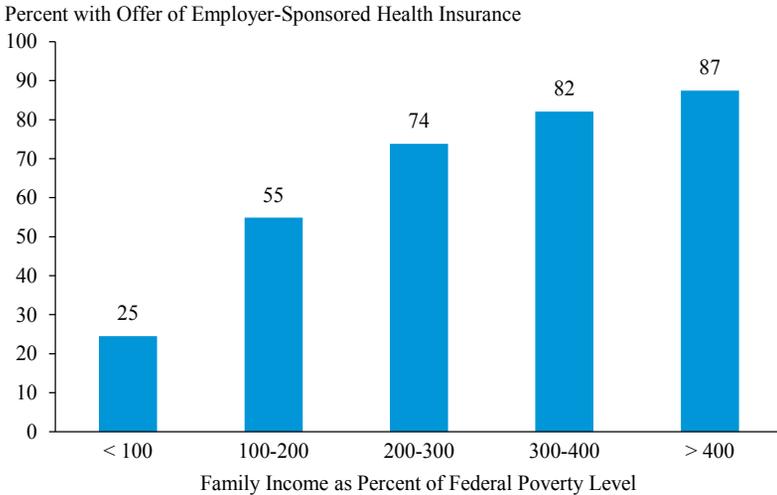
In addition to the affordability challenges described above, many uninsured Americans faced an additional barrier: the dysfunction of the individual health insurance market. While most non-elderly individuals had access to coverage through an employer, it was far from universal, even at relatively high income levels, as depicted in Figure 4-4. Retirees, many students, the self-employed, people working part-time due to family or other obligations, and the unemployed were all particularly likely to lack access to coverage through the workplace, as were individuals who happened to work at smaller firms or in industries where insurance coverage was not commonly offered. These individuals, if they did not qualify for public programs, had no choice but to turn to the individual market.

The fundamental flaw of the pre-ACA individual health insurance market was that, unlike the employer market, the individual market lacked a mechanism for forming broad pools that included both relatively healthy and relatively sick individuals. The employer market forms broad pools by taking advantage of the fact that people are matched to employers based on a wide variety of factors, many of which are only loosely related to health status. In addition, employers typically cover around three-quarters of the premium, ensuring participation by a broad cross-section of their workforces, including both healthier and sicker workers (KFF/HRET 2016). Insurers offering coverage through employers can therefore be confident that their products will attract a balanced pool of healthier and sicker enrollees. As a result, their economic incentives generally drive them to design products that maximize the well-being of the pool as a whole.

By contrast, insurers in the individual market had to contend with the possibility of “adverse selection,” the tendency of people with greater health care needs—and thus higher costs to insurers—to prefer more generous insurance coverage. Insurers’ concerns that they would attract an adversely selected pool drove them to engage in a wide range of practices aimed at discouraging enrollment by sicker individuals. These practices kept the individual market from performing the core functions of a health insurance

Figure 4-4

Share of Non-Elderly Individuals With an Offer of Employer-Sponsored Health Insurance in the Family, 2008



Source: National Health Interview Survey; CEA calculations.

market: sharing risk between the healthy and the sick; providing robust financial protection against unexpected health shocks; and facilitating access to needed health care.

Most destructively, insurers typically offered coverage on worse terms or not at all to people with pre-existing health conditions, a group estimated to include between 50 million and 129 million non-elderly Americans, depending on the definitions used (ASPE 2011). Before issuing a policy, insurers generally required applicants to submit information about their health history. Individuals with a pre-existing condition might then be charged a higher premium, offered a policy that excluded care related to the condition, or denied coverage entirely. While estimates of the frequency of these practices vary, they were clearly quite common. An industry survey found that 34 percent of individual applicants were charged higher-than-standard rates based on demographic characteristics or medical history (AHIP 2009). Similarly, a report by the Government Accountability Office (2011) estimated that, as of early 2010, the denial rate among individual market applications was 19 percent, and the most common reason for denial was health status. A 2009 survey found that, among adults who had individual market coverage or shopped for it in the previous three years, 36

percent were denied coverage, charged more, or had exclusions placed on their policy due to pre-existing conditions (Doty et al. 2009).

Insurers' desire to discourage enrollment by individuals with significant health care needs also led them to limit coverage in ways that undermined enrollees' access to care and financial security. For example, plans offered on the individual market frequently excluded or charged a high premium for services like maternity care, prescription drugs, and mental health care (Whitmore et al. 2011). One study estimated that, in 2011, 62 percent of individual market enrollees lacked coverage for maternity services, 34 percent lacked coverage for substance abuse services, 18 percent lacked coverage for mental health services, and 9 percent lacked prescription drug coverage (ASPE 2011). Individual market policies also frequently imposed very high cost-sharing requirements or placed annual, lifetime, or other limits on the amount they would cover. Half of individual market enrollees were estimated to be in policies that covered less than 60 percent of their total medical spending (Gabel et al. 2012). Similarly, an estimated 89 percent of those purchasing individual health coverage had a lifetime limit on their benefits (Musco and Sommers 2012).

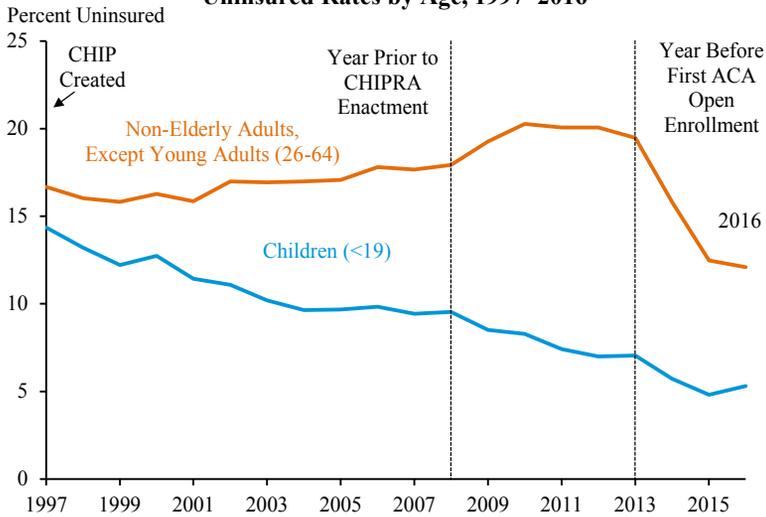
Reforms to Expand Health Insurance Coverage

The Obama Administration has implemented a series of reforms designed to overcome the barriers described above and ensure that all Americans can access high-quality, affordable health insurance coverage. This work began in February 2009 with the enactment of legislation improving CHIP and continued with the enactment and implementation of the ACA, which made broader reforms to the health insurance system in the United States. These reforms, as well as the evidence that they have dramatically expanded access to health insurance coverage, are described in detail below.

Strengthening the Children's Health Insurance Program

The Children's Health Insurance Program (CHIP) was created in 1997 and provides financial support beyond what is available through the existing Medicaid program to states wishing to cover additional low- and moderate-income children. Research has found that CHIP was highly effective in increasing insurance coverage among children and implies that CHIP was likely the main reason that the uninsured rate among children declined almost without interruption from the late 1990s through the mid-2000s, as

Figure 4-5
Uninsured Rates by Age, 1997–2016



Note: Estimates for 2016 reflect only the first two quarters. See footnote in the main text for additional detail on calculation of the 2016 estimates.
 Source: National Health Interview Survey; CEA calculations.

illustrated in Figure 4-5 (Howell and Kenney 2012).⁵ Progress stalled after the mid-2000s, however, and 9.5 percent of children still lacked health insurance coverage in 2008.

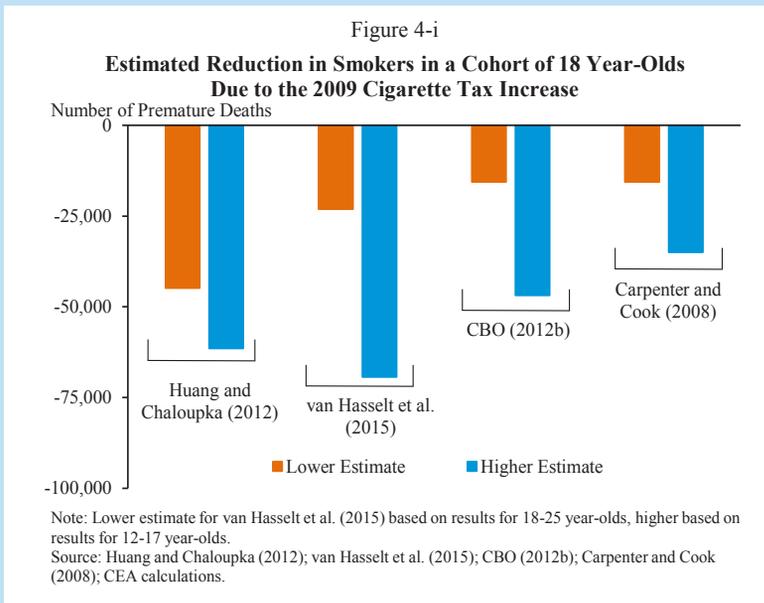
In February 2009, just weeks after taking office, President Obama signed the Children’s Health Insurance Program Reauthorization Act (CHIPRA). CHIPRA aimed to further reduce the uninsured rate among children by making a range of improvements to CHIP. Notably, the law provided new options for states that wanted to simplify enrollment, improve outreach, or expand eligibility; created financial incentives for states to adopt best practices; and extended the program’s funding.

In the years after CHIPRA’s enactment, the children’s uninsured rate resumed its rapid decline. From 2008 through 2013, the uninsured rate among children declined by around a quarter, equivalent to 1.9 million children gaining coverage. The timing of these gains, combined with the fact that uninsured rates actually rose during this period for adults—likely due to the Great Recession and its aftermath—suggests that policy changes introduced by CHIPRA played an important role in reducing the uninsured

⁵ Estimates of the uninsured rate for 0-18 year olds have not yet been reported for 2016, so the uninsured rate for 0-18 year olds reported in Figure 4-5 was calculated by extrapolating the 2015 estimate using the percentage point change for 0-17 year olds, which has been reported. Similarly, estimates of the uninsured rate for 26-64 year olds were extrapolated using the percentage point change for the larger group consisting of 18 year olds and 26-64 year olds.

Box 4-1: Public Health Benefits of CHIPRA

In addition to extending and improving CHIP, CHIPRA also raised the Federal cigarette tax from \$0.39 per pack to approximately \$1.01 per pack. By increasing cigarette prices, cigarette taxes substantially reduce smoking rates and generate large improvements in public health. Research examining the impact of Federal cigarette tax increases on the number of teen or young-adult smokers imply that the 2009 Federal cigarette tax increase will reduce youth smoking by between 3 and 15 percentage points (van Hasselt et al. 2015; Huang and Chaloupka 2012; CBO 2012b; Carpenter and Cook 2008). Assuming that roughly a third of youth smokers die prematurely due to smoking (U.S. Surgeon General 2014), these estimates suggest that the 2009 cigarette tax increase plausibly reduced the number of premature deaths due to smoking in each cohort by between 15,000 and 70,000, as illustrated in Figure 4-i.



rate among children.⁶ Consistent with this time-series evidence, research examining specific changes in state CHIP and Medicaid programs enabled by CHIPRA has concluded these changes were effective in expanding coverage for children (Blavin, Kenney, and Huntress 2014; Goldstein et al. 2014).

⁶ Figure 4-5 uses adults ages 26-64 (rather than all non-elderly adults) as a comparison group in order to exclude any effects of the Affordable Care Act’s dependent coverage expansion, which took effect in late 2010. That coverage expansion is discussed in greater detail below.

Legislative actions subsequent to CHIPRA have ensured that CHIP can continue to be a source of affordable coverage for low- and moderate-income children. The ACA extended funding for CHIP through fiscal year 2015 and increased the share of CHIP costs paid by the Federal Government, making the program even more financially attractive for states. In 2015, the Medicare Access and CHIP Reauthorization Act (MACRA) extended funding for CHIP, as well as many of the policy improvements introduced in CHIPRA and the ACA, through fiscal year 2017.

Expanding Access to Coverage for Young Adults

The ACA's comprehensive reforms to ensure access to health insurance coverage are described below, but the law also included a targeted provision to reduce the particularly high uninsured rate among young adults, which is illustrated in Figure 4-6. Young adults' uninsured rates exceeded those for older adults for a number of reasons. Because many young adults are still in school, and those who have already joined the labor force are less likely to be offered health insurance through work, they were much less likely to have employer coverage. They also were much less likely to have Medicaid coverage than children, reflecting the stricter eligibility rules that apply to adults.

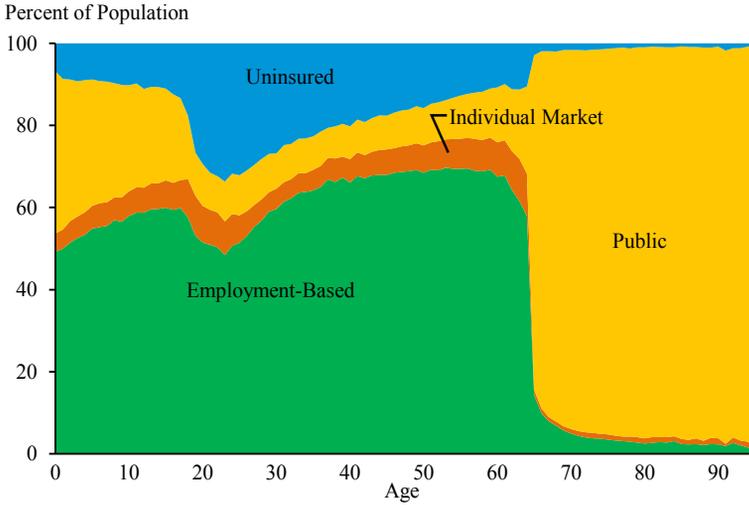
To address the unique challenges faced by young adults, the ACA required private insurance plans to allow young adults to remain on a parent's policy until age 26. Immediately after this policy took effect during September 2010, the uninsured rate among young adults ages 19-25 started declining rapidly, as shown in Figure 4-7.⁷ The uninsured rate fell from 34.1 percent in the four quarters ended in September 2010 to 26.7 percent in the four quarters of 2013, just before the ACA's broader coverage provisions took effect. The timing of this decline, combined with the fact that the uninsured rate for older non-elderly adults was essentially flat during this period is strong evidence that the decline was caused by the ACA provision.

On the basis of these data, the U.S. Department of Health and Human Services (HHS) estimates that 2.3 million young adults gained coverage because of this provision (ASPE 2015). The broader academic literature has also concluded that the provision generated substantial gains in young adult coverage, though estimates vary across studies, with some reporting estimates higher than ASPE's and others reporting lower estimates (Cantor et al. 2012; Antwi, Moriya, and Simon 2013; Porterfield and Huang 2016).

⁷ The estimates of the uninsured rate for 26-64 year olds reported in Figure 4-7 were derived using the same approach described in footnote 5.

Figure 4-6

Health Insurance Coverage Status by Age, 2008



Note: Individuals were categorized into coverage groupings using the procedure described in the note to Figure 4-3.

Source: American Community Survey; CEA calculations.

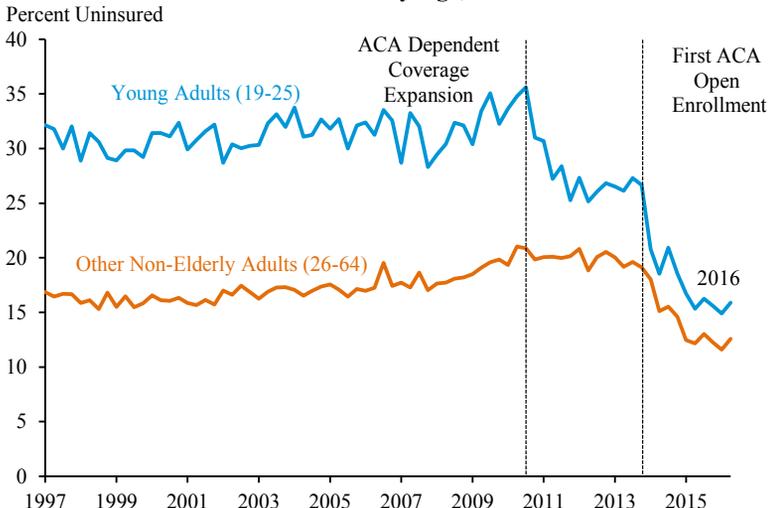
Comprehensive Coverage Expansions

Starting in 2014, the ACA implemented broad-based coverage expansions designed to ensure that all Americans could access affordable, high-quality health insurance coverage. These expansions consisted of two main pieces: an expansion of eligibility for Medicaid coverage and comprehensive reforms to the individual health insurance market. Each of these reforms is described in greater detail below.

To provide affordable coverage options for the lowest-income Americans, the ACA provided states with generous financial assistance to expand Medicaid coverage to all non-elderly people with incomes below 138 percent of the Federal Poverty Level (FPL), around \$16,200 for an individual and \$33,500 for a family of four in 2016.⁸ As specified in the ACA, the Federal Government has funded 100 percent of the cost for newly eligible individuals to date, and this share gradually phases down to 90 percent in 2020 and subsequent years. This generous matching rate makes expanding Medicaid a very attractive proposition for states, particularly since research has generally concluded that states that expand Medicaid realize significant

⁸ The base income eligibility threshold is 133 percent of the FPL. However, Medicaid program rules provide for an additional “income disregard” of 5 percent of income, which brings the effective eligibility threshold to 138 percent of the FPL. The dollar amounts reported in the text reflect the 2015 version of the FPL because those are the amounts used to determine eligibility for coverage during 2016.

Figure 4-7
Uninsured Rates by Age, 1997–2016



Note: See footnote in the main text for additional detail on calculation of the 2016 estimates.

Source: National Health Interview Survey; CEA calculations.

offsetting savings elsewhere in their budgets, including in existing portions of their Medicaid programs, in programs that defray the costs of uncompensated care, and in programs that provide mental health services (Buettgens, Dorn, and Carroll 2011; Dorn, McGrath, and Holahan 2014). To date, 31 states and the District of Columbia have expanded Medicaid under the ACA.

For Americans with incomes too high to qualify for Medicaid, the ACA implemented an interlocking set of reforms in the individual health insurance market. The first component of these reforms was a new set of consumer protections that guaranteed access to high-quality health insurance coverage. Most importantly, to ensure that both healthy and sick individuals could access coverage, the law required insurers to offer coverage on common terms to all enrollees, regardless of whether they had pre-existing health conditions, with premiums allowed to vary based solely on age, geography, and tobacco use. In order to ensure that the coverage available on the reformed market offered real access to medical care and financial protection, the law required all plans to cover a set of essential health benefits and provide a basic level of protection against out-of-pocket costs. As a complement to these reforms, the law created a risk adjustment program that compensates insurers that attract a sicker-than-average group of enrollees, thereby ensuring that insurers have incentives to design plans that meet the needs of all types of consumers, both healthy and sick. Finally, to foster competition, the law created the Health Insurance Marketplaces

(Marketplaces), web-based markets that help consumers comparison shop to find a plan that matches their particular preferences and needs.

The second component of these reforms was designed to ensure that coverage on the reformed individual market was affordable. To overcome the affordability challenges that kept many low- and middle-income Americans from obtaining coverage before the ACA, the law created a premium tax credit for people with incomes between 100 percent and 400 percent of the FPL who purchase coverage through the Marketplaces.⁹ The premium tax credit ensures that all consumers have affordable coverage options by limiting the amount enrollees must contribute to a “benchmark” plan to a specified percentage of their income; if the premium for the benchmark plan exceeds that amount, the tax credit makes up the difference. For individuals with incomes below 250 percent of the FPL, the law also provides cost-sharing reductions that reduce enrollees’ out-of-pocket costs. As an additional measure to keep premiums affordable, the law implemented an individual responsibility provision that requires people who can afford coverage to make a payment if they elect to go without it. This requirement encourages healthy individuals to enroll in coverage, which protects the individual market’s ability to pool risk between the healthy and the sick, thereby helping keep premiums affordable; indeed, the Congressional Budget Office has estimated that individual market premiums would be around 20 percent higher in the absence of this provision (CBO 2015b). The provision also discourages individuals from shifting their health care costs to others in the form of uncompensated care.

The U.S. uninsured rate has declined dramatically since these reforms took effect at the beginning of 2014, falling from 14.5 percent in 2013 to 8.9 percent in the first half of 2016, as illustrated in Figure 4-1. The decline in the uninsured rate seen over this period is, by far, the largest decline since the years following the creation of Medicare and Medicaid in 1965. Consistent with the nearly unprecedented magnitude of this decline, research aimed at isolating the effect of the ACA from other trends in the health care system or the economy has concluded that the overwhelming majority of these gains are directly attributable to the ACA’s reforms (Courtemanche et al. 2016; Blumberg, Garrett, and Holahan 2016). Using a methodology that controls for unrelated economic and demographic changes, HHS estimates that 17.7 million non-elderly adults have gained coverage since the end of 2013 because of the ACA’s comprehensive reforms (Uberoi, Finegold, and Gee 2016). Combining these gains since 2013 with the gains for young adults

⁹ In states that have expanded Medicaid, people with incomes between 100 and 138 percent of the FPL receive coverage through Medicaid. In non-expansion states, these people are generally eligible for subsidized coverage through the Marketplace.

because of the ACA's provision allowing young adults to remain on a parent's plan until age 26, an estimated 20 million adults have gained coverage because of the ACA.

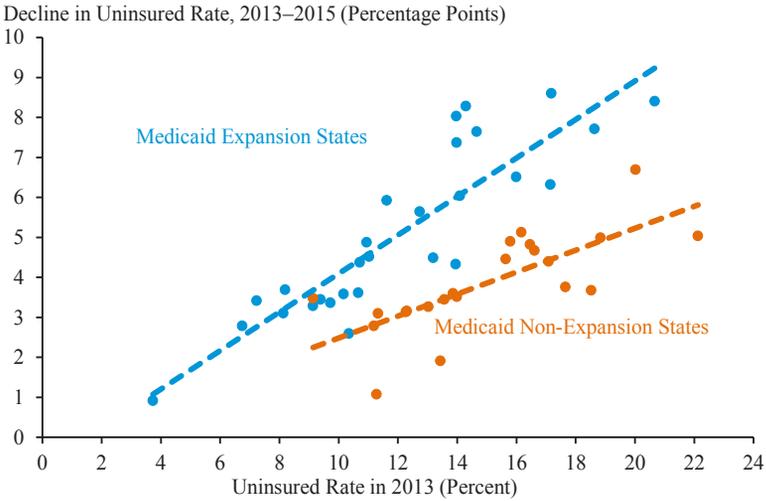
The ACA's main coverage provisions have also driven further coverage gains among children, which are not captured in the data from the Gallup-Healthways Well-Being Index used by Uberoi, Finegold, and Gee (2016). As illustrated in Figure 4-5 above, the uninsured rate among children has seen another sharp decline as the ACA's major coverage expansions have taken effect, equivalent to an additional 1.2 million children gaining coverage.¹⁰ Combining the gains that began in 2014 with the gains in children's coverage from 2008 through 2013 that were discussed above, an additional 3.1 million children have coverage in 2016 because of the decline in the uninsured rate among children since 2008.

Both the law's Medicaid expansion and its reforms to the individual health insurance market are contributing to this major expansion in health insurance coverage. To illustrate this, Figure 4-8 reports the decline in the uninsured rate from 2013 to 2015 by state in relation to that state's uninsured rate in 2013. While every state in the country has seen a decline in its uninsured rate since 2013, states that have taken advantage of the law's Medicaid expansion have seen markedly larger declines, with the largest declines in those states that both took up Medicaid and had high uninsured rates before the ACA's reforms took effect. However, even those states that have not taken up Medicaid expansion have made considerable progress in reducing the uninsured rate, indicating that the law's reforms to the individual health insurance market are also working to expand insurance coverage.

The pattern of coverage gains by income provides additional evidence that the law's reforms to the individual health insurance market are contributing to coverage gains, alongside Medicaid expansion. In particular, Figure 4-9 shows that the uninsured rate has declined markedly among individuals with incomes above the Medicaid eligibility threshold of 138 percent of the FPL, and these declines are similar in proportional terms to those for individuals with incomes below 138 percent of the FPL. Notably, declines have been seen both for people with incomes between 138 percent and 400 percent of the FPL, who are generally eligible for financial assistance

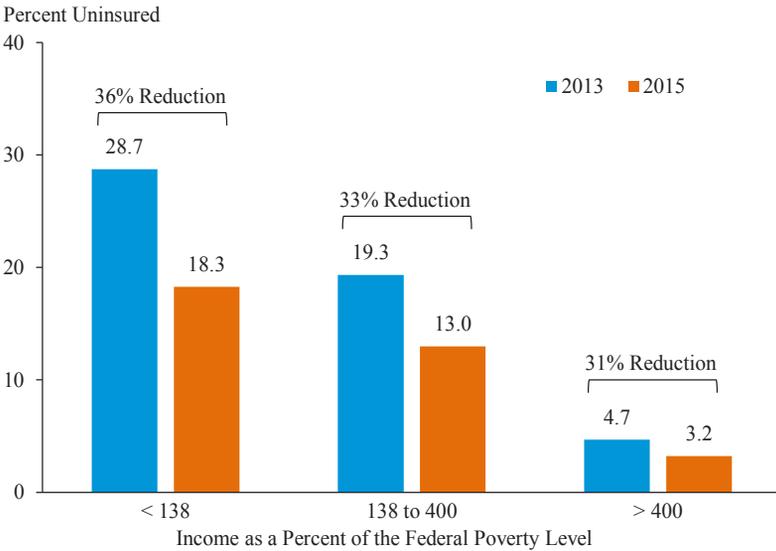
¹⁰ The 1.2 million figure cited here reflects coverage gains for individuals ages 0 to 17 from 2013 through the first half of 2016, as reported in the National Health Interview Survey. The data reported in Figure 4-5 include individuals ages 0 to 18 because 18-year-olds are considered children for Medicaid and CHIP eligibility purposes, making this the most appropriate age range to examine when discussing CHIPRA. By contrast, 18-year-olds are already included in the estimate reported by Uberoi, Finegold, and Gee (2016) regarding the effects of the ACA, so including 18-year-olds in this estimate would double-count post-2013 gains for 18-year-olds.

Figure 4-8
**Decline in Uninsured Rate from 2013 to 2015
 vs. Level of Uninsured Rate in 2013, by State**



Note: States are classified by Medicaid expansion status as of July 1, 2015.
 Source: American Community Survey; CEA calculations.

Figure 4-9
Nonelderly Uninsured Rate by Income, 2013 and 2015



Source: National Health Interview Survey; CEA calculations.

Box 4-2: Dynamics in the Individual Health Insurance Market

After two years of moderate premium growth for plans offered through the Health Insurance Marketplace, premiums are increasing at a faster pace for 2017, though experience will vary widely across states (ASPE 2016b). This box discusses the factors that are driving changes in Marketplace premiums in 2017, as well as their implications for the future of the individual market. Contrary to some recent claims, a range of evidence demonstrates that this year's premium changes are part of the ordinary process of adjustment in a new market, not a harbinger of future market instability.

Factors Driving 2017 Premium Changes

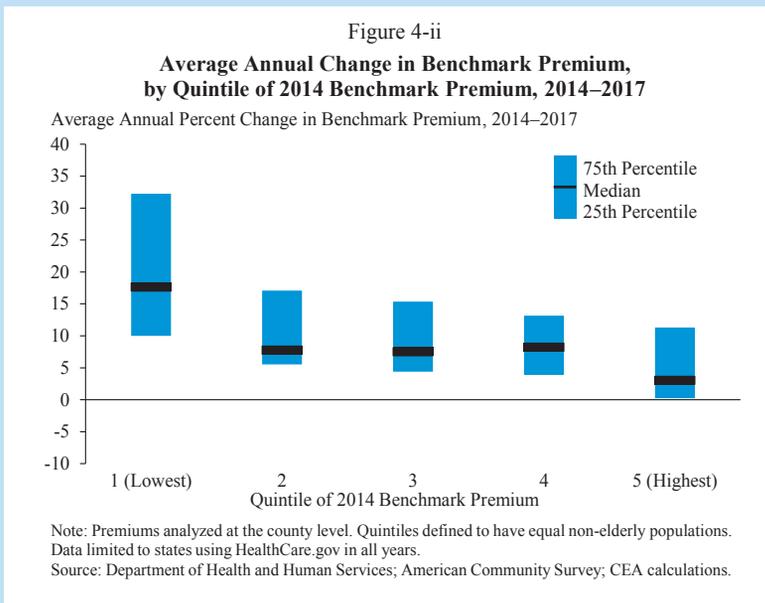
Insurers faced significant challenges in setting premiums in the years immediately following implementation of the ACA's reforms to the individual market. The ACA brought many new people into the individual market, including people with pre-existing health conditions who had previously been locked out of the market and people who could newly afford coverage because of the law's financial assistance. These major changes made predicting average medical costs in the reformed market difficult. This in turn created a significant risk that insurers would underestimate or overestimate the level of premiums required to finance those claims. In addition, some insurers may have intentionally underpriced when setting premiums in an attempt to attract the many new consumers who have entered the individual health insurance market during its first few years, accepting losses in the short run in exchange for higher market shares in the long run.

It is now clear that, on average, insurers underpriced in the early years of the new market. Insurers are estimated to have incurred losses of around 5 percent of premium revenue on ACA-compliant health insurance policies in 2014, the market's first year (McKinsey 2016). To achieve sustainable pricing in subsequent years, insurers needed to make up for these initial losses while also accommodating two additional factors. The first was the ordinary upward trend in medical costs, which averaged around 4 percent a year, though, as discussed below, this has likely been partially offset by ongoing improvements in the ACA-compliant risk pool relative to 2014. The second was the scheduled phasedown of the ACA's transitional reinsurance program, which defrayed a portion of insurers' claims spending on high-cost enrollees in 2014 through 2016. The decline in payments from this program added around 7 percent to premium growth in each of 2015, 2016, and 2017. The net effect of these various factors is that returning premiums to a sustainable level by 2017 likely required premium increases averaging a bit more than 10 percent per year in 2015, 2016, and 2017. But the premium for the second-lowest

silver (or “benchmark”) plan increased by just 2 percent in 2015 and 7 percent in 2016 in the states using the HealthCare.gov enrollment platform, necessitating much more significant adjustments in 2017.

The pattern of premium changes across areas strongly supports the view that Marketplace premium changes are being driven in substantial part by insurers’ efforts to bring premiums in line with costs after having initially underpriced. Figure 4-ii illustrates how the annual percentage increase in the premium for the benchmark plan from 2014 to 2017 varies based on the level of the benchmark premium in 2014. In the four-fifths of the country with higher benchmark premiums in 2014, the median person has seen average annual increases in the benchmark of below 10 percent, less than what would have been needed to cover normal increases in medical costs and the gradual phasedown of the ACA’s transitional reinsurance program. By contrast, the fifth of the country that had the lowest premiums in 2014 has seen much larger increases since then. This pattern is what would have been expected if insurers in some areas significantly underpriced in 2014 and have been working to bring premiums back in line with costs since then, while insurers in other areas priced appropriately or overpriced.

It is also important to note that, even after the increases seen for 2017, Marketplace premiums remain roughly in line with CBO’s initial projections (ASPE 2016b). The average benchmark premium for 2014 was about 15 percent *below* what the Congressional Budget Office had



projected during the debate over the ACA (CBO 2014), and analysts have estimated that premiums remained between 12 percent and 20 percent below CBO's initial projections in 2016, depending on the methodology used (Levitt, Cox, and Claxton 2016; Adler and Ginsburg 2016). The 2017 increases are therefore taking Marketplace premiums back to their originally expected trajectory, consistent with the view that these increases are a one-time correction, not an indication of underlying problems in the individual market.

Implications of 2017 Premium Changes for the Future of the Individual Market

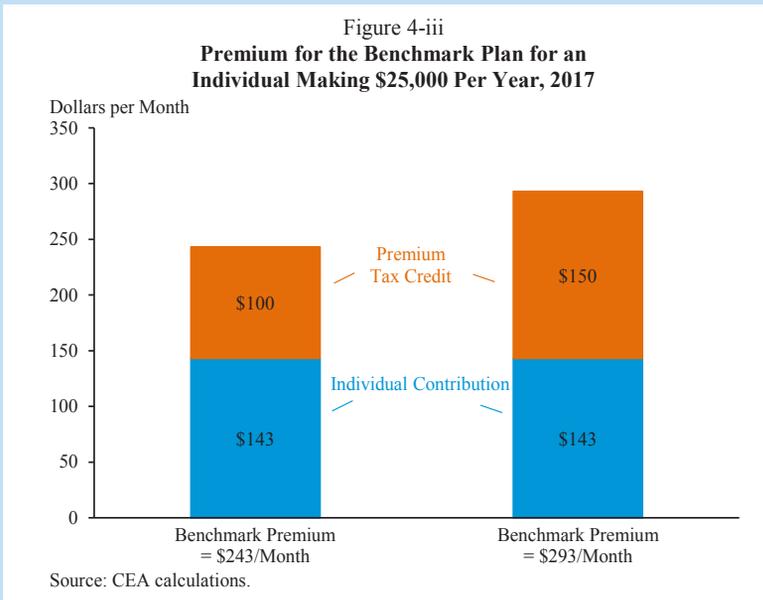
By bringing insurers' premium revenue back in line with their claims costs, the premium increases being implemented for 2017 help create the conditions for a more stable market in the years ahead. However, some analysts and commentators have taken a more negative view. They argue that premium increases will drive large reductions in individual market enrollment, particularly among healthy individuals. This decline in enrollment among the healthy, they argue, will increase average medical costs in the individual market, triggering further premium increases and enrollment reductions. Some observers have even speculated this feedback loop between higher premiums and falling enrollment will become so intense that it will cause a "death spiral," a scenario in which enrollment in the individual market ultimately falls nearly to zero. Some of these observers have further suggested that the premium increases seen for 2017 are evidence that this type of vicious cycle has already begun.

In fact, there is no evidence that a death spiral is underway. The defining feature of a death spiral is declining enrollment, particularly among the healthy, resulting in a deteriorating risk pool. In fact, the exact opposite is occurring. Marketplace enrollment has grown every year since the Marketplace opened in 2014, and enrollment in the individual market as a whole was estimated to be around 18 million in early 2016, up from around 11 million in 2013 (ASPE 2016a). Furthermore, it appears that the average individual market enrollee is actually getting *healthier* over time. Using data on medical spending in the individual market submitted by insurers as part of the ACA's transitional reinsurance program, the Centers for Medicare and Medicaid Services (CMS) estimate that nominal per member per month medical spending fell slightly from 2014 to 2015, and an outside analysis of a private claims database supports a similar conclusion (CMS 2016a; Avalere Health 2016). Due to the underlying upward trend in medical costs, per member per month spending would have been expected to increase if the average

health status of individual market enrollees had held steady, so these data suggest that the average health status improved from 2014 to 2015.

Looking to the future, the design of the ACA's premium tax credit ensures that a death spiral can never occur in this market. The tax credit is designed so that an individual's contribution to the benchmark plan is capped at a specified percentage of income; the tax credit pays the remainder of the premium. Figure 4-iii provides a concrete example of how this works for a single person making \$25,000 per year. This individual's required contribution to the benchmark plan is \$143 a month in 2017. If the premium for the benchmark plan in the individual's area were \$243 a month, the tax credit would then pay the remaining \$100 per month, as illustrated in the left column of the Figure. If the premium for the benchmark plan were \$50 a month higher, as in the right column of the Figure, the individual's contribution would remain at \$143 a month, and the tax credit would increase to \$150 a month. Thus, the individual is fully protected from the higher benchmark premium. Importantly, even individuals who qualify for only modest premium tax credits benefit from this protection since their required contribution, though larger, also does not depend upon the actual level of premiums.

Around 85 percent of individuals who get coverage through the Marketplace receive the premium tax credit, and about two-thirds of people in the individual market as a whole are eligible for tax credits (ASPE 2016a). The premium tax credit therefore ensures that the over-



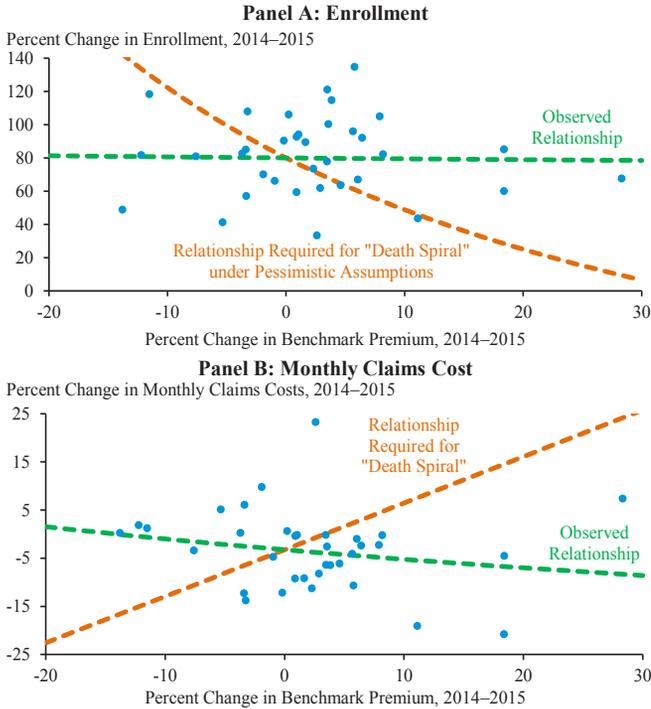
whelming majority of Marketplace enrollees and the sizeable majority of individuals in the individual market overall are protected against premium increases and have no reason to leave the market when premiums rise. That, in turn, stabilizes the overall individual market risk pool and helps keep premiums affordable for people who are not eligible for tax credits. The result is that any negative effects of higher premiums on enrollment and the risk pool will be greatly attenuated, arresting the feedback loop of falling enrollment and higher premiums that would cause the market to unravel.

Consumers' actual behavior under the ACA to date provides no support for the view that premium increases will trigger significant market unraveling. Panel A of Figure 4-iv examines the relationship between changes in the average benchmark premium in each state from 2014 to 2015 and the corresponding changes in enrollment in the state's ACA-compliant individual market (including both on- and off-Marketplace enrollment). For there to be any risk of a death spiral, premium changes would need to have very large negative effects on enrollment, akin to the scenario illustrated by the orange dashed line. In fact, there was essentially no difference in enrollment growth across areas experiencing larger and smaller increases in the benchmark premium from 2014 to 2015, as illustrated by the green dashed line.

Similarly, Panel B of Figure 4-iv examines the relationship between the change in the benchmark premium in each state from 2014 to 2015 and the change in average claims costs in the ACA-compliant market in that state. For there to be any risk of a death spiral, increases in premiums would have to result in substantial increases in claims costs (as a result of healthy individuals leaving the market), akin to the relationship between premium and cost changes illustrated by the orange dashed line. In fact, consistent with the evidence from Panel A that premium increases did not meaningfully affect enrollment, there is no evidence that premium increases adversely affected the risk pool. If anything, larger premium increases appeared to be associated with slightly *slower* year-over-year growth in monthly claims costs, as illustrated by the green dashed line.

Complete data on how enrollment and claims in the ACA-compliant individual market changed from 2015 to 2016 are not yet available. However, the county-level relationship between changes in benchmark premiums and changes in the number of people selecting Marketplace plans, depicted in Figure 4-v, reinforces the conclusion that the individual market is at no risk of unraveling. As above, for the individual market to be at risk of a death spiral, counties experiencing larger increases in the benchmark premium would have to see much smaller growth in plan selections, akin to the scenario illustrated by the

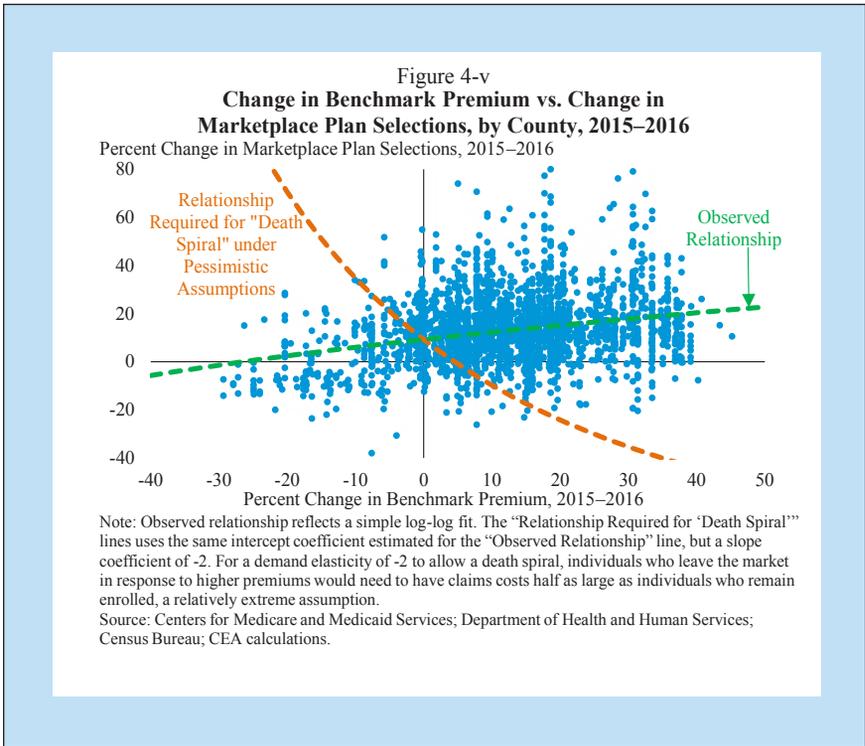
Figure 4-iv
Change in Benchmark Premium vs. Change in Individual Market Enrollment and Claims Costs, by State, 2014–2015



Note: Sample is limited to States that used HealthCare.gov in all years due to availability of data on benchmark premiums. Changes in benchmark premiums are calculated on a population-weighted basis. Enrollment and monthly claims spending for the ACA-compliant market are measured using data submitted to CMS for the risk adjustment and reinsurance programs. Enrollment is measured as the number of member months of enrollment during the year. Monthly claims spending is measured as aggregate claims in the State's individual market divided by the aggregate number of member months of enrollment. Observed relationships use a simple log-log fit. The "Relationship Required for 'Death Spiral'" lines use the same intercept coefficient estimated for the "Observed Relationship" lines, but different slope coefficients. In Panel A, the "Relationship Required for 'Death Spiral'" line reflects a slope coefficient of -2; for a demand elasticity of -2 to allow a death spiral, individuals who leave the market in response to higher premiums would need to have claims costs half as large as individuals who remain enrolled, a relatively extreme scenario. In Panel B, the "Relationship Required for 'Death Spiral'" line depicts a slope coefficient of 1, which is sufficient to ensure that additional revenue from higher premiums is fully offset by higher claims costs.

Source: Centers for Medicare and Medicaid Services; Department of Health and Human Services; Census Bureau; CEA calculations.

orange dashed line. To the contrary, counties that saw larger increases in the benchmark premium from 2015 to 2016 actually seem to have seen slightly *larger* increases in Marketplace plan selections over that period. Notably, while average premium increases were lower in 2016 than 2017, some counties saw rate increases of 30 percent or more in 2016, and even these counties show no clear evidence of slower enrollment growth.



to purchase Marketplace coverage, and people above 400 percent of the FPL, who are not eligible for financial assistance. The substantial coverage gains among the higher-income group, individuals who are not eligible for financial assistance through the Marketplaces, indicates that the combination of the ACA’s consumer protections guaranteeing access to coverage and its individual responsibility requirement are also proving effective in increasing health insurance coverage.

Improvements in Existing Health Insurance Coverage

In addition to implementing reforms that have greatly increased the number of people with health insurance coverage, the ACA has also implemented reforms that are improving insurance coverage for people who were already insured, including people covered through an employer or through Medicare. Because of these reforms, tens of millions more Americans are now better protected against catastrophic out-of-pocket costs in the event of serious illness and have greater access to needed medical care.

One such set of reforms is ensuring that all private insurance plans provide real protection against catastrophic costs. When the ACA became law in 2010, 18 percent of workers enrolled in single coverage through an employer were exposed to potentially unlimited out-of-pocket spending, as

illustrated in Figure 4-10 (KFF/HRET 2016). To address this problem, the ACA required that all non-grandfathered private insurance plans place a limit on enrollees' annual out-of-pocket spending starting in 2014.¹¹ The share of enrollees lacking an out-of-pocket limit fell modestly in the years immediately after the ACA became law (likely in part because some firms elected to make changes in advance of 2014) then fell sharply as the ACA requirement took effect. In 2016, just 2 percent of enrollees in single coverage lacked an out-of-pocket limit. If the share of enrollees in employer coverage who lack an out-of-pocket limit had remained at its 2010 level, at least 22 million additional people enrolled in employer coverage would lack this protection today.¹² The ACA also prohibits private insurance plans from imposing lifetime limits on the amount of care they will cover and, with the exception of a dwindling number of grandfathered policies in the individual market, imposing annual limits on benefits.

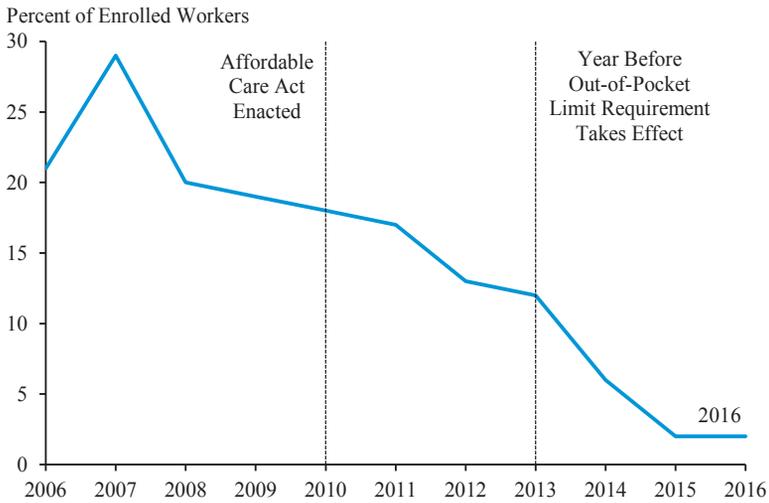
The ACA also strengthened protections against high out-of-pocket costs in Medicare Part D, the portion of Medicare that provides prescription drug coverage. The original Medicare Part D benefit design included a gap in coverage, commonly referred to as the “donut hole.” Because of the coverage gap, Medicare beneficiaries spending more than about \$2,700 on prescriptions in 2009 were required to pay the next roughly \$3,500 entirely out of pocket. The ACA is phasing out the coverage gap and will close it entirely by 2020. In 2015, the most recent full year for which data are available, 5.2 million Medicare beneficiaries with high drug costs saved \$5.4 billion, an average of more than \$1,000 per affected beneficiary (CMS 2016d). Cumulatively through July 2016, more than 11 million beneficiaries have saved \$23.5 billion, an average savings of more than \$2,100 per beneficiary (CMS 2016b).

Another set of ACA reforms sought to encourage greater use of preventive services. Research prior to the ACA had documented that many preventive services—such as blood pressure screenings, mammograms, and colonoscopies—were seriously underutilized, despite strong evidence of their effectiveness (McGlynn et al. 2003; Commonwealth Fund 2008).

¹¹ The ACA specified that certain insurance policies in place prior to the law's enactment would be “grandfathered” and thus not subject to some of the insurance reforms implemented under the law. The number of grandfathered policies has fallen steadily over time (KFF/HRET 2016).

¹² Trends for those enrolled in family coverage are similar to those reported for single coverage in Figure 4-10. In 2010, 17 percent of family coverage enrollees lacked an out-of-pocket limit, and the decline in this percentage almost exactly paralleled the decline for single coverage through 2014; estimates for family coverage have not been reported for years after 2014. To be conservative, the 22 million estimate presented in the text assumes that the overall share of enrollees lacking an out-of-pocket limit declined from 17 percent in 2010 to 2 percent in 2016. It assumes that 150 million people were enrolled in employer coverage in 2016, consistent with KFF/HRET (2016).

Figure 4-10
**Share of Workers in Single Coverage
 Without an Out-of-Pocket Limit, 2006–2016**



To encourage greater utilization, the ACA required that private insurance plans and Medicare cover preventive services that are recommended by the United States Preventive Services Task Force without cost sharing. While the research literature examining the effects of this provision is still limited, one recent study examined plans that implemented this provision at different times and concluded that eliminating cost sharing had the expected effect of increasing use of the service studied, in this case contraception (Carlin, Fertig, and Dowd 2016).

Economic Consequences of Broader Health Insurance Coverage

The historic expansion in insurance coverage described in the last section is still very new, so research to evaluate its consequences is just beginning. Early evidence shows, however, that recent coverage gains are already generating major benefits similar to those documented in prior research on the effects of health insurance coverage. This evidence demonstrates that the law has already succeeded in improving access to care, health, and financial security for the newly insured and in reducing the burden of uncompensated care for the health care system as a whole. Looking beyond the health care sector, the law is helping to reduce income inequality, and it is achieving this broad range of benefits without the negative near-term effects on the labor market that many of the law’s critics had predicted, while laying the foundation for a stronger labor market over the long term. This subsection of the

chapter reviews this evidence base, with a particular focus on the effects of the major coverage provisions of the Affordable Care Act that took effect at the start of 2014.

Improved Access to Care

One objective of expanding insurance coverage is to ensure that individuals can access needed health care.¹³ Research examining prior coverage expansions leaves little doubt that expanding insurance coverage is an effective tool for increasing access to care. For example, the Oregon Health Insurance Experiment, a randomized-controlled trial of expanding Medicaid coverage to low-income adults, found that Medicaid increased receipt of health care services, including preventive services, prescription medications, and physician visits (Baicker et al. 2013). Studies in many other contexts, including the RAND Health Insurance Experiment (Newhouse et al. 1993), studies of past Medicaid expansions targeting adults (Sommers, Baicker, and Epstein 2012) and children (Howell and Kenney 2012), studies of the effect of gaining Medicare eligibility at age 65 (McWilliams et al. 2007; Card, Dobkin, and Maestas 2009), and studies of Massachusetts health reform (Van der Wees, Zaslavsky, and Ayanian 2013; Sommers, Long, and Baicker 2014), have similarly concluded that having health insurance or having more generous health insurance enhances individuals' ability to obtain care.

A range of evidence demonstrates that recent coverage expansions are having similar effects on individuals' ability to access care. One important measure of individuals' ability to access care is the share of people reporting that they failed to obtain needed medical care due to cost during the last 12 months. As illustrated in Figure 4-11, this share rose by more than 50

¹³ While many non-economists consider it a self-evidently good thing when expanded insurance coverage increases use of health care, a long-standing strand of economic research emphasizes the possibility that health insurance will drive overconsumption of health care by insulating enrollees from the cost of services, a phenomenon referred to as "moral hazard" (Pauly 1968). For several reasons, however, moral hazard is not the appropriate analytic lens for considering increases in the use of health care that arise from a coverage expansion. First, health insurance can increase the use of health care services by increasing the resources that individuals have available to them when seriously ill, thereby allowing them to access very expensive, but cost-effective treatments (Nyman 1999); these types of increases in use of care do not represent overconsumption. Second, in light of evidence that many effective services are persistently underused, increases in the use of care that result from reducing the cost of accessing care may, in some cases, reflect a reduction in underconsumption rather than a shift toward overconsumption (Baicker, Mullainathan, and Schwartzstein 2015). Third, the standard moral hazard analysis defines care as excessive if the individual would prefer to receive a cash payment equal to the cost of the care in lieu of that care. Because low- and moderate-income families face serious constraints on their budgets, they will often prefer a cash payment even to highly effective health care services, so care that is judged excessive by the moral hazard definition may still be quite valuable when judged using a broader social perspective.

percent during the decade preceding the ACA's passage, with particularly sharp increases coinciding with the onset of the Great Recession. By contrast, since 2010, the overall share of individuals reporting these types of affordability problems has declined by more than a third, returning to levels last seen 15 years ago.

The recovery from the Great Recession has likely played some role in reducing cost barriers to accessing care, as increased employment and rising wages have reduced financial stress on families. However, the fact that this measure is now so far below its pre-recession trend, combined with the particularly sharp declines seen after 2013, strongly suggests that recent coverage expansions are playing an important role. Consistent with that interpretation, Figure 4-12 looks across states and demonstrates that states experiencing larger reductions in their uninsured rates from 2013 to 2015 experienced larger reductions in the share of individuals reporting difficulty accessing care due to cost. State-level data show that larger coverage gains are also strongly associated with increases in the share of individuals with a personal doctor and the share of individuals with a checkup in the last 12 months, as shown in Figure 4-13.

Researchers using other survey data sources have documented similar sharp improvements in access to care as the ACA's coverage provisions have taken effect. For example, examining data through March 2015, Shartzter, Long, and Anderson (2016) report that the share of non-elderly adults with a usual source of care and the share who received a routine checkup in the last 12 months has risen alongside insurance coverage, while the share reporting problems accessing care or forgoing care due to cost has fallen. Examining a similar time period, Sommers et al. (2015) report reductions in the share of non-elderly adults reporting that they lack easy access to medicine, lack a personal physician, or are unable to afford care. As with the trends reported in Figure 4-12 and Figure 4-13, the pattern of the access gains reported in these studies is consistent with their having been caused by the ACA's coverage expansion. Both studies cited above, as well as Simon, Soni, and Cawley (2016) and Wherry and Miller (2016), document that gains in access to care have been largest in states that expanded their Medicaid programs. Similarly, Shartzter, Long, and Anderson (2016) find that low- and moderate-income adults, who saw the largest coverage gains, also saw the largest improvements in access to care.

Better Health Outcomes

The ultimate goal of expanding access to health care services is improving health. Research examining prior coverage expansions that targeted populations similar to those targeted under the ACA provides a basis

Figure 4-11

**Share of Population Not Receiving Needed Medical Care
Due to Cost in the Last 12 Months, 1997–2015**

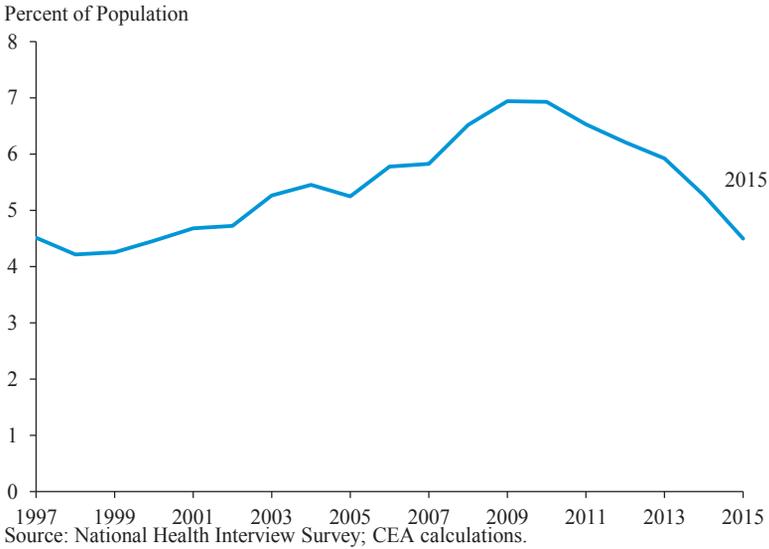


Figure 4-12

**Decline in Share Not Seeing a Doctor Due to Cost vs.
Decline in Uninsured Rate, by State, 2013–2015**

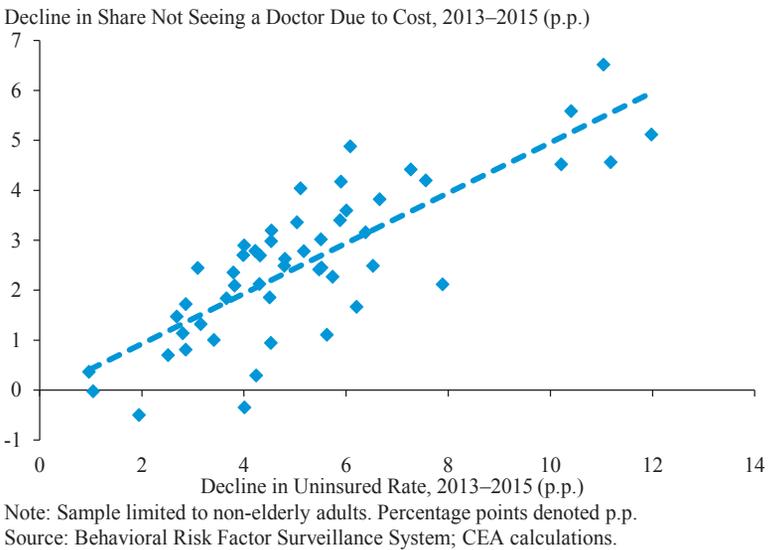
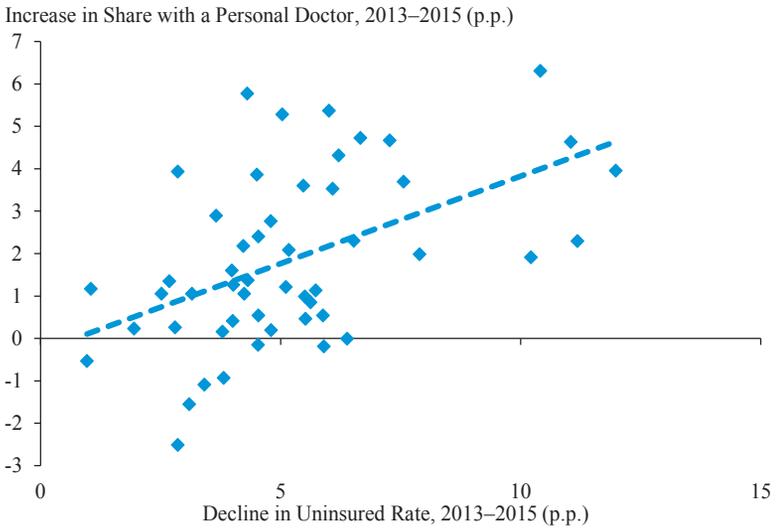
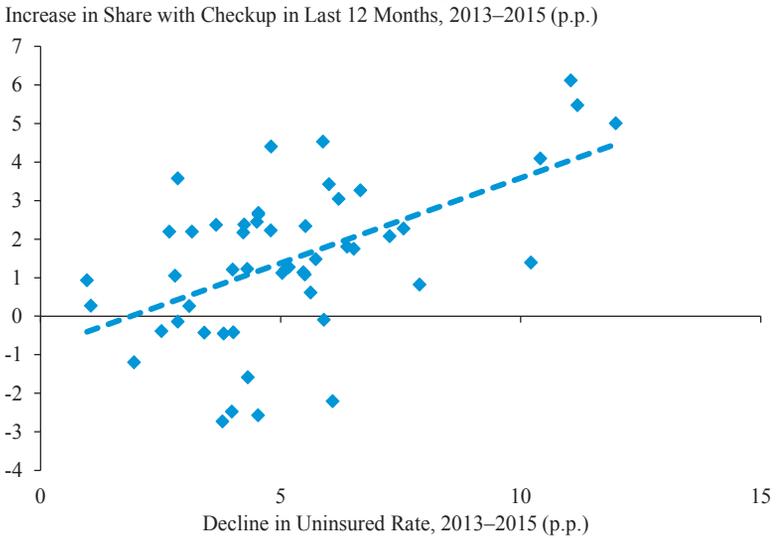


Figure 4-13
**Increases in Measures of Access to Care vs.
 Decline in Uninsured Rate, by State, 2013–2015**

Panel A: Share with a Personal Doctor



Panel B: Share with Checkup in Last 12 Months



Note: Sample limited to non-elderly adults. Percentage points denoted p.p.
 Source: Behavioral Risk Factor Surveillance System; CEA calculations.

for confidence that expanded insurance coverage will translate into better health. The Oregon Health Insurance Experiment documented significant improvements in self-reported health status and mental health due to expanded Medicaid coverage (Finkelstein et al. 2012; Baicker et al. 2013). Studies of Massachusetts health reform concluded that the coverage expansion drove improvements in self-reported physical and mental health, as well as reductions in mortality (Van der Wees, Zaslavsky, and Ayanian 2013; Sommers, Long, and Baicker 2014), and a study of state Medicaid expansions targeting low-income adults during the early 2000s reached similar conclusions (Sommers, Baicker, and Epstein 2012). Studies of prior expansions of Medicaid and CHIP coverage targeting low- and moderate-income children have documented that health benefits of expanded coverage can be long-lasting, with adults who had access to coverage in childhood experiencing lower risk of death and hospitalization many years later (Wherry et al., 2015; Brown, Kowalski, and Lurie 2015; Wherry and Meyer 2016).

Early evidence on the effects of the ACA appears quite consistent with the results documented for earlier coverage expansions. Barbaresco, Courtemanche, and Qi (2015) report improvements in self-reported health status among young adults following implementation of the ACA's provision allowing young adults to remain on a parent's plan. Looking at the main ACA coverage provisions that took effect in 2014, Sommers et al. (2015) find that the share of non-elderly adults reporting that they are in fair or poor health has fallen as coverage has expanded, as has the percentage of days that respondents report having their activities limited by health problems. Research has also found evidence that gains in self-reported health status have been larger in states that have expanded their Medicaid programs (Sommers et al. 2016; Simon, Soni, and Cawley 2016).

While direct estimates of the law's effects on physical health outcomes are not yet available, largely because these data become available with longer lags, these effects are likely to be quite important. Consider, for example, one particularly important health outcome: mortality. As discussed in detail in CEA (2015), there is considerable evidence that prior coverage expansions targeting populations similar to those targeted in the ACA generated substantial reductions in mortality rates. The most relevant existing estimate of the effect of insurance coverage on mortality comes from work by Sommers, Long, and Baicker (2014) on Massachusetts health reform. By comparing experiences in Massachusetts to those in neighboring states, they estimate that one death was avoided annually for every 830 people who gained health insurance. In conjunction with the estimate cited earlier in this chapter that 20 million adult have gained coverage because of the ACA as of early 2016,

Box 4-3: Interpreting Results from the Oregon Health Insurance Experiment

The Oregon Health Insurance Experiment (OHIE) is an important recent contribution to the literature on the effects of health insurance coverage (Finkelstein et al. 2012; Baicker et al. 2013). The OHIE arose from the state of Oregon's decision in early 2008 to reopen enrollment under a pre-ACA Medicaid expansion that targeted low-income adults. Because the State could not accommodate all applicants, it allocated the opportunity to enroll in Medicaid by lottery. This decision by the State created a unique research opportunity because the only systematic difference between lottery winners and lottery losers was whether they could access Medicaid coverage. As a result, the OHIE researchers were able to estimate the effect of Medicaid coverage on a range of outcomes by comparing lottery winners to lottery losers and have confidence that those estimates represented the causal effect of Medicaid.

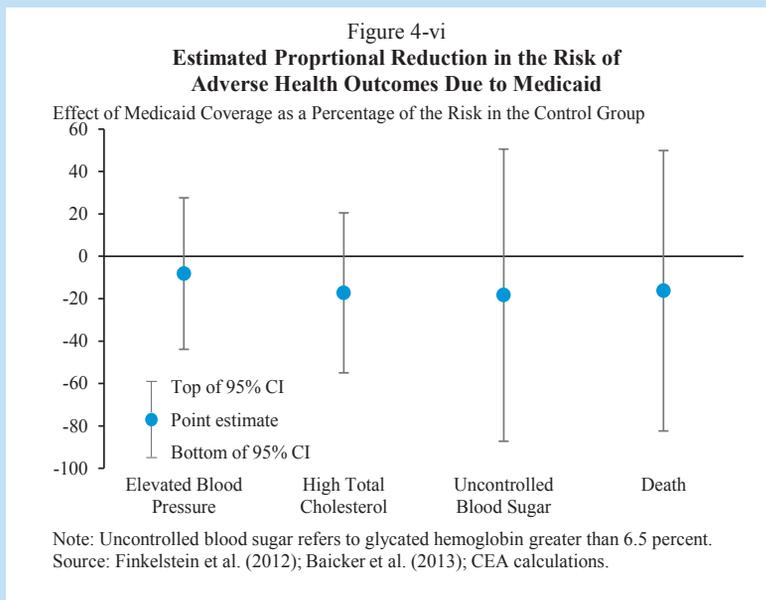
As discussed in the main text, the OHIE found that Medicaid coverage generated substantial benefits for those who enrolled, including greater access to health care services, improved financial security, better mental health, and better self-reported health status. The OHIE did not, however, find statistically significant evidence that Medicaid improved several objective measures of physical health, including the risk of high blood pressure, high cholesterol, uncontrolled blood sugar, and death.

The OHIE's failure to find *statistically* significant evidence that Medicaid improves physical health has sometimes been interpreted as evidence that Medicaid has no *clinically* significant effect on physical health (for example, Roy 2013; Cannon 2014). But this conclusion is incorrect. The OHIE's sample size was limited, so its estimates of how Medicaid affected physical health were quite imprecise. As a result, while the OHIE did not find statistically significant evidence of improvements in physical health, the study also could not rule out the possibility that Medicaid caused very large improvements in physical health. For this reason, the correct interpretation of the OHIE results is that they provide little insight into how Medicaid affects the objective measures of physical health examined in the OHIE, whether positively or negatively (Frakt 2013a; Frakt 2013b; Mulligan 2013; Richardson, Carroll, and Frakt 2013).

To make this point concrete, Figure 4-vi plots the OHIE estimates of the effect of Medicaid on four adverse health outcomes, death, and one outcome from each of the three physical health domains examined in Baicker et al. (2013), as well as the associated 95 percent confidence intervals. For scale, both the point estimates and confidence intervals are shown as a percentage of the risk of each outcome in the control group; the estimates reported in Figure 4-vi can therefore be interpreted

as the proportional reduction in the risk of each outcome attributable to Medicaid coverage. For none of these four health outcomes can the OHIE rule out a proportional reduction in risk of more than two-fifths. For three of the outcomes, the OHIE evidence cannot rule out a risk reduction of more than a half, and for uncontrolled blood sugar and death, the OHIE evidence cannot rule out nearly complete elimination of the outcomes. Effects of this size would be clinically important and quite valuable to individuals, indicating that the OHIE simply cannot resolve the question of whether Medicaid has important effects on physical health.

Furthermore, Figure 4-vi demonstrates that the OHIE point estimates suggest that Medicaid reduced the risk of these adverse health outcomes by between 8 and 18 percent in proportional terms, depending upon the outcome. These estimates are broadly consistent with the improvements that Medicaid coverage would have been expected to achieve in light of the prior literature on the efficacy of treatment for these conditions (Frakt 2013a; Frakt 2013b; Mulligan 2013; Richardson, Carroll, and Frakt 2013). Thus, while the OHIE estimates provide little direct evidence on the effects of Medicaid on physical health of any kind, they certainly do not suggest that Medicaid generates markedly smaller improvements in physical health than would have been expected based on the pre-OHIE evidence base.



Fortunately, the OHIE is not the only source of evidence on how health insurance affects health outcomes. Many prior studies have used “quasi-experiments” stemming from prior coverage expansions or quirks in program design to study how health insurance affects physical health outcomes. Quasi-experimental studies are more vulnerable to systematic biases than studies using randomized research designs, but they can often draw on much larger samples and, thus, deliver much more precise estimates. As discussed in the main text, well-designed studies of this type have concluded that health insurance improves physical health in a number of ways, including by reducing the risk of death.

this estimate implies that around 24,000 deaths are being avoided annually because of the ACA.

Greater Financial Security

Another function of health insurance is to protect against the medical costs associated with serious illness. As discussed above, one benefit of that protection is that it allows sick individuals to obtain needed medical care. An additional important benefit, however, is that it helps ensure that families do not experience financial hardship due to illness, ranging from having to cut back spending on other needs, to taking on debt, to failing to pay other bills and thereby impairing their ability to get a loan in the future.¹⁴

Research examining prior coverage expansions convincingly established that expanding health insurance coverage substantially improves financial security. The Oregon Health Insurance Experiment found that having Medicaid coverage virtually eliminated the risk of facing catastrophic out-of-pocket medical costs (defined as medical costs in excess of 30 percent of income) and sharply reduced the share of individuals reporting trouble paying bills due to medical expenses (Baicker et al. 2013). Mazumder and Miller (2016) examine the effects of Massachusetts health reform and document reductions in the amount of debt past due, the amount of debt in third-party collection, and the risk of bankruptcy, as well as improvements in credit scores. Similarly, Gross and Notowidigdo (2011) document substantial reductions in bankruptcy risk due to Medicaid expansions during the 1990s and early 2000s, and Finkelstein and McKnight (2008) demonstrate

¹⁴ Medical costs are not the only financial consequence of serious illness. Dobkin et al. (2016) document that non-elderly individuals experience large earnings losses after serious health shocks, with the result that even insured individuals are at risk of financial hardship under these circumstances. A progressive tax code and the safety net, which have been strengthened by the ACA’s reforms to help low- and moderate-income families afford health insurance coverage, play an important role in cushioning households against these types of shocks.

that the introduction of Medicare led to large reductions in exposure to high out-of-pocket medical costs among individuals over the age of 65.

Recent research indicates that the ACA's major coverage provisions are having similar beneficial effects on financial security. Research using survey data show that the share of families reporting problems paying medical bills has fallen substantially since 2013, with particularly large reductions for low- and moderate-income adults (Shartzter, Long, and Anderson 2016). Studies using data from consumer credit reports to compare states that have and have not expanded Medicaid found similar improvements in financial security, including reductions in the amount of debt sent to a collection agency and improvements in credit scores (Dussault, Pinkovskiy, and Zafar 2016; Hu et al. 2016). The magnitude of these improvements is substantial; Hu et al. (2016) estimate that state Medicaid expansions reduce the amount of debt sent to collection by between \$600 and \$1,000 per person gaining coverage under expansion.

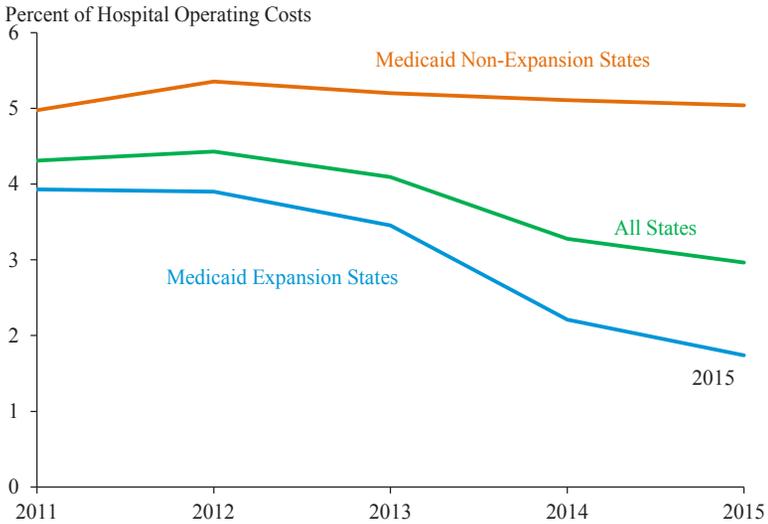
Lower Uncompensated Care Costs

While the most salient benefits of expanded insurance coverage accrue to the newly insured, expanding insurance coverage also has implications for other participants in the health care system. Uninsured individuals still receive some medical care, and when they do so, they are often unable to pay for that care; Coughlin et al. (2014) estimated that health care providers delivered roughly \$1,000 in uncompensated care per uninsured person in 2013, costs that must then be borne either by the health care provider itself or by some other entity. Correspondingly, recent research has emphasized that one important consequence of expanding insurance coverage is to reduce the amount of uncompensated care that health care providers deliver (Garthwaite, Gross, and Notowidigdo 2015; Finkelstein, Hendren, and Luttmer 2015).

Recent trends provide strong evidence that the expansion in insurance coverage driven by the Affordable Care Act is, as expected, driving substantial reductions in uncompensated care. Figure 4-14 uses data from hospitals' cost reports to the Centers for Medicare and Medicaid Services to examine trends in uncompensated care. Nationwide, these data show that uncompensated care fell by more than a quarter as a share of hospital expenses from 2013 to 2015. Had uncompensated care as a share of hospital expenses remained at its 2013 level, hospitals would have delivered an additional \$10.4 billion of uncompensated care in 2015. The reductions in uncompensated care since 2013 have been concentrated in Medicaid expansion states, likely both because expansion states have seen larger coverage gains and because the low-income uninsured individuals targeted by Medicaid expansion were

Figure 4-14

Uncompensated Care as a Share of Hospital Costs, 2011–2015



Note: State Medicaid expansion status is as of July 1, 2015. Data for 2015 are incomplete.
 Source: Centers for Medicare and Medicaid Services, Hospital Cost Reports; CEA calculations.

particularly likely to receive uncompensated care. In Medicaid expansion states, uncompensated care as a share of hospital operating costs has fallen by around half since 2013.

More detailed research using these hospital cost report data has provided additional evidence that the Affordable Care Act’s coverage provisions, particularly Medicaid expansion, have driven substantial reductions in uncompensated care. Dranove, Garthwaite, and Ody (2016) and Blavin (2016) document similar aggregate trends in uncompensated care, including differences in trends between expansion and non-expansion states. Dranove, Garthwaite, and Ody (2016) also look at hospital-level trends in uncompensated care, finding that reductions in uncompensated care are larger for hospitals located in areas that had larger numbers of individuals likely to become eligible for Medicaid under Medicaid expansion.

Reduced Economic Disparities

The ACA’s coverage expansions have also substantially reduced economic inequality, as discussed in greater detail in Chapter 3. Most directly, the law has sharply narrowed differences in uninsured rates across population groups. As illustrated in Figure 4-15 below, the coverage gains from 2010 through 2015 have been broadly shared, with the uninsured rate falling across all income, age, and race and ethnicity groups. Gains have also been seen in both urban areas, defined here as counties included in a metropolitan

statistical area (MSA), and rural areas, defined as counties outside an MSA. However, the population groups that had the highest risk of being uninsured in 2010 have seen the largest gains; in particular, gains have been larger for younger adults than for older adults, larger for lower-income individuals than higher-income individuals, and larger for racial and ethnic minorities than for Whites.

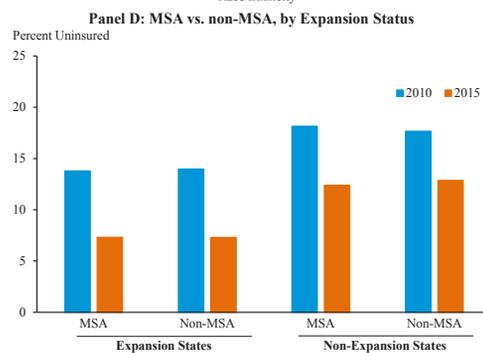
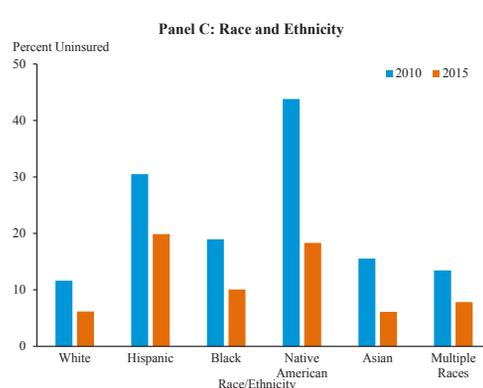
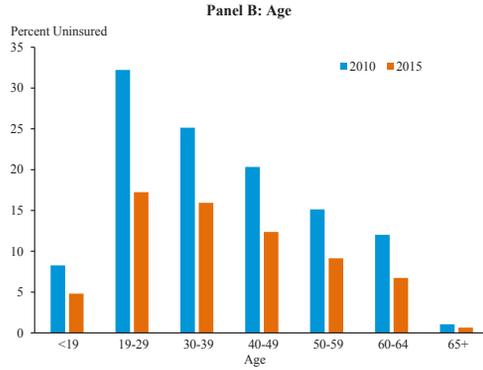
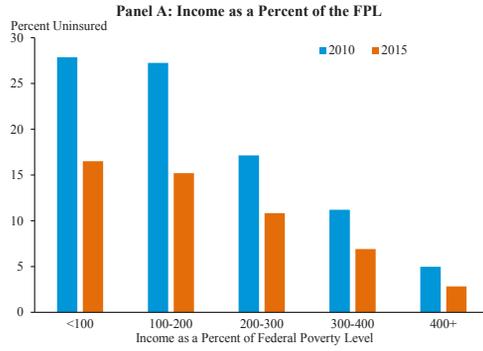
The ACA has also helped to reduce income inequality. As discussed in detail above, the ACA achieved its coverage expansion in part by providing financial assistance to low- and moderate-income individuals who obtain coverage through Medicaid and the Marketplaces. That financial assistance has greatly boosted income for these households. Those coverage expansions were, in turn, financed in part through tax increases on higher-income Americans. These and other ACA coverage provisions, together with other tax policies enacted during the Obama Administration, are making the income distribution in the United States considerably more equal, as illustrated in Figure 4-16. Because of these policies, the share of after-tax income received by the bottom fifth of income distribution will rise by 0.6 percentage point (18 percent), while the share of income received by the top 1 percent will fall by 1.2 percentage points (7 percent).

Continued Labor Market Recovery

Many critics of the Affordable Care Act argued that its coverage expansions would seriously harm the labor market. While critics of the law were not always explicit about how these harms would arise, some analysts argued that the law's provisions providing low- and moderate-income people with affordable coverage options would reduce individuals' incentive to work, leading some people to leave the labor force or reduce their work hours (such as Mulligan 2014a; Mulligan 2014b). These analysts also argued that the ACA's requirement that large employers offer health insurance coverage to their full-time employees or pay a penalty would cause some employers to shift workers from full-time status to part-time status.

Other analysts noted that the law's coverage expansions had the potential to drive important positive changes in individuals' labor supply decisions. Economists have long argued that the lack of good coverage options for those who do not get coverage through the workplace can lead to "job lock," in which workers remain in a job that offers insurance coverage, despite the fact that their time and talents could be better employed elsewhere (for example, Madrian 1994). The pre-ACA research literature provided some empirical support for this view. Some research has suggested broader insurance coverage increases worker mobility and facilitates appropriate risk-taking in the labor market (for example, Farooq and Kugler

Figure 4-15
Uninsured Rate by Population Group, 2010 and 2015



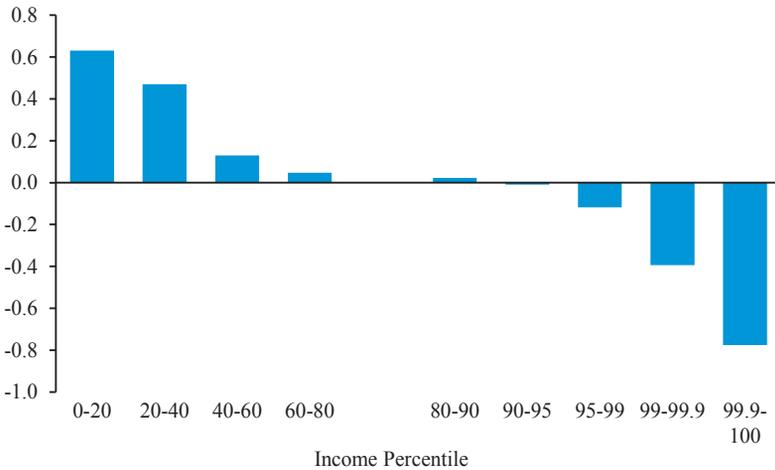
Note: Panels A through C display estimates from the National Health Interview Survey. Panel D displays estimates from the American Community Survey, which provides more detailed geographic breakdowns.

Source: National Health Interview Survey; American Community Survey; CEA calculations.

Figure 4-16

Change in Share of After-Tax Income by Income Percentile: Changes in Tax Policy Since 2009 and ACA Coverage Provisions, 2017

Change in Share of After-Tax Income (Percentage Points)



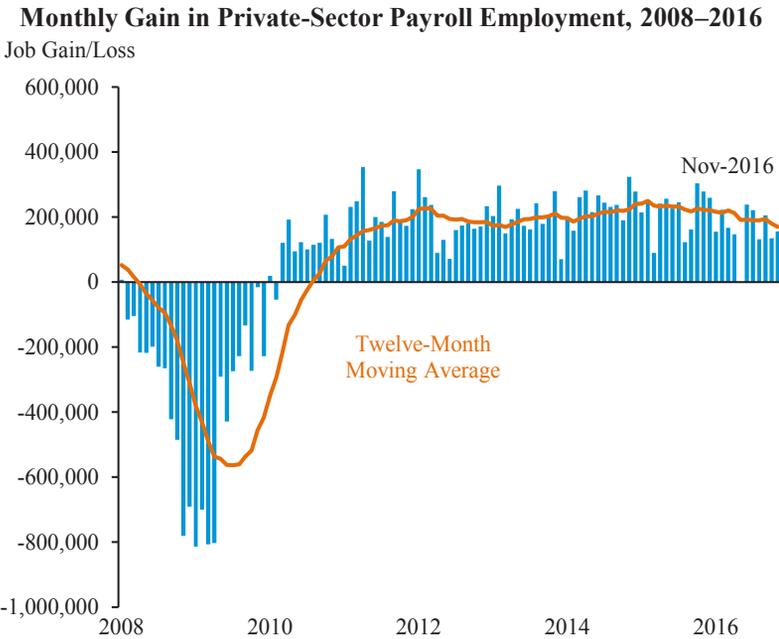
Source: U.S. Treasury, Office of Tax Analysis.

2016). Providing better coverage options outside the workplace may also facilitate entrepreneurship (Fairlie, Kapur, and Gates 2011; DeCicca 2010); enable workers to invest in additional years of education (Dillender 2014); or give workers additional flexibility in structuring their work lives, such as by retiring when it makes sense for them or reducing their work hours in order to have more time to care for a family member (for example, Heim and Lin 2016).

Fully understanding how the ACA’s coverage expansions have affected the labor market will require additional research, but it is already quite clear that predictions of large reductions in total employment and large increases in part-time employment have not come to pass. Implementation of the ACA has occurred alongside the steady recovery of the labor market from the Great Recession, as illustrated in Figure 4-17. The private sector started adding jobs in March 2010, the month the ACA became law, and businesses have added a cumulative 15.6 million jobs since that time. Private-sector employment has actually increased somewhat more quickly since the ACA’s main coverage provisions took effect at the beginning of 2014 (around 209,000 jobs per month) than over the rest of the employment expansion (around 181,000 jobs per month).

This time series evidence, particularly the fact that private-sector job growth has actually been slightly faster after the ACA’s main coverage provisions took effect than before they took effect, is sufficient to demonstrate

Figure 4-17



Source: Bureau of Labor Statistics, Current Employment Statistics; CEA Calculations.

that the ACA has not had the extreme negative effects on employment that many critics predicted. However, more rigorous evidence on the ACA's effects on labor markets can be obtained by comparing labor market performance between states where the ACA's coverage provisions were likely to have had larger or smaller impacts. One crude indicator of the scope of the effects of the ACA's coverage provisions is simply the state's uninsured rate in 2013; consistent with this, it is a strong predictor of the magnitude of a state's coverage gains since 2013, as demonstrated in Figure 4-8. Comparing states with higher and lower uninsured rates in 2013 can therefore provide insight into the effect of the ACA's coverage provisions on the labor market. Another useful indicator is whether the state has expanded Medicaid, which provides insight into the labor market effects of Medicaid expansion in particular.

Figure 4-18 plots each state's uninsured rate in 2013 against the change from 2013 to 2015 in the share of working-age individuals who are

currently employed.¹⁵ Contrary to what would have been expected if the ACA's coverage provisions had reduced employment, there is essentially no correlation between a state's uninsured rate in 2013 and its employment gains from 2013 to 2015. Similarly, states that expanded their Medicaid programs actually saw slightly larger employment gains than those that did not expand Medicaid (an increase in the working-age employment-population of 1.5 percentage points in expansion states versus 1.3 percentage points in non-expansion states). Several recent studies using related approaches have similarly found no evidence that the ACA's coverage provision have reduced employment (Pinkovskiy 2015; Kaestner, Gangopadhyaya, and Fleming 2015; Leung and Mas 2016; Gooptu et al. 2016).

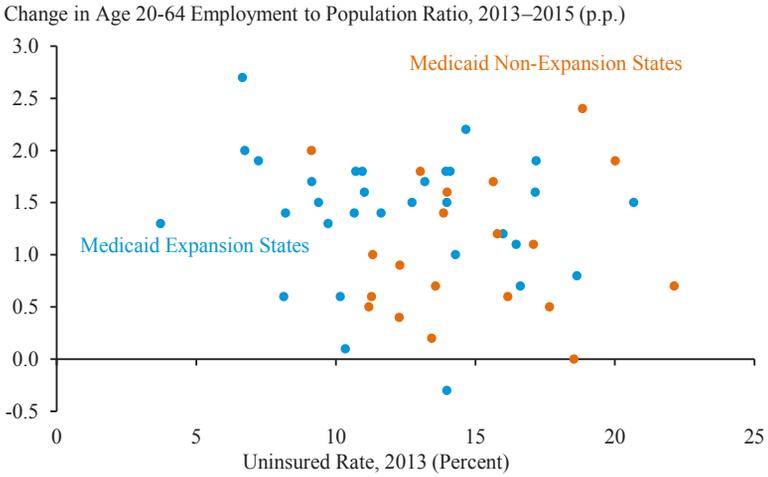
There is also no evidence that the ACA has driven the large-scale shift to part-time work predicted by critics of the law. As with overall employment, time series evidence is sufficient to dismiss the strong claims made by many of the ACA's critics. As illustrated in Figure 4-19, since the ACA became law in March 2010, the number of workers employed full time has increased by 13.0 million, while the number of workers employed part-time has been essentially flat. This was true during the years leading up to the implementation of the ACA's major coverage provisions in 2014, and it continued to be true thereafter, contrary to claims that the ACA would usher in a major shift to part-time work.

More rigorous cross-state comparisons also provide little evidence that implementation of the ACA's coverage provisions has meaningfully reduced workers' hours. Figure 4-20 plots each state's uninsured rate in 2013 against the change in average weekly hours among workers ages 16 to 64. Contrary to what would have been expected if the ACA's coverage provisions had caused many workers to shift to part-time work or caused firms to curtail hours, there is essentially no correlation between a state's uninsured rate in 2013 and the change in average hours worked from 2013 to 2015. Similarly, average hours worked has increased by about 0.2 hours per week in both Medicaid expansion and non-expansion states, inconsistent with the view that Medicaid expansion has put substantial downward pressure on worker hours. Outside estimates using a range of methodologies similarly conclude that there is little evidence that the law has driven a major

¹⁵ An alternative, simpler approach would be to compare labor market outcomes across states seeing larger and smaller declines in their uninsured rates. Comparisons of this type also support the conclusion that the ACA has not negatively affected the labor market. However, this approach has the disadvantage that improvements in labor market outcomes, whatever their cause, are likely to drive reductions in the uninsured rate since many people who gain jobs gain coverage at work. This could generate a spurious positive relationship between coverage gains and employment gains. The approach taken in Figure 4-18 and Figure 4-20 avoids this problem.

Figure 4-18

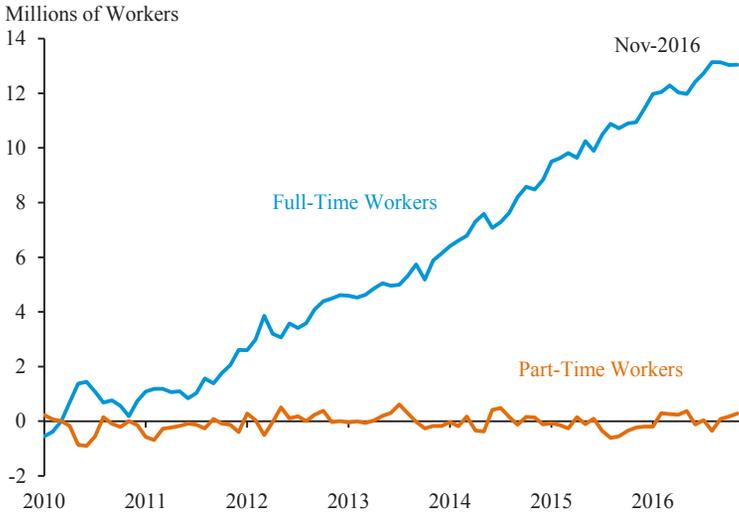
Change in Working-Age Employment to Population Ratio vs. Uninsured Rate in 2013, by State, 2013–2015



Note: Medicaid expansion status is as of July 1, 2015. Percentage points denoted p.p.
Source: American Community Survey; CEA calculations.

Figure 4-19

Change in Number of Full-Time and Part-Time Workers Since March 2010, 2010–2016



Source: Current Population Survey; CEA calculations.

this cross-sectional relationship between health status and labor market outcomes reflects the effect of health status on labor market outcomes, rather than the effect of labor market outcomes on health status (Fadlon and Nielsen 2015; Dobkin et al. 2016).

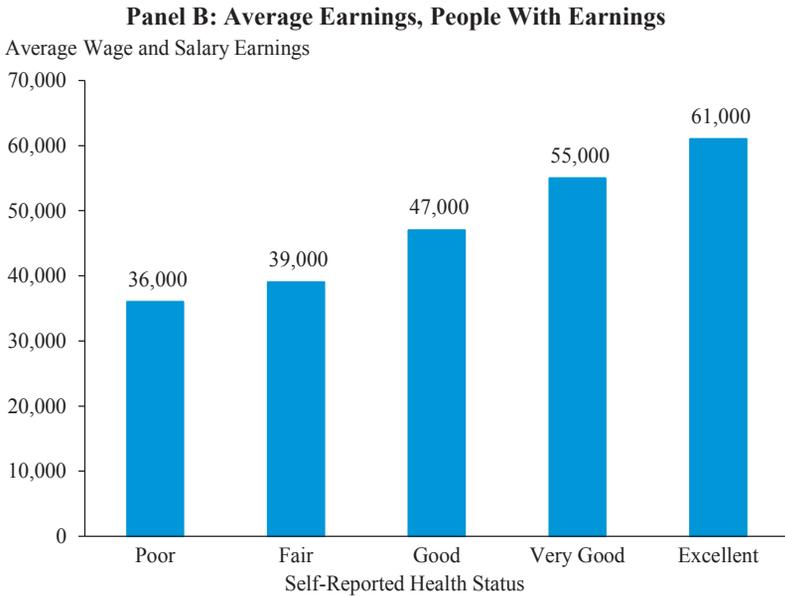
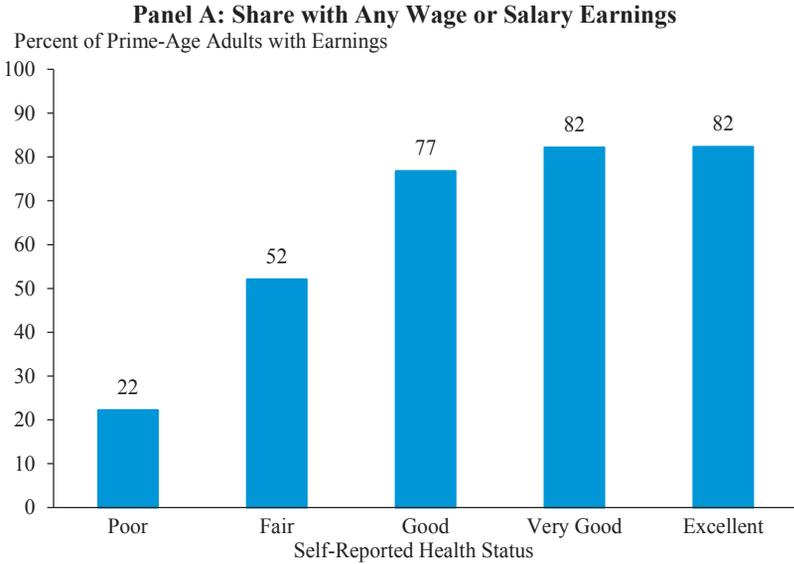
There is particularly compelling evidence that coverage gains for children improve educational attainment and earnings. Identifying such effects is challenging because they are likely to appear only gradually over time. However, a pair of recent studies has examined earlier expansions in insurance coverage for children through Medicaid and CHIP, using the fact that different states expanded coverage at different times and to different extents. Because some of these coverage expansions are now decades old, the authors have been able to study their effects on long-term labor market outcomes.

These studies find important long-term labor market benefits from expanded insurance coverage. Cohodes et al. (2015) find that having Medicaid or CHIP coverage in childhood increases the likelihood of completing high school and college. Brown, Kowalski, and Lurie (2015) find that female children with greater access to Medicaid or CHIP coverage in childhood have higher educational attainment and higher earnings in early adulthood. They also find evidence that both boys and girls with greater access to Medicaid or CHIP in childhood pay more in income and payroll taxes in their young adult years, potentially offsetting a substantial fraction of the cost of providing coverage to children. These results provide direct evidence that the increases in children's insurance coverage that have occurred under this Administration will generate important long-term labor market benefits and suggest that expanded coverage for adults could generate similar benefits.

The ACA has also strengthened the U.S. system of automatic stabilizers, programs that automatically expand during hard times and contract during good ones, which will help to reduce the severity of future recessions. The ACA's coverage expansions help ensure that families facing job or income losses during a recession retain access to affordable health insurance options. Retaining access to affordable health insurance options safeguards families' ability to access health care and cushions their budgets, enabling these families to better smooth their consumption of health care and other necessities.

While these direct improvements in families' economic security in the face of recession are valuable on their own, they also have important macroeconomic benefits. By boosting consumption at the household level during recessions, the ACA will increase aggregate demand for goods and services at times when it would otherwise be impaired, increasing overall economic output and helping to mitigate the severity of the recession itself. Moreover,

Figure 4-21
Employment Outcomes for Prime Age Adults, by Health Status, 2015



Source: Current Population Survey; CEA calculations.

recent discussions of macroeconomic policy have suggested that changes in the U.S. economy have increased the likelihood that monetary policy will be constrained by the inability to cut nominal interest rates below the zero bound in future recessions, increasing the importance of a strong system of automatic stabilizers (Furman 2016).

REFORMING THE HEALTH CARE DELIVERY SYSTEM

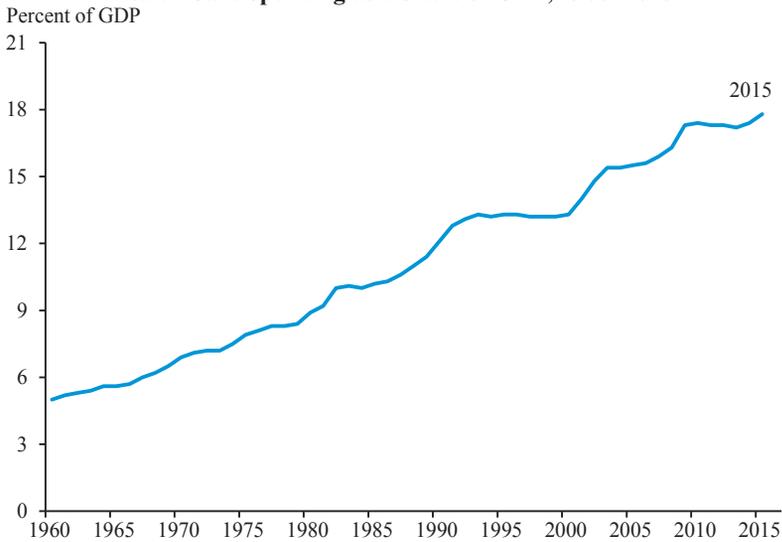
The United States has historically devoted a large fraction of its economic resources to delivering health care. In 2009, the year President Obama took office, the United States spent 17.3 percent of GDP—\$2.5 trillion—on health care. That fraction had risen rapidly over time, having increased from 13.2 percent a decade earlier and just 5.0 percent in 1960, as illustrated in Figure 4-22. Much of that spending on health care created substantial value. Indeed, economic research has emphasized that much of the long-term rise in health care spending results from the steady advance of medical technology and that the resulting improvements in length and quality of life have historically been more than sufficient to justify the increase in spending (Newhouse 1992; Cutler 2004). Nevertheless, evidence also demonstrated that the U.S. health care delivery system suffered from serious inefficiencies that drove up spending and undermined patients' health. In light of the magnitude of the resources devoted to the health care system and the great value of better health, this evidence suggested that reform could bring large gains.

This section of the chapter reviews the progress that has been made under this Administration in reforming the health care delivery system. The section begins by summarizing the evidence that the health care delivery system has historically fallen short of its potential, and then describes the reforms implemented under this Administration to address these shortcomings. Next, the section documents the slow growth in health care costs and improvements in health care quality that have occurred as these reforms have taken effect, and presents evidence that the reforms have, in fact, played an important role in driving the positive trends of recent years. The section closes by discussing the benefits that an improved health care delivery system will have for the United States economy in the years to come.

Health Care Costs and Quality Before the Affordable Care Act

A range of evidence indicates that the U.S. health care delivery system has historically fallen short of its potential. One commonly cited piece of evidence was how health care spending and outcomes in the United States compared with those of its peer countries. The United States has historically been an extreme outlier in the share of GDP it devotes to health care,

Figure 4-22
Health Care Spending as a Share of GDP, 1960–2015



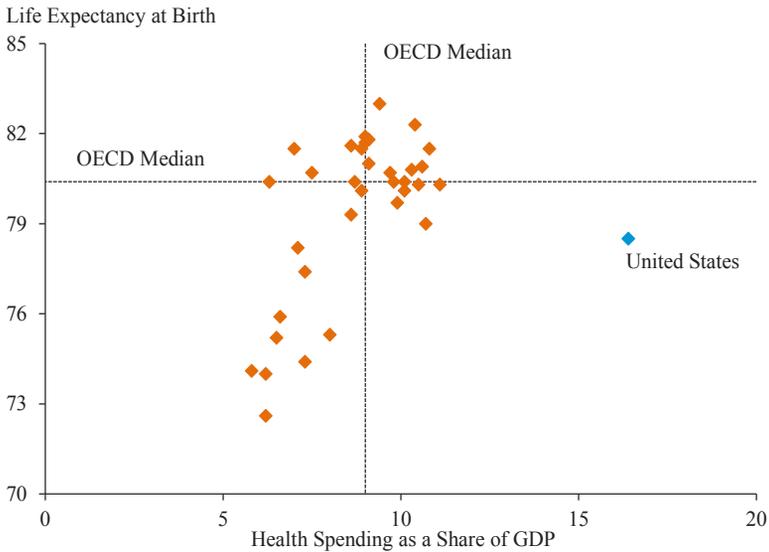
Source: National Health Expenditure Accounts; National Income and Product Accounts; CEA calculations.

as illustrated in Figure 4-23. In 2009, the share of GDP that the United States devoted to health care was more than 80 percent higher than that of the median member of the Organisation for Economic Co-operation and Development (OECD) and nearly 50 percent higher than that of the next highest OECD member. Due in part to challenges in obtaining comparable data for the United States and other OECD countries, the reasons that spending was so much higher in the United States are not fully understood. However, research has generally concluded that the United States paid higher prices for health care services—potentially reflecting the greater market power held by providers and insurers in the United States’ system—and made greater use of costly, but not necessarily effective, medical technologies and treatments (Anderson et al. 2003; Garber and Skinner 2008).¹⁶

The United States’ much-higher spending could have been justified if the additional spending translated into better health care outcomes. In fact, life expectancy was almost two years shorter in the United States than in the median OECD country, and cross-county comparisons of various measures of the quality of care, such as the risk of hospital-acquired infections, found that the outcomes achieved in the United States were, at best, unremarkable

¹⁶ These two drivers of higher health care spending in the United States may, to some degree, be related if providers’ ability to charge higher prices facilitates investment in costly medical technologies.

Figure 4-23
Life Expectancy at Birth vs. Health Spending, 2009



Source: OECD; CEA calculations.

(Drösler, Romano, and Wei 2009). In principle, this pattern could arise if factors outside the health care delivery system, such as the United States’ high obesity rate and uniquely large share of people without health insurance, masked the large returns generated by the United States’ higher health care spending. While these factors may have played some role in explaining the United States’ poor performance, the sheer magnitude of the difference in spending between the United States and its OECD peers made it unlikely that this was a full explanation (Garber and Skinner 2008).

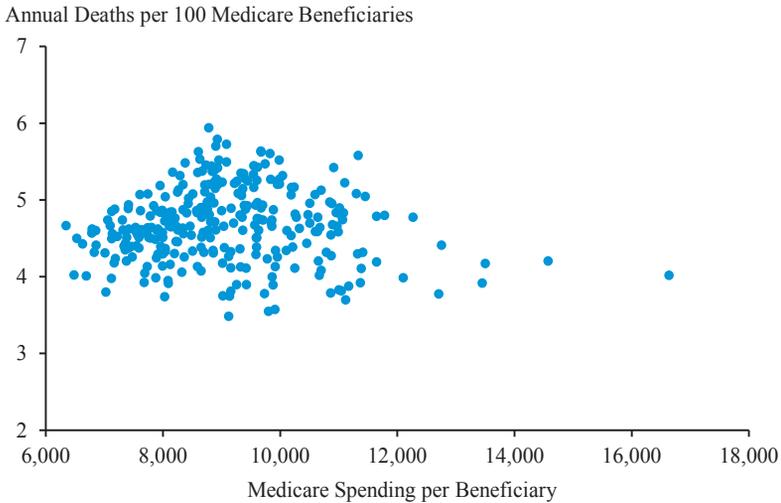
Patterns of health care spending and quality performance within the United States provided additional evidence that the United States health care delivery system suffered from serious inefficiencies. Research documented that the amount Medicare spent per enrollee varied widely in the United States, largely reflecting substantial differences in the quantity of care provided in different parts of the country (Fisher et al. 2003a). Other research has documented a similarly large variation in spending among people covered through private insurance, with those in private insurance also seeing wide variation in the *prices* paid for care in different markets in addition to the quantity of care provided (Chernew et al. 2010; Philipson et al. 2010; Cooper et al. 2015). As with cross-county comparisons, however, there was little evidence that higher-spending areas achieved better health outcomes,

suggesting that the additional spending in high-spending areas was unnecessary (Fisher et al. 2003b). Moreover, this research found that there was wide variation in health outcomes among areas with similar levels of spending, suggesting that there might be major opportunities to improve patient outcomes, even while holding spending fixed. Figure 4-24 illustrates these empirical patterns using data on spending and outcomes among Medicare beneficiaries from the Dartmouth Atlas of Health Care.

One important advantage of comparing cost and quality among different areas within the United States, as opposed to across countries, is that much richer data are available. This greater data availability makes it easier for researchers to have confidence that confounding factors were not masking a positive relationship between spending and health outcomes. For example, one possible explanation for the patterns in Figure 4-24 is that people in some areas of the country were in worse health, which led those areas to spend more on health care, but masked any benefits of that additional spending for health care outcomes. However, the research cited above found that these patterns held after controlling for individual-level characteristics, casting doubt on whether this could explain the observed patterns. More recent research has examined people who move from one part of the country to another and similarly concluded that much of the variation in spending across areas reflects differences in how care is delivered in different areas, not differences in the characteristics or preferences of people in different places (Finkelstein, Gentzkow, and Williams 2016).

Aggregate data on patterns of care in the United States also suggested that the delivery system was falling short of what a well-functioning delivery system could be expected to achieve, driving up costs and leading to worse outcomes for patients. Research examining individual patient encounters with the health care system found that patients commonly failed to receive care that was recommended under clinical guidelines, while also commonly receiving care that was not recommended (McGlynn et al. 2003). Studies similarly found evidence that care was often poorly coordinated, with patients commonly receiving duplicate tests and different medical providers responsible for a patient's care often failing to communicate when a patient transitioned from one care setting to another (Commonwealth Fund 2008). Research also found that patients were often injured in avoidable ways when seeking medical care, suffering harms ranging from medication errors, to pressure sores, to infections (Institute of Medicine 1999). Others noted that patients were often readmitted to the hospital soon after discharge, despite evidence that these readmissions might be avoidable with better planning for post-discharge or other changes in medical practice (MedPAC 2007; Commonwealth Fund 2008).

Figure 4-24
**Mortality Rate vs. Medicare Spending per Beneficiary,
by Hospital Referral Region, 2009**



Note: Spending and mortality adjusted for age, sex, and race.
Source: Dartmouth Atlas of Health Care.

Reforms to the Health Care Delivery System Under the Obama Administration

In light of the compelling evidence that the health care delivery system has historically fallen short of its potential, this Administration has implemented a comprehensive set of reforms, largely using tools provided by the ACA, to make the health care delivery system more efficient and improve the quality of care. These reforms fall in three main categories: better aligning payments to medical providers and insurers in public programs with actual costs; improving the structure of Medicare’s provider payment systems to ensure that those systems reward providers who deliver efficient, high-quality care, rather than simply a high quantity of care; and engaging private insurers in a similar process of payment reform. Each of these reforms, as well as its underlying economic logic, is discussed in detail below.

Aligning Public Program Payment Rates with Actual Costs

One way of reducing spending on health care is to ensure that the amounts Medicare and other public programs pay for health care services match the actual cost of delivering those services. Setting Medicare payment rates at an appropriate level has at least two major benefits. Most directly, reductions in Medicare payment rates reduce costs for the Federal

Government, which pays for the majority of care Medicare beneficiaries receive, as well as for beneficiaries themselves, who pay the remaining costs through premiums and cost sharing.¹⁷

Recent research implies that reductions in Medicare payment rates can also generate savings for individuals enrolled in private insurance plans by enabling private insurers to secure better rates from medical providers.¹⁸ Clemens and Gottlieb (forthcoming) study a past reform in Medicare's payments to physicians that had different effects in different parts of the country. They find that when Medicare reduces its payment rate by one dollar, private insurers reduce their payment rates for the same services by \$1.12, on average. White (2013) and White and Wu (2014) undertake a similar analysis focused on Medicare payment to hospitals using variation in how earlier Medicare payment reforms affected different hospitals. White (2013) finds that when Medicare reduces its payment rates by one dollar, private payers reduce their payment rates by \$0.77. White and Wu (2014) find that for each dollar Medicare saves in response to such a reform, other payers realize savings of \$0.55. These results run contrary to earlier conventional wisdom that Medicare payment reductions generate offsetting "cost shifts" to private payers that drive up the costs of private insurance.

The ACA made a range of changes designed to bring payment rates in public programs more closely in line with the actual cost of delivering services. Two of these were particularly important due to their large size. First, the ACA modified Medicare's formula for updating payment rates to certain medical providers to reflect an expectation that providers will improve their productivity to a similar extent as the rest of the economy over the long run. Previously, Medicare had updated payment rates for these providers based solely on changes in the costs of the inputs they use to deliver care, without accounting for improvements in productivity, an approach that caused payment rates to rise more quickly than the providers' actual cost of delivering health care services.

Second, the law addressed long-standing deficiencies in the system used to pay Medicare Advantage plans that led to those plans being paid far

¹⁷ Many Medicare beneficiaries have supplemental coverage that pays for some or all of their cost sharing. In some cases, they purchase this coverage individually and in other cases they receive it from a former employer or a state Medicaid program. In these cases, cost-sharing is ultimately financed by the entity paying for the supplemental coverage. Similarly, some Medicare beneficiaries also have all or part of their premiums paid by another entity, typically a state Medicaid program or a former employer.

¹⁸ The mechanism by which Medicare payment rates affect private payment rates remains unclear. Clemens and Gottlieb (forthcoming) suggest that reducing Medicare's payment rate may strengthen private payers' negotiating position, perhaps because it becomes less attractive for a provider to walk away from the negotiation or because Medicare's rates serve as a benchmark for judging whether contract terms are reasonable.

more to cover Medicare patients than it would have cost to cover the same patient in traditional Medicare (MedPAC 2009). To do so, the ACA phased in changes to the “benchmarks” used to determine payments to Medicare Advantage plans. These provisions have taken effect without adverse effects on the premiums or availability of Medicare Advantage plans, consistent with the view that pre-ACA payment rates were excessive. Access to Medicare Advantage plans remains essentially universal among Medicare beneficiaries, and the share of Medicare beneficiaries enrolled in a Medicare Advantage plan has risen from 24 percent in 2010 to a projected 32 percent in 2017, while average premiums are estimated to have fallen by 13 percent from 2010 through 2017 (CMS 2016b).

Reforming the Structure of Medicare’s Payment Systems

A second approach to increasing the value produced by the health care delivery system is to improve the *structure* of the payment systems that public health care programs and private insurers use to pay medical providers. Historically, the U.S. health care system has been dominated by “fee-for-service” payment systems in which medical providers are paid separately for each individual service they deliver, like an office visit, a diagnostic test, or a hospital stay.

Fee-for-service payment undermines the efficiency and quality of patient care in three important ways. First, fee-for-service payment encourages providers to deliver more services than necessary since each additional service translates into additional revenue. Second, fee-for-service payment encourages providers to deliver the wrong mix of services. In a system with payment rates for thousands of different services, payment rates for some services will inevitably end up being set too high relative to the underlying cost of some services and too low for others, biasing care toward those services that happen to be particularly profitable, whether or not those services create the most value for patients. Third, fee-for-service payment fails to reward providers who improve health outcomes because payment is completely independent of the outcomes they achieve for their patients.¹⁹

The perverse short-run incentives created by fee-for-service payment may also distort the long-run trajectory of medical technology. Because of the shortcomings catalogued above, fee-for-service payment tends to encourage widespread use of resource-intensive new technologies, even if they generate modest health benefits, while often failing to ensure equally widespread use of less resource-intensive new technologies that generate

¹⁹ While health care professionals have other reasons to deliver high-quality care, including their concern for their patients’ well-being and their desire to attract and retain patients, the evidence summarized earlier demonstrates that this was not always sufficient to ensure that all patients received high-quality care.

large health benefits. When deciding what new technologies to develop, potential innovators and investors are likely to favor technologies that they expect to have a larger market, causing them to focus more on the former type of technology than the latter. Over time, this bias may lead to larger increases in health care spending and smaller improvements in health outcomes than would occur under a payment system that rewards efficient, high-quality care.

Largely using tools provided by the ACA, the Administration has implemented two types of reforms in the Medicare program designed to address the shortcomings of fee-for-service payment. The first was targeted improvements to existing fee-for-service payment systems to encourage more efficient, higher-quality care, which have the important advantage that they can be implemented quickly at scale. The second was setting in motion a longer-term shift away from fee-for-service payment and toward alternative payment models (APMs) that pay providers based on overall cost and quality of the care they deliver, rather than the numbers and types of services they provide. In addition, to facilitate continuous learning and progress along both of these tracks, the ACA created the Center for Medicare and Medicaid Innovation (CMMI) to develop and test innovative new payment models. Importantly, the Secretary of Health and Human Services has the authority to expand a payment model tested through CMMI nationwide if the model is determined to reduce spending without harming quality of care or to improve quality of care without increasing spending.

Targeted Reforms to Fee-For-Service Payment Systems

This Administration has implemented a range of targeted improvements to existing fee-for-service payment systems. One such improvement is greater use of “value-based” payment systems, which adjust providers’ fee-for-service payment amounts upward or downward according to how they perform on measures of the quality or efficiency of care. For hospitals, the ACA introduced value-based payment incentives aimed at encouraging hospitals to reduce their hospital readmission rates and their hospital-acquired infection rates. The ACA also introduced broader value-based payment programs for physicians and hospitals that reward providers that perform well across a broad array of quality and efficiency measures. More recently, CMMI began testing a value-based payment system for home health care services, and the bipartisan Medicare Access and CHIP Reauthorization Act (MACRA) introduced a new value-based payment system for physician services that will consolidate existing value-based payment programs for physicians into a single program starting in 2017.

Another type of improvement is beginning to pay providers to deliver high-value services for which payment was not previously available. For

example, through CMMI, the Administration tested the Medicare Diabetes Prevention Program (MDPP), which provides coaching aimed at helping participants transition to a healthier lifestyle and lose weight. The evaluation of this initiative demonstrated that MDPP both reduced spending and improved quality of care for Medicare beneficiaries, and the Chief Actuary of the Centers for Medicare and Medicaid Services (CMS) has certified that expanding the initiative would not increase Medicare spending (RTI 2016; Spitalnic 2016; HHS 2016a). On this basis, CMS is now taking steps to begin paying providers to deliver MDPP services to eligible Medicare beneficiaries nationwide starting in 2018. The Administration has also used various pre-ACA authorities to begin covering other high-value services under Medicare in recent years, such as care management services for individuals with chronic diseases and care planning services for patients with cognitive impairments like Alzheimer’s disease or dementia.

Development and Deployment of Alternative Payment Models

Most important for the long term, the Administration has also made substantial progress in deploying APMs that reorient payment to be based upon the overall cost and quality of the care providers deliver. The Administration has tested and deployed a range of different types of APMs in Medicare. Two particularly important types of APMs are bundled payment models and accountable care organization (ACO) payment models, each of which is discussed in greater detail below.

Under bundled payment models, sometimes called episode payment models, Medicare makes a single payment for all care involved in a clinical episode, rather than paying for each of those services separately.²⁰ Bundled payment models use a range of different approaches to define clinical episodes, but they generally start when a specified triggering event occurs and then continue for a follow-up period. For example, in a bundled payment model CMMI is currently testing for hip and knee replacement, the episode begins when the patient is admitted to the hospital for surgery and continues through 90 days after discharge. The bundled payment covers all the health care services the patient receives during that time, including the initial hospital admission, the surgeon’s services, post-discharge home health services,

²⁰ Some bundled payment models literally make a single payment for the episode and rely on the providers involved in the patient’s care to split that payment among themselves. However, most bundled payment models being tested by CMMI instead pay for care on a fee-for-service basis during the episode, and then “reconcile” these payments after the fact. If fee-for-service spending falls below the episode price, CMS makes a payment to the provider equal to the savings, while if the fee-for-service spending exceeds the episode price, the provider makes a corresponding payment to CMS. Either approach to bundled payment creates similar incentives.

and any other services associated with the patient's recovery, including those triggered by complications.

Making a single payment for this broad array of services associated with an episode allows providers to deliver the most appropriate combination of services to patients, without regard to how those individual services are compensated, creating opportunities to improve the efficiency and quality of care. Many bundled payment models further encourage quality improvement by providing a higher payment per episode to providers who perform well on specified measures of care quality. Medicare captures a portion of the savings generated by more efficient care by setting the bundled payment amount at a discount relative to the costs historically associated with each type of clinical episode.

CMMI is testing several different types of bundled payment models. Through the Bundled Payments for Care Improvement initiative, CMMI is testing bundled payments for 48 different clinical episodes, and this model has attracted nearly 1,500 participating provider organizations across the country as of the middle of 2016. Similarly, CMMI is testing bundled payment for the full scope of care provided to beneficiaries receiving chemotherapy through the Oncology Care Model, which has enrolled 194 oncology practices from markets across the country. CMMI has also begun tests of bundled payment models that include all providers in randomly selected metropolitan areas. Specifically, CMMI began this type of test of a bundled payment model for hip and knee replacement in 67 metropolitan statistical areas across the country in early 2016 and recently proposed a similar approach to testing bundled payment for additional orthopedic procedures and certain types of cardiac care.

Testing models on a geographic basis, as these new bundled payment models do, has two important advantages relative to other approaches. First, randomly selecting metropolitan areas to participate in the model ensures that participants will not differ systematically from non-participants, allowing the test to deliver particularly compelling evidence on how the model affects the efficiency and quality of care. Second, participation by all providers in the randomly-selected geographic areas allows the test to provide evidence on how the model would perform if it were expanded program-wide; evidence from tests that allow each individual provider to opt in or out of the model are much more challenging to generalize in this fashion. In light of these advantages, CBO recently noted that CMMI's ability to conduct geographically based tests is an important reason that CBO projects CMMI to generate substantial savings for the Medicare program (Hadley 2016).

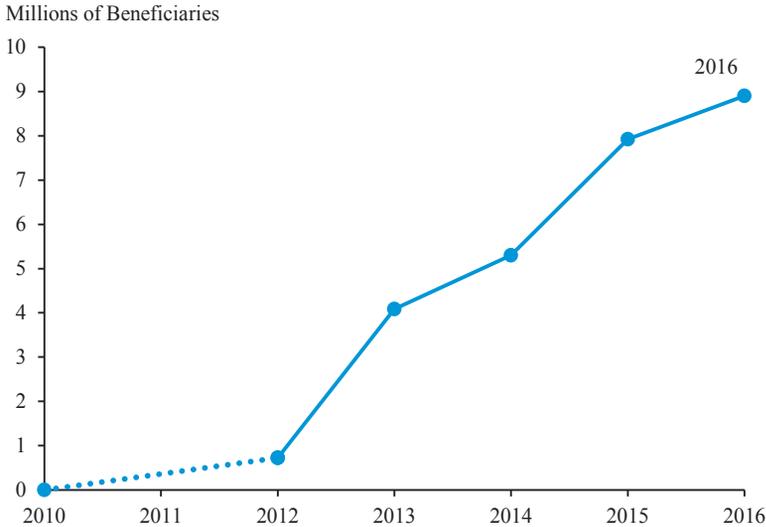
A second major category of APM deployed under this Administration are ACO models, which go a step further than episode payment models and

orient payment around the entirety of the care a patient receives during the year, rather than just the care delivered during a particular episode of care. Under an ACO model, a group of providers join together and agree to be held accountable for the overall cost and quality of the care their patients receive during a year. ACOs that reduce average per beneficiary spending below a “benchmark” level share a portion of the savings, giving providers a strong incentive to deliver care more efficiently. (Certain ACO models are “two-sided,” meaning that providers also agree to repay a portion of any spending in excess of the benchmark.) ACOs that perform well on a suite of measures of the quality of the care they deliver are eligible for larger financial rewards, giving them a strong incentive to deliver high-quality care and a corresponding disincentive to limit access to necessary care.

ACOs are now widespread in the Medicare program. As of January 2016, 8.9 million traditional Medicare beneficiaries—nearly a quarter of the total—were receiving care through more than 470 ACOs, as illustrated in Figure 4-25. The substantial majority of these beneficiaries are aligned with ACOs operating under the Medicare Shared Savings Program, the permanent ACO program created under the ACA. A smaller number are participating in ACO models being tested by CMMI that aim to improve upon existing ACO models in a range of ways. These CMMI ACO models include: the Next Generation ACO; the Comprehensive ESRD Care Model, which aims to improve outcomes for patients with a particular high cost, high risk condition; and the ACO Investment Model, which supports the participation of small practices or practices in rural areas. Notably, an earlier CMMI ACO model—the Pioneer ACO model—became the first model to meet the criteria for expansion under the Secretary’s expansion authority (L&M Policy Research 2015; Spitalnic 2015; HHS 2015). Features of the Pioneer ACO model have now been incorporated into the Medicare Shared Savings Program on a permanent basis.

Through CMMI, the Administration has also tested a range of other innovative payment approaches in addition to bundled payments and ACOs. For example, CMMI is testing medical home models that provide additional resources to primary care practices that agree to engage in a set of specified activities, including care management and care coordination activities, and to be held financially accountable for the cost and quality of the care their patients receive. CMMI began its first major test of medical homes through the Comprehensive Primary Care Initiative, which began operating in October 2012; currently, there are 442 participating practices in seven states. In early 2016, CMMI announced an improved medical home initiative, known as the Comprehensive Primary Care Plus model, which will begin operating in 16 states in January 2017. In collaboration with the

Figure 4-25
Medicare Beneficiaries Aligned to ACOs, 2010–2016



Note: Beneficiary counts are for January of the year shown.
Source: Centers for Medicare and Medicaid Services.

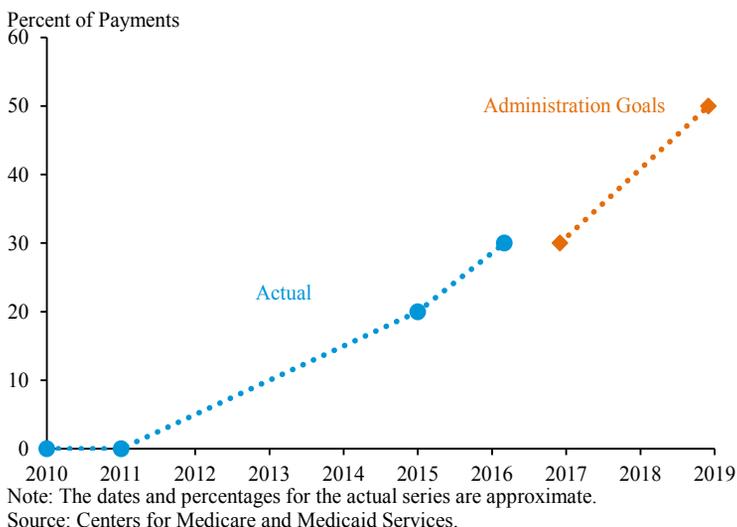
states of Maryland and Vermont, CMMI is also testing statewide all-payer initiatives aimed at making comprehensive changes in how providers in those states deliver care.

In light of the potential of APMs to improve the performance of the health care delivery system, the Administration set the goal of having 30 percent of traditional Medicare payments flowing through APMs by the end of 2016, up from essentially none before the ACA. As illustrated in Figure 4-26, CMS estimates that this goal was reached ahead of schedule in early 2016. The Administration has set the goal of having at least 50 percent of traditional Medicare payments flowing through APMs by the end of 2018.

Provisions included in the bipartisan MACRA will help accelerate the Administration’s efforts to deploy APMs in Medicare. Under the law, physicians who provide a sufficiently large fraction of their care through “advanced” APMs will receive a bonus payment equal to 5 percent of their annual Medicare revenue. Advanced APMs are a category that includes most of CMS’ most ambitious APMs, including the two-sided ACO models operating through the Medicare Shared Savings Program and CMMI, several of CMMI’s bundled payment models, and the new Comprehensive Primary Care Plus medical home model. Additionally, CMS has committed

Figure 4-26

Percentage of Traditional Medicare Payments Tied to Alternative Payment Models, 2010–2019



to developing new models that qualify as advanced APMs as well to revising some existing models to meet the advanced APM criteria.

Engaging the Private Sector in Payment Reform

Reforming payment systems in Medicare is an important step, as Medicare accounts for around a quarter of all health care spending in the United States. However, more than half of Americans receive coverage through private insurers, which have also historically relied upon fee-for-service payment systems. Ensuring that all Americans receive efficient, high-quality care therefore requires improving private insurers' provider payment systems as well. In light of the substantial shortcomings of fee-for-service payment systems, it may seem puzzling that private insurers had not already done so. But insurers faced two major barriers: a serious collective action problem and poor incentives created by the tax treatment of employer-sponsored health insurance coverage.

A collective action problem exists because developing and deploying new payment models is a costly endeavor, requiring significant investments by both payers and providers, but, as described below, many of the benefits of investments made by any individual actor accrue to its competitors. As a result, each individual payer's return to investing in new payment methods

is far below the overall return to the health care sector, leading private payers to substantially underinvest in new payment approaches.

The benefits of one payer's investment in alternative approaches to provider payment spill over to other payers in two important ways. First, once new approaches to payment have been developed and providers have been induced to make the investments needed to deploy them, other payers can adopt those same payment structures at lower cost, but still realize the resulting benefits for the efficiency and quality of care. Largely for this reason, private payers have often elected to base their payment systems on Medicare's payment systems, at least in part (Ginsburg 2010). Private payers typically set payment rates for physicians by starting with the Medicare physician fee schedule rates and increasing them by a specified percentage. Consistent with this, recent research has documented that when Medicare changes the relative amount it pays for different types of physician services, private payers follow suit, at least on average (Clemens and Gottlieb forthcoming). For hospital services, there is far more diversity in the methods used, though Medicare's payment systems are a common starting point (Ginsburg 2010).

A second reason spillovers occur is that medical providers often apply a common "practice style" across all of their patients, so changes made in response to payment changes implemented by one payer often affect patients covered by other payers as well. For example, research examining the diffusion of managed care in the 1990s found that increases in the prevalence of managed care in an area led to changes in treatment patterns for patients in non-managed policies as well (Glied and Zivin 2002). Research has found similar effects for the Alternative Quality Contract (AQC), an ACO-like contract that Blue Cross Blue Shield of Massachusetts has been experimenting with since 2009. McWilliams, Landon, and Chernew (2013) report that patients who were treated by AQC-participating providers, but who were not covered by Blue Cross Blue Shield of Massachusetts, also benefited from lower costs and improved quality along some dimensions.

The Administration has taken several steps to overcome this collective action problem. The Administration's aggressive efforts to improve Medicare's payment systems, described in detail in the previous section, are one particularly important step. As discussed above, private payers often pattern their payment systems after Medicare's payment systems, so transforming payment in Medicare can facilitate improvements in private payment systems. The resulting trends in private payment approaches have been encouraging. For example, recent years have seen rapid growth in private ACO contracts alongside the growth in Medicare ACO contracts, and about 17 million—or roughly one in ten—private insurance enrollees were

covered under ACO contracts at the beginning of 2016, up from virtually none as recently as 2011 (Muhlestein and McClellan 2016). Looking across all types of APMs, a recent survey of private insurers estimated that approximately one in four claims dollars paid by private insurers flowed through an APM during calendar year 2015 (HCPLAN 2016).

The Administration has also taken a range of steps to directly overcome the collective action problem described above by facilitating collaboration across payers in developing innovative payment models. The Administration created the Health Care Payment Learning and Action Network in 2015, a forum in which providers and payers can share best practices on how to design and deploy new payment methods. Similarly, in partnership with the members of the Core Quality Measure Collaborative, a group that includes representatives of payers, providers, and consumers, CMS released agreed-upon quality measures for six major medical specialties as well as for ACO and medical home models in early 2016. CMMI has also directly included private payers in many of its model tests. For example, the medical home interventions being tested through the Comprehensive Primary Care initiatives is being implemented in parallel by CMS and other payers in each of the test markets, and the all-payer models now being tested in Maryland and Vermont involve multiple payers by definition.

These steps to facilitate collaboration across payers may have benefits in addition to resolving a collective action problem. Notably, these efforts have the potential to reduce the administrative costs to providers of participating in APMs. Reducing administrative costs is valuable in their own right, but may also facilitate more rapid diffusion of these models. Aligning incentives across payers may also make APMs more effective by ensuring that providers do not face conflicting incentives from different payers.

In addition to the collective action problem discussed above, the tax treatment of employer-sponsored health insurance coverage has been a second important barrier to the adoption of better payment methods in the private sector. In particular, employees pay income and payroll taxes on compensation provided in the form of wages and salaries, but not on compensation provided in the form of health care benefits. As discussed earlier in this chapter, this treatment means that the Federal Government provides an implicit subsidy of around 35 cents on the dollar to compensation provided in the form of health benefits that it does not provide to other forms of compensation.

As also discussed earlier in this chapter, this subsidy plays a useful role in helping make coverage affordable for many families, but it also distorts employers' incentives. Because the Federal Government subsidizes each additional dollar of health benefits, employers have a strong incentive to

provide excessively costly and inefficient health plans. This in turn undermines the business case for payers to make the plans they offer employers more efficient, including by adopting new approaches to provider payment developed in the public sector and making their own investments in better benefit designs and better approaches to provider payment.

The ACA addressed this problem by including an excise tax on high-cost employer-sponsored coverage. The tax, currently scheduled to take effect in 2020, will levy a 40-percent tax on employer plan costs in excess of about \$29,000 for family coverage and about \$10,700 for single coverage. Plans with higher costs due to factors such as the age-sex mix of their enrollment or the industry in which their enrollees work are eligible for higher thresholds. The tax applies only to the portion of plan costs in excess of the threshold; for example, a family plan with a cost of \$29,100 in 2020 would pay just \$40 in tax. For these very high-cost plans, this structure counteracts the perverse incentives to offer overly generous coverage that existed under pre-ACA law, while preserving strong incentives for employers to offer appropriate coverage. The Treasury Department estimates that 7 percent of enrollment in employer-sponsored coverage and around 1 percent of plan costs will be affected when the tax takes effect in 2020.

The most direct effects of the tax will be on enrollees in the high-cost plans affected by the tax. As their employers take steps to make their plans more efficient, workers at these firms will see lower premiums and correspondingly higher wages, which Congressional Budget Office and Joint Committee on Taxation estimates imply will be around \$43 billion in 2026 alone.²¹ However, the benefits of this reform are likely to be felt throughout the health care system, not just by enrollees in highly inefficient plans. Just as improvements in Medicare's payment systems generate spillover benefits for the rest of the health care system, payment innovations adopted by inefficient plans are likely to generate benefits for enrollees in many different types of coverage. Similarly, the excise tax on high-cost coverage will encourage plans and employers to engage in more aggressive price negotiation with medical providers. By weakening the bargaining position of providers relative to plans, the excise tax will help plans not directly affected by the tax secure lower prices for their enrollees (Baker, Bundorf, and Kessler 2015).

²¹ This estimate was derived from an August 2016 estimate by the Congressional Budget Office (CBO) and Joint Committee on Taxation (JCT) that repealing the excise tax would increase the deficit by \$20 billion in 2026 (CBO 2016a). CBO/JCT assume that roughly three-quarters of the fiscal effects of the tax arises from the increase in payroll and income tax revenue as workers' wages rise (CBO 2015a). Calculations based on tables published by the Urban-Brookings Tax Policy Center imply that the average marginal tax rate on labor income for individuals with employer coverage is around 35 percent (see Urban-Brookings Tax Policy Center Tables T13-0253 and T14-0091). Combining these estimates implies an increase in wage and salary income of \$43 billion ($=[\$21 \text{ billion} * 0.75]/0.35$).

Additional Steps to Reform the Health Care Delivery System

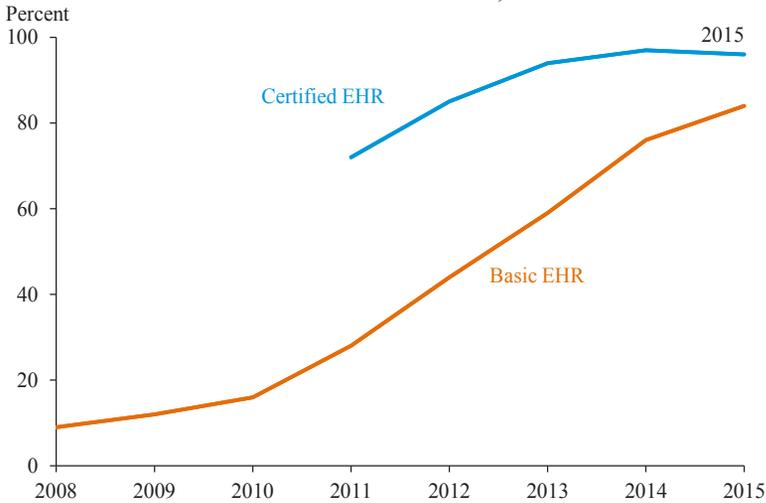
This Administration has also taken a range of other steps to reform the health care delivery system that complement the provider payment reforms discussed in the rest of this section. One such effort aimed to accelerate the deployment of health information technology (IT). Studies of health IT adoption have found positive impacts on the quality and efficiency of patient care (Buntin et al. 2011; Shekelle et al. 2015). For example, numerous studies provide evidence that computerized physician order entry systems, which can alert doctors to possible medication allergies or dosing errors, prevent adverse drug events (Jones et al. 2014; Shamliyan et al. 2008).

To spur greater use of health IT, the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 created financial incentives for Medicare and Medicaid providers to adopt and make “meaningful use” of electronic health records (EHR). More recently, MACRA updated the HITECH incentives for physicians to use health IT and integrated them into Medicare’s core physician payment system. Providers participating in the value-based payment system for physicians established under MACRA will be scored, in part, on their use of EHRs to improve the quality of patient care. MACRA also incorporates the use of certified EHRs (EHRs that meet certain criteria for capturing and sharing patient data) into the determination of whether a payment model qualifies as an advanced APM and thereby qualifies participating physicians for the bonus payments described in the last section.

Recent years have seen substantial progress in deploying EHRs. As illustrated in Figure 4-27, 84 percent of non-Federal acute care hospitals had adopted a basic EHR (an EHR that can perform a certain set of core functions) as of 2015, up from just 16 percent in 2010. An even greater share of hospitals possessed at least a certified EHR system. EHR use has also become common among office-based physicians. In 2015, 78 percent of office-based physicians had an EHR and more than a third had used their EHR system to transmit patient health information to external providers (Jamoom and Yang 2016). Focusing on hospitals, Dranove et al. (2015) found evidence that the HITECH payment incentives had accelerated EHR adoption.

This Administration has also taken steps to improve the availability of information on how cost and quality performance vary across medical providers to help consumers, employers, and others make better-informed choices about where to obtain care. For example, the Qualified Entity program, which was created by the ACA and expanded by MACRA, allows organizations that agree to abide by rigorous privacy and security requirements to use Medicare claims data to create public reports comparing the performance of different medical providers. CMS has also improved and

Figure 4-27
Percent of Non-Federal Acute Care Hospitals
with Electronic Health Records, 2008–2015



Source: American Hospital Association; Office of the National Coordinator for Health Information Technology.

expanded the websites it operates to deliver information on provider performance directly to consumers; these websites now include information on performance by hospitals, nursing homes, physicians, dialysis facilities, home health providers, and Medicare Advantage and Part D prescription drug plans. Additionally, CMS has begun releasing versions of Medicare’s claims databases that have been stripped of beneficiary-identifying information as public use files. The availability of public use files can help researchers better understand patterns of care in the Medicare program in order to evaluate the effectiveness of ongoing delivery system reform efforts and develop new approaches to delivery system reform.

The ACA also created a streamlined process for implementing needed changes to Medicare’s payment systems in the future. In detail, it established an Independent Payment Advisory Board (IPAB) of 15 voting members appointed by the President and confirmed by the Senate. If growth in Medicare spending per beneficiary is projected to exceed a target growth rate over a five-year period, IPAB is charged with recommending improvements in how Medicare pays providers to reduce Medicare spending growth; IPAB is not permitted to recommend changes to Medicare’s benefit design, including premiums, deductibles, and coinsurance. The Secretary of Health and Human Services then implements IPAB’s recommendations unless

legislation that overrides the recommendations is enacted. Over the long run, the target growth rate for IPAB is the growth rate of per capita GDP plus 1 percentage point. However, a more stringent target was set for years through 2017: the average of projected growth in the overall Consumer Price Index (CPI) and the CPI for medical care. Because of the exceptionally slow growth in Medicare spending since the ACA became law, which is discussed in greater detail in the next section, IPAB has not yet been called upon to make recommendations despite this stringent target.

Recent Trends in Health Care Costs and Quality

As the reforms described in the last section have taken effect, the United States has seen exceptionally slow growth in health care costs, as well as promising improvements in the quality of care patients receive. This progress has been seen in every part of the health care system, including both public insurance programs like Medicare and Medicaid and private coverage. While the factors driving these encouraging trends are not fully understood, there is clear evidence that the reforms introduced in the ACA, together with other actions taken by this Administration, are playing an important role. This section of the chapter provides a detailed description of recent trends in health care costs and quality, as well as what is known about the causes of these trends.

Recent Trends in Health Care Costs

Economists commonly focus on three distinct measures of health care costs: unit prices; per enrollee spending; and aggregate spending. Unit prices are the amounts paid for a single unit of a health care good or service, such as a physician visit, a hospital admission, or a dose of medicine. Lower unit prices, holding quality fixed, are unambiguously good for consumers because they allow consumers to purchase the same medical care for less money, leaving more money to purchase other valued goods and services.

Per enrollee spending refers to the average health care spending per person enrolled in insurance coverage and is determined by both the unit prices of health care and the average quantity of services used by enrollees. Per enrollee spending is what ultimately determines what consumers pay in the form of premiums and cost sharing. Slower growth in per enrollee spending that reflects slower growth in health care prices is unambiguously good for consumers, for the reasons described above. Slower growth in per enrollee spending that reflects slower growth in utilization of services will often benefit consumers as well, provided that slow growth is achieved without worsening the quality of care.

Aggregate spending refers to the total amount the country spends on health care and is influenced by both spending per individual enrolled in coverage and the number of individuals enrolled in coverage. Faster growth in aggregate spending can be a negative development if it reflects faster growth in per enrollee spending that is not justified by concomitant improvements in quality. However, it can also be a positive development if, for example, it reflects improvements in access to care due to expanded health insurance coverage. Aggregate spending is not directly relevant to consumers.

Recent trends in each of these measures are examined below.

Health Care Prices

The period since the ACA became law has seen exceptionally slow growth in health care prices, as depicted in Figure 4-28. From March 2010 through October 2016, prices of health care goods and services have risen at an annual rate of 1.7 percent, far below the 3.2-percent annual rate seen over the preceding decade and even farther below the 5.4-percent annual rate over the preceding 50 years.²² In fact, the rate of health care price inflation since the ACA became law has been slower than over any prior period of comparable length since these data began in 1959.

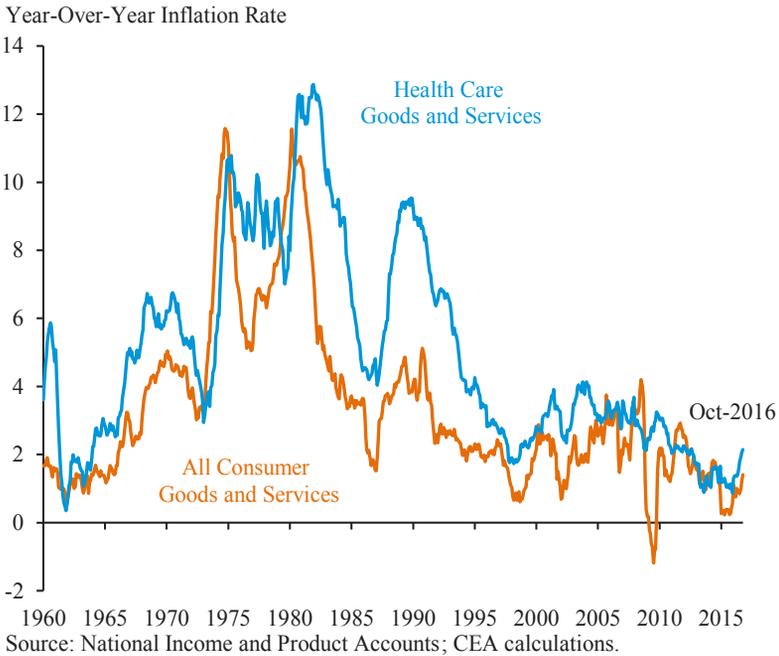
The slow growth in health care prices in recent years is not merely a reflection of slow inflation throughout the economy. Rather, the rate of increase in health care prices has been unusually low *relative* to the rate of increase in prices overall. Indeed, as depicted in Figure 4-29, the rate of increase in health care prices has exceeded the rate of overall inflation by just 0.2 percentage point since the ACA became law, whereas the rate of increase in health care prices exceeded overall inflation by 1 percentage point or more in both the recent and longer-term past.

Health care prices have grown slowly in both of the two largest categories of health care spending: hospital and skilled nursing facility (SNF) services and outpatient services. Real prices for outpatient services have actually *fallen* during the post-ACA period, while real prices for hospital and SNF services have barely risen. The one important exception to this pattern

²² The price index for health care goods and services reported here was derived from Personal Consumption (PCE) Expenditures data produced by the Bureau of Economic Analysis. Price indices for the outpatient services, hospital and nursing home services, pharmaceutical products, other medical products, therapeutic appliances and equipment, and net health insurance categories were combined to construct a Fisher index for the aggregate. The Bureau of Labor Statistics also reports data on health care prices as part of the Consumer Price Index (CPI). This chapter relies on the PCE price indices because they endeavor to measure trends in health care prices throughout the economy, whereas the CPI encompasses a more limited set of transactions. Both series, however, show broadly similar trends in health care prices.

Figure 4-28

Health Care Price Inflation vs. Overall Inflation, 1960–2016



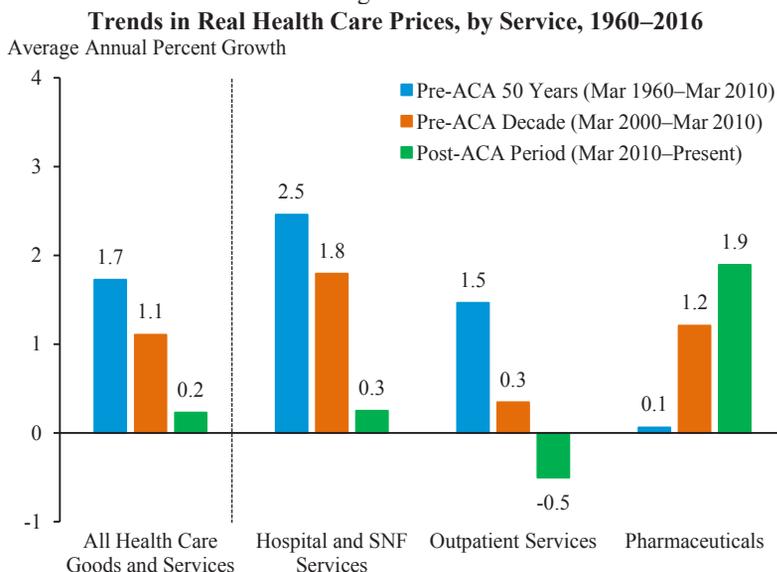
is pharmaceutical prices, which have grown somewhat faster post-ACA than they have historically.

For most categories of services, data limitations make it challenging to separately examine the prices paid by private insurance, Medicare, and Medicaid. One important exception, however, is services provided by general medical and surgical hospitals, which deliver the overwhelming majority of hospital services and account for around a third of total health care spending. As depicted in Figure 4-30, growth in prices paid to these hospitals has been sharply lower during the post-ACA period for all three payer categories, with a particularly large slowdown for services provided to Medicare beneficiaries.

Per Enrollee Health Care Spending

The period since the ACA became law has also seen exceptionally slow growth in overall per enrollee health care spending, as illustrated in Figure

Figure 4-29



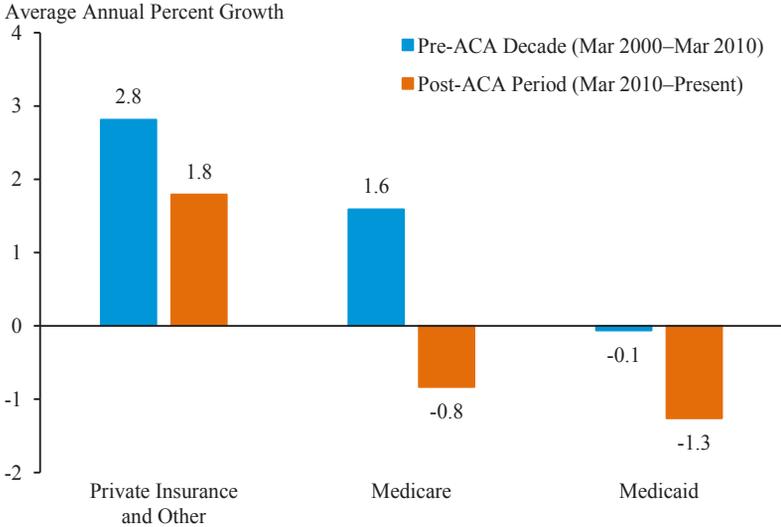
Source: National Income and Product Accounts; CEA calculations.

4-31.²³ Real per enrollee spending in private insurance has risen at an average rate of just 1.5 percent per year during the post-ACA period, well below the pace recorded over either the five-year period that immediately preceded the ACA or the five-year period before that. Medicare spending has followed a similar pattern, with real Medicare spending per enrollee actually falling at an average annual rate of 0.3 percent per year during the post-ACA period. (Per enrollee spending growth in Medicaid has also fallen during the post-ACA period, although these trends are more complicated to interpret due to significant compositional changes in the types of individuals enrolled in Medicaid during both the pre-ACA and post-ACA periods.)

Per enrollee spending growth has slowed markedly across all major service categories, including hospital services, physician services, and prescription drugs, as illustrated in Figure 4-32. Notably, where comparable data are available, the decline in real per enrollee spending growth exceeds the decline in the growth of real health care prices described previously, indicating that much of the decline in per enrollee spending growth reflects slower growth in the utilization of health care services. For example, the

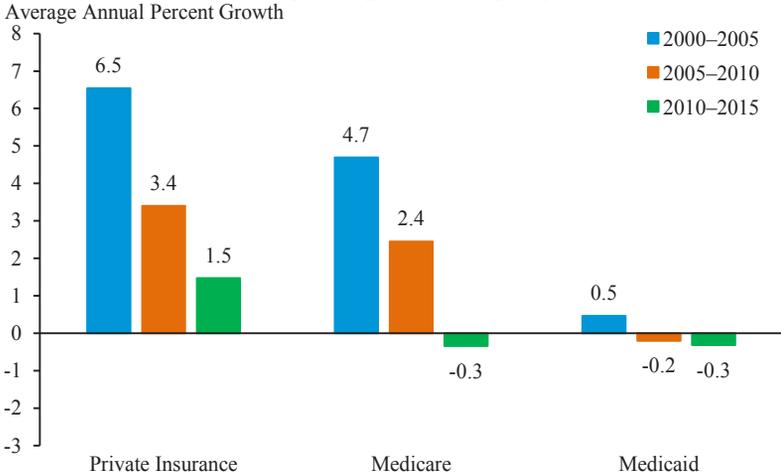
²³ The spending amounts attributed to each insurance type in the National Health Expenditure Accounts reflect only the payments made by the insurer. They do not include amounts borne by enrollees such as deductibles, coinsurance, or copayments. Including these amounts would not change the main conclusions reached here.

Figure 4-30
Trends in Real Prices for General Medical and Surgical Hospitals, by Payer, 2000–2016



Source: Producer Price Indices; CEA calculations.

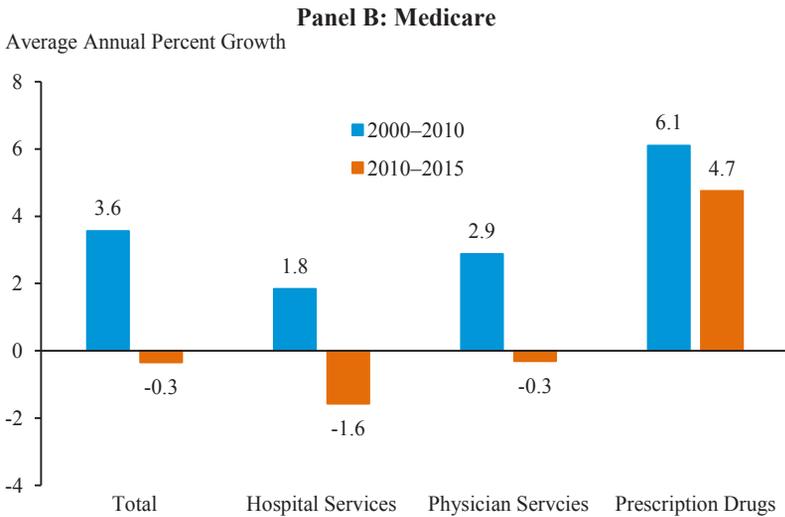
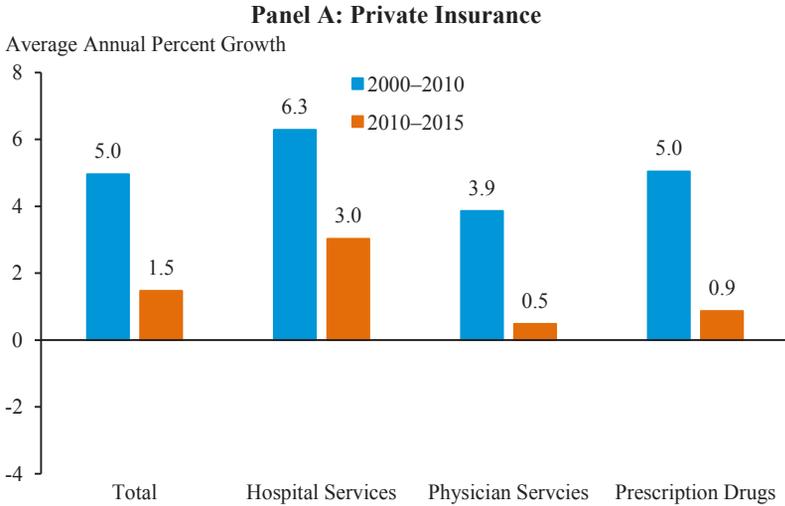
Figure 4-31
Real Per Enrollee Spending Growth, By Payer, 2000–2015



Note: Medicare growth rate for 2005–2010 was calculated using the growth rate of non-drug Medicare spending in place of the growth rate of total Medicare spending for 2006 to exclude effects of the creation of Medicare Part D. Inflation adjustments use the GDP price index.

Source: National Health Expenditure Accounts; National Income and Product Accounts; CEA calculations.

Figure 4-32
**Real Per Enrollee Health Care Spending
 by Service and Payer, 2000–2015**



Note: To exclude effects of the creation of Medicare Part D, the average growth rate of Medicare spending for 2000–2010 was calculated using the growth rate of non-drug Medicare spending in place of the growth rate of total Medicare spending for 2006. Similarly, the average growth for Medicare prescription drug spending reflects 2006–2010 rather than 2000–2010.

Source: National Health Expenditure Accounts; National Income and Product Accounts; CEA calculations.

average growth rate of real per enrollee private insurance spending on hospital services has been 3.3 percentage points lower in the post-ACA period than over the pre-ACA decade, whereas the growth rate of the prices private insurers pay for hospital care has declined by only 0.8 percentage point over the same period.²⁴ Similarly, real per enrollee Medicare spending on hospital services has fallen by 3.4 percentage points from the pre-ACA decade to the post-ACA period, while the growth rate of the real prices Medicare pays for hospital services has declined by only 2.5 percentage points.

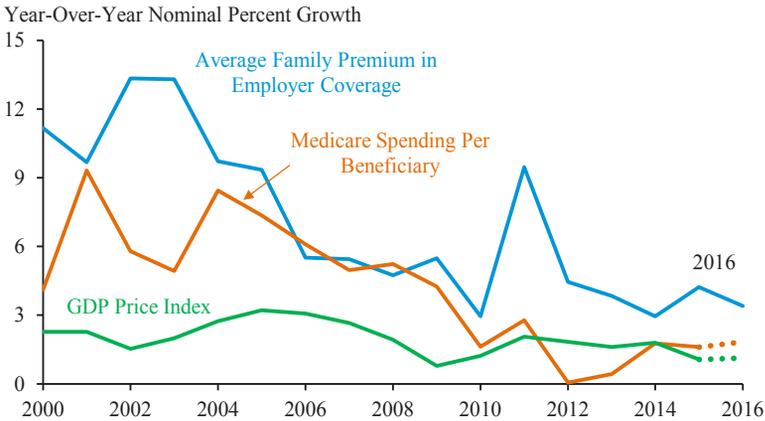
Figures 4-31 and 4-32 extend only through 2015 because they rely upon data from the National Health Expenditure Accounts, which only report annual data. However, timely indicators of per enrollee health care spending indicate that spending growth has remained low into 2016, as illustrated in Figure 4-33. CEA analysis of data on Medicare spending published by the Treasury Department indicates that growth in Medicare spending per beneficiary for the first 10 months of 2016 was roughly in line with 2015 and well below longer-term historical experience. Similarly, data from the annual Employer Health Benefits Survey conducted by the Kaiser Family Foundation and Health Research and Educational Trust's (KFF/HRET) indicate that growth in employer premiums remained near its post-2010 lows in 2016.

Trends in employer coverage merit particularly detailed attention since well more than half of non-elderly Americans get coverage through an employer. As illustrated in Figure 4-34, slow growth in underlying medical costs has translated into slow growth in the premiums of employer plans, with real premium growth dropping from an average annual rate of 5.6 percent in the pre-ACA period to an average annual rate of 3.1 percent since the ACA became law. Notably, growth in the portion of the premium paid directly by the worker has fallen by more than growth in the total premium. While economists generally believe that the total premium is the more relevant measure of the overall premium burden because workers ultimately pay for the employer's contribution to premiums indirectly through lower wages, workers' direct contributions may be particularly salient to individuals.

In principle, trends in premiums could be a misleading indicator of the overall trend in the health costs for individuals with employer coverage if the share of spending that enrollees bear in the form of out-of-pocket costs like coinsurance, copayments, and deductibles is changing over time. As

²⁴ This estimate of the slowdown in growth of real hospital prices differs modestly from what is reported in Figure 4-28. This is because, to align with the estimates reported in Figure 4-31, this calculation reflects the 2010–2015 period rather than the March 2010–March 2016 time period and uses the GDP price index, rather than the PCE price index, to adjust for inflation.

Figure 4-33
Nominal Per Enrollee Health Care Spending Growth, 2000–2016



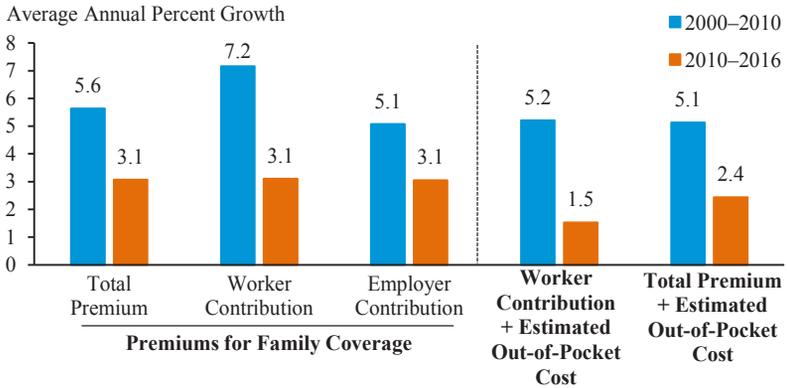
Note: Medicare estimates through 2015 are from the National Health Expenditure Accounts; the Medicare growth rate for 2006 reflects only non-drug spending to exclude effects of the creation of Medicare Part D. The Medicare estimate for 2016 reflects CEA analysis of Treasury data and covers the first ten months of the year. GDP price index for 2016 is a CBO projection.
 Source: Kaiser Family Foundation/Health Research and Educational Trust Employer Health Benefits Survey; National Health Expenditure Accounts; Monthly & Daily Treasury Statements; National Income and Product Accounts; CEA calculations.

discussed in greater detail in the next subsection of this chapter, there is no evidence that out-of-pocket spending obligations have risen more quickly during the post-ACA period than the preceding years. Indeed, the rightmost columns of Figure 4-34 combine the KFF/HRET data on premiums with data on the out-of-pocket share in employer coverage from the Medical Expenditure Panel Survey’s Household Component. If anything, accounting for out-of-pocket costs makes the decline in cost growth for individuals enrolled in employer coverage look slightly larger. While the extent to which incorporating data on out-of-pocket costs magnifies the slowdown in cost growth in employer coverage is somewhat sensitive to which data source is used to measure out-of-pocket costs, the core finding appears relatively robust.

Aggregate Health Care Spending

Driven by the very slow growth in per enrollee health care spending documented above, the years immediately after 2010 saw exceptionally slow growth in aggregate national health expenditures, with 2011, 2012, and 2013 seeing the slowest growth rates in real per capita national health expenditures on record, as shown in Figure 4-35. Growth in aggregate national health expenditures increased in 2014 and 2015, driven in large part by the historic expansion in health insurance coverage that began in 2014.

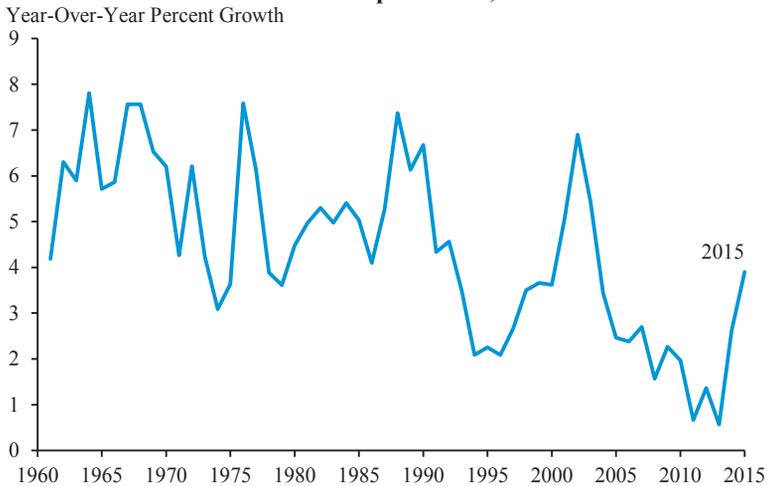
Figure 4-34
**Growth in Real Costs for Employer-Based
 Family Coverage, 2000–2016**



Note: Out-of-pocket costs were estimated by first using the Medical Expenditure Panel Survey to estimate the out-of-pocket share in employer coverage for 2000–2014 and then applying that amount to the premium for each year to infer out-of-pocket spending. The out-of-pocket share for 2015 and 2016 was assumed to match 2014. Inflation adjustments use the GDP price index. GDP price index for 2016 is a CBO projection.

Source: Kaiser Family Foundation/Health Research and Educational Trust Employer Health Benefits Survey; Medical Expenditure Panel Survey, Household Component; CEA calculations.

Figure 4-35
**Growth in Real Per Capita
 National Health Expenditures, 1961–2015**



Note: Inflation adjustment uses the GDP price index.

Source: National Health Expenditure Accounts; National Income and Product Accounts; CEA calculations.

Indeed, Holahan and McMorro (2015) estimate that the expansion in insurance coverage added between 1.4 percentage points and 2.1 percentage points to the growth of national health expenditures in 2014. This implies that, absent the expansion in coverage, 2014 would have been another year of historically slow growth in aggregate health care spending, falling somewhere between the slowest and third-slowest year on record. The coverage gains that occurred during 2015 were almost as large as those occurring during 2014, and some of the upward pressure on spending growth from coverage gains during 2014 may have appeared during 2015, so expanding coverage likely placed a similar degree of upward pressure on aggregate spending growth in 2015. Without this upward pressure, real per capita spending growth would have been around 2 percent in 2015, also near the bottom of historical experience.

Furthermore, as noted earlier, faster growth in aggregate health care spending due to expanding coverage is not a cause for concern. Faster aggregate spending growth is the expected consequence of the major improvements in access to care that have occurred as coverage has expanded and does not indicate that costs are rising more quickly for individuals who are already covered. Moreover, faster growth in aggregate spending due to expanding coverage will be temporary, continuing only until insurance coverage stabilizes at its new higher level. Consistent with that expectation, more timely data on health care spending from the Bureau of Economic Analysis suggest that aggregate health care spending growth has begun to moderate in recent months as the pace of coverage gains has slowed.

Understanding the Recent Slow Growth in Health Care Costs

An important question is what has caused the very slow growth in health care costs under the ACA. Broader economic and demographic trends do not provide a satisfactory explanation for recent trends. The Great Recession cannot explain the slow growth in Medicare spending, nor can it explain why spending growth in the private sector remains so low years after the end of the recession. Similarly, demographic changes can explain only a small portion of the slowdown in per enrollee health care spending and actually make the slowdown in aggregate health care spending growth look slightly larger.

This evidence implies that recent trends in health care spending primarily reflect developments internal to the health care sector. Changes in the cost sharing obligations borne by individuals do not appear to explain recent trends, suggesting that the main factor has been changes in the health care delivery system. Within the delivery system, there are likely a number of factors playing a role, but the ACA's changes to provider payment have

made a large, readily quantifiable contribution, and there is reason to believe that the ACA's effects on recent trends may go beyond what can be easily quantified today.

Each of these factors is discussed in greater detail below.

The Great Recession and Its Aftermath

Some analysts have pointed to the economic disruptions caused by the Great Recession as a possible explanation for the slow growth in health care costs under the ACA. However, this explanation does not fit the available data. Most fundamentally, the Great Recession does not appear to be able to explain any meaningful portion of the slow growth in Medicare spending in recent years. In addition, while it appears that the Great Recession did dampen private sector spending growth in the years during and immediately after the downturn, it is doubtful that the recession and its aftermath can explain why spending growth has remained low all the way through the present, more than seven years after the recession's end.

The fact that health care spending growth has grown slowly in Medicare, not just private insurance, is the clearest evidence that recent health care spending trends reflect much more than just the Great Recession and its aftermath. Medicare beneficiaries are generally not employed and only around a fifth live in families that get more than half of their income from earnings, so they are relatively insulated from developments in the labor market. Likewise, only around a quarter of Medicare beneficiaries have asset income in excess of \$1,000 annually, suggesting that the typical beneficiary is relatively insulated from financial market developments as well.²⁵

Empirical evidence strongly supports the view that the Great Recession had little effect on trends in Medicare spending. Historically, weaker macroeconomic performance has not been associated with lower growth in Medicare spending per beneficiary, either at the national level or when comparing across states experiencing stronger and weaker macroeconomic performance at a given point in time (Levine and Buntin 2013; Chandra, Holmes, and Skinner 2013; Sheiner 2014). Similarly, Dranove, Garthwaite, and Ody (2015) directly compare Medicare spending growth in areas of the country that experienced larger and smaller reductions in employment during the Great Recession. They conclude that the recession had only small effects on Medicare spending growth.

It is more plausible that the Great Recession could have affected health care spending among people under age 65. Non-elderly Americans generally depend on the labor market for their livelihoods, and those who have health insurance overwhelmingly receive coverage through an employer, as

²⁵ These estimates reflect CEA analysis of the Current Population Survey Annual Social and Economic Supplement data covering 2015.

illustrated in Figure 4-3. As a result, there many mechanisms through which the Great Recession could have affected the health care spending of people under age 65.

Most directly, an economic downturn could cause some individuals to become uninsured. For example, reduced employment could reduce access to employer coverage, and increased financial stress could cause families to conclude that premiums are unaffordable. Alternatively, financial pressure could cause employers to stop offering coverage or charge higher premiums. The uninsured rate among non-elderly adults did indeed increase sharply during and immediately after the Great Recession, as depicted in Figure 4-5. Because the uninsured are much less likely to access health care, as discussed earlier in this chapter, this development likely exerted downward pressure on aggregate health care spending growth during this period. However, the uninsured rate for non-elderly individuals peaked by 2010, so increases in the number of uninsured cannot explain why health care spending growth has remained low since that time. Furthermore, reductions in the number of people with coverage through an employer cannot explain why per enrollee health care spending, not just aggregate health care spending, has grown so slowly.

There are, however, mechanisms by which an economic downturn might affect spending by individuals who remain insured. Financial stress could cause individuals to de-prioritize spending on health care or cause employers to modify the coverage they offer in ways that reduce health care spending, such as by increasing cost sharing. Whatever the mechanism, there is empirical evidence that the Great Recession reduced the growth of per enrollee health care spending in employer coverage in its immediate aftermath. Ryu et al. (2013) find that the recession increased cost sharing in employer coverage and estimate that those increases subtracted around 1 percentage point per year from the growth of per enrollee health care spending in employer coverage in both 2010 and 2011, with smaller reductions in earlier years. Similarly, Dranove, Garthwaite, and Ody (2014) compare growth in per enrollee spending in employer coverage in metropolitan statistical areas that experienced larger and smaller reductions in employment during the Great Recession. They conclude that the Great Recession subtracted an average of 1.8 percentage points per year from growth in per enrollee spending in employer coverage in 2010 and 2011.

While this evidence demonstrates that the Great Recession exerted downward pressure on growth in private insurance spending in the years around 2010, it is doubtful that it can explain why per enrollee spending growth in private coverage has remained low through the present, as was illustrated in Figure 4-33. Research comparing health care spending growth

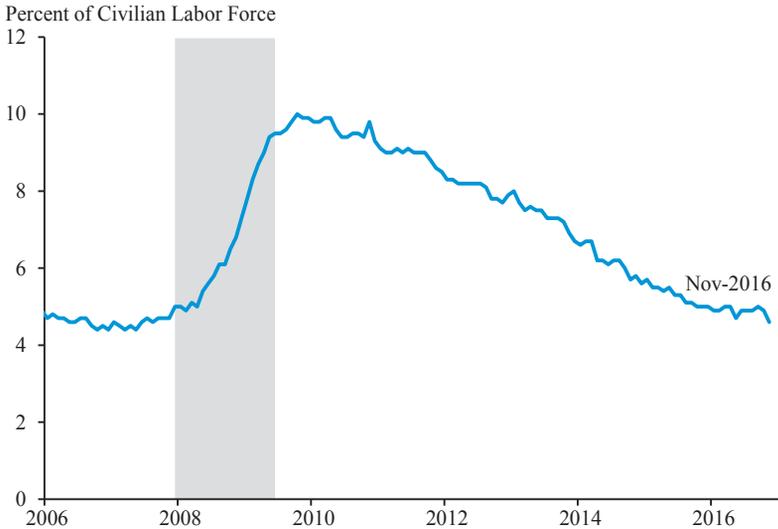
in states experiencing weaker and stronger economic performance at a given point in time has generally concluded that, to the extent economic downturns affect health care spending growth at all, those effects fade almost completely within a few years (Chandra, Holmes, and Skinner 2013; Sheiner 2014). Because the labor market reached its trough by early 2010 and has recovered steadily since then, as illustrated in Figure 4-36, this evidence would suggest that the recession can play only a limited role in explaining why private health care spending growth has been so slow during the post-ACA period, particularly over the last few years.

One potential shortcoming of using cross-state comparisons to estimate the relationship between macroeconomic conditions and private health insurance spending is that these types of analyses cannot capture effects of economic downturns that operate at the national level, rather than state or local level. It is possible that these types of national effects might persist for a longer period of time. In an effort to capture these national effects, some researchers have examined the correlation between economic growth and growth in private health insurance spending at the national level over time.

Taken at face value, results from these “time series” analyses suggest that economic growth has large effects on private health insurance spending that emerge with a four- or five-year lag (Chandra, Holmes, and Skinner 2013; Sheiner 2014). However, analyses of this type have important methodological weaknesses. Unlike analyses that compare outcomes across different geographic areas at the same point in time, time series analyses cannot control for unobserved factors that might cause health care spending to change over time. As a result, these approaches are at much greater risk of mistaking changes in private health insurance spending growth that *coincided with* an economic downturn for change in private health insurance spending growth that were *caused by* an economic downturn.

Moreover, it is unclear whether the results from these analyses are economically plausible. In particular, the most plausible way an economic downturn could generate long-lasting effects on health care spending growth is by changing the development and diffusion of medical technology. However, as noted by Sheiner (2014), four to five years may be too soon for a downturn to have meaningful effects on the path of medical technology, given the long duration of the research and development process. Furthermore, if economic downturns change the path of medical technology in the medium term, that should affect spending growth in Medicare in addition to private insurance. However, there is little evidence that economic downturns affect spending growth in Medicare at any time horizon.

Figure 4-36
Unemployment Rate, 2006–2016



Note: Shading denotes recession.
Source: Bureau of Labor Statistics.

Demographic Changes

Demographic changes are another factor outside the health care system that could affect health care spending trends. As illustrated in Figure 4-37, the United States population is currently aging. Because age is an important determinant of health care spending, differences in how the age distribution is changing at different points in time can cause differences in health care spending growth over time.

Figure 4-38 reports estimates of how health care spending would have changed in recent years based solely on changes in the age and sex

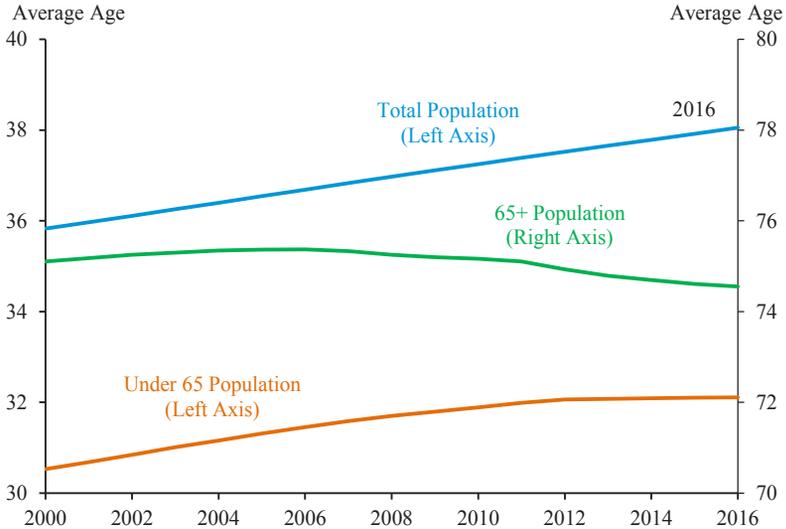
distribution, holding fixed both spending and coverage patterns.²⁶ Consistent with the steady increase in the average age of the full population depicted in Figure 4-37, demographic changes have consistently added to aggregate health care spending growth in recent years. Over the decade preceding the ACA, these demographic factors added an average of 0.5 percentage point per year to growth of per capita health care spending in the full population. Those effects have been slightly larger in the years following passage of the ACA, averaging around 0.6 percentage point per year from 2010 through 2016. Thus, at the level of the population as a whole, demographic changes cannot explain why growth has slowed.

On the other hand, demographic changes can explain a small portion of the slowdown in the growth of per enrollee spending in private insurance and Medicare. As illustrated in Figure 4-37, the aging of the baby boomers drove a steady increase in the average age of the under 65 population during the decade that preceded the ACA, which essentially stopped when the first cohort of baby boomers reached age 65 in 2012. At that time, demographic factors abruptly began placing less upward pressure on per enrollee spending growth in private insurance, as illustrated in Figure 4-38. Whereas demographic changes added an average of 0.6 percentage point per year to private spending growth from 2000 through 2010, they have added an average of just 0.2 percentage point per year since 2010. Thus, demographics can explain a non-zero, but small portion of the decline in private health insurance spending growth.

Demographic changes have had a related effect in Medicare. As the early cohorts of baby boomers have turned 65, the average age among

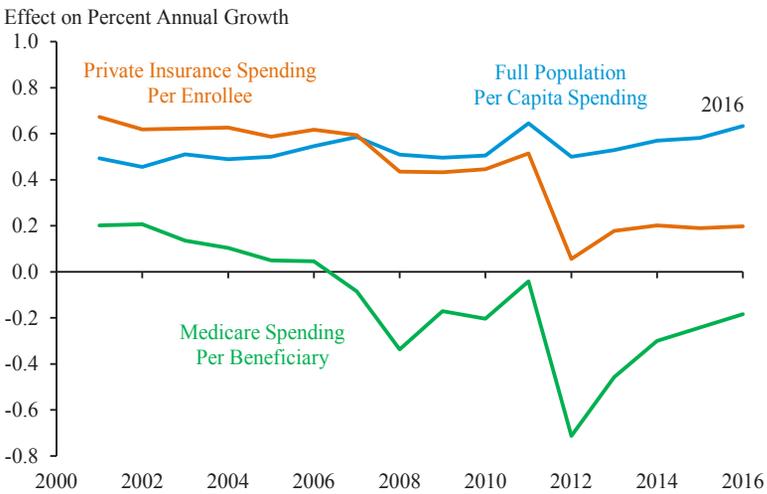
²⁶ The first step in producing these estimates was to allocate the population across private coverage, public coverage, and uninsurance in each year, holding the age-specific propensity to be enrolled in each type of coverage fixed, but allowing population demographics to change over time. Age-specific enrollment propensities for private insurance, public coverage, and uninsurance were set at the 2000-2015 average for each age, as estimated using the National Health Interview Survey for those years. Data on the population by age and sex in each year were obtained from various Census Bureau population estimates and projections. The second step was to obtain data on spending by age and coverage type. Yamamoto (2013) reports data on relative spending by single year of age for commercial coverage and traditional Medicare coverage. Because Yamamoto (2013) reports relative spending by age within commercial and traditional Medicare coverage, additional information is required to put the commercial and traditional Medicare spending curves on the same absolute scale. To do so, CEA relied upon an estimate from Wallace and Song (2016) that spending falls by 34 percent, on average, for individuals converting from commercial coverage to traditional Medicare at age 65. The commercial age curve was used for all individuals with private coverage, while the traditional Medicare age curve was used for all Medicare enrollees. For individuals under age 65 with public coverage, spending was assumed to reflect the commercial age curve scaled down by 20 percent. For individuals under age 65 who were uninsured, spending was assumed to reflect the commercial age curve scaled down by 50 percent. The results are not particularly sensitive to the approach used for these groups.

Figure 4-37
Average Age in Population, 2000–2016



Note: Age was top-coded at 100 years in the data used to calculate these averages.
 Source: Census Bureau; CEA calculations.

Figure 4-38
Effects of Changes in the Age Distribution on Health Care Spending Growth, by Payer, 2001–2016



Source: Census Bureau; Yamamoto (2013); Wallace and Song (2016); National Health Interview Survey; CEA calculations.

individuals among individuals 65 and older has declined, placing significant downward pressure on growth in Medicare spending per beneficiary. As reported in Figure 4-38, after having had little net effect on per beneficiary Medicare spending growth over the decade preceding the ACA, demographic changes have subtracted around 0.3 percentage point per year during the post-ACA period. As with the effects reported above, this effect is not trivial but still relatively small in relation to the overall slowdown in the growth of Medicare spending.

Changes in Enrollee Cost Sharing

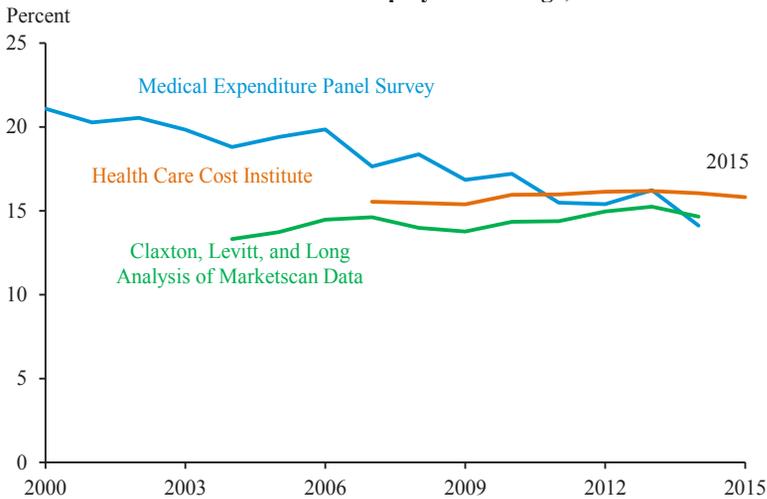
Changes in cost sharing obligations, such as coinsurance, copayments, and deductibles, are another possible explanation for the slower growth in health care spending since the ACA became law. It is well-established that higher cost sharing causes individuals to use less care (for example, Newhouse et al. 1993), so if cost sharing obligations had grown more rapidly during the post-ACA period than during the pre-ACA period, this could account for slower growth in health spending after the ACA's passage. In fact, there is no evidence that this has occurred.

Focusing first on individuals who get coverage through an employer, Figure 4-39 plots out-of-pocket spending as a share of total spending in employer coverage over time derived from three different data sets: the Household Component of the Medical Expenditure Panel Survey (MEPS) and two different databases of health insurance claims.²⁷ The MEPS estimates suggest that the out-of-pocket share has been declining steadily since at least 2000 with, if anything, a faster pace of decline after 2010 than before 2010. The estimates from the two claims databases suggest that the out-of-pocket share has been relatively flat, with small increases in the out-of-pocket share in the years before 2010 and little net change after 2010. Thus, there is no evidence that cost sharing obligations have grown more quickly after 2010 and, therefore, no evidence that faster growth in cost sharing can explain slower growth in health care spending. If anything, these data suggest that cost sharing trends may have worked slightly *against* the slowdown in health care spending growth observed in recent years.²⁸

²⁷ Each of these data series has strengths and weaknesses. The MEPS is nationally representative, whereas the claims databases are not. On the other hand, the claims databases offer larger sample sizes. They also offer more accurate information on each individual transaction since they contain the actual transaction records.

²⁸ This conclusion is even stronger if consumers' decisions on whether to access care depend on the *dollar amounts* they pay when they access care rather than the *share of total spending they pay*. The absolute dollar amount of cost sharing has grown more slowly in the post-ACA period than the pre-ACA period due to the combination of sharply lower overall spending growth and the relatively steady trend in the out-of-pocket share.

Figure 4-39
Out-of-Pocket Share in Employer Coverage, 2000–2015

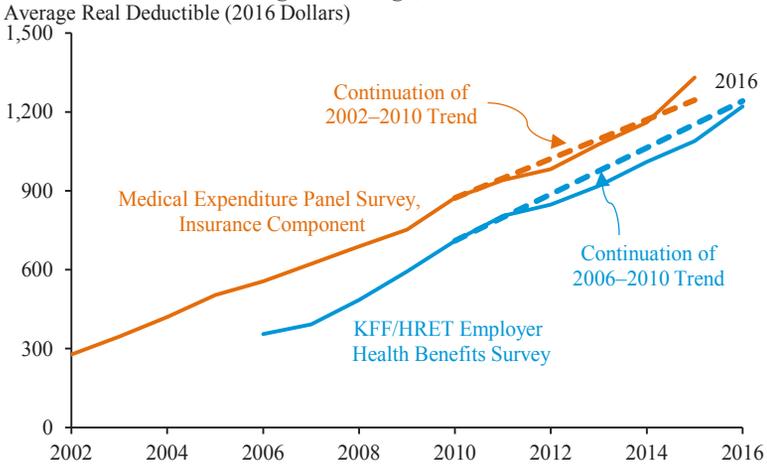


Note: Different vintages of the HCCL series were combined by starting with the most recent series and extrapolating backwards based on percentage point changes.
 Source: Medical Expenditure Panel Survey, Household Component; Health Care Cost Institute and Herrera et al. (2013); Claxton, Levitt, and Long (2016); CEA calculations.

The overall out-of-pocket share, reported in Figure 4-39, is the best metric for evaluating trends in cost sharing in employer coverage because it captures all types of cost sharing, including copayments, coinsurance, and deductibles. Focusing on individual categories of cost sharing can provide a misleading picture of the overall trend in out-of-pocket costs since different components can grow at different rates. Notably, enrollees’ copayments and coinsurance obligations have grown quite slowly in recent years, while deductible spending has grown much more quickly (Claxton, Levitt, and Long 2016). This is likely in part because deductibles have simply supplanted these other types of cost sharing and in part because of the ACA’s reforms requiring insurance plans to cover preventive services without cost sharing and to limit enrollees annual out-of-pocket spending, which were discussed earlier in this report.

Despite the limitations of doing so, public discussions have sometimes focused narrowly on trends in deductibles to the exclusion of other out-of-pocket costs. Even looking solely at deductibles, however, provides little support for the view that recent years’ slow growth in health care spending can be explained in part by faster growth in cost sharing. Average deductibles in employer coverage have indeed risen steadily in recent years, as illustrated in Figure 4-40. However, the pace of this increase since 2010 has been similar to the increase prior to 2010, meaning it can do little to explain why growth

Figure 4-40
**Average Real Deductible in Employer-Based
 Single Coverage, 2002–2016**



Note: Inflation adjustments use the GDP price index, including a CBO projection for 2016.
 Source: Medical Expenditure Panel Survey, Insurance Component; Kaiser Family Foundation/Health Research and Educational Trust (KFF/HRET) Employer Health Benefits Survey; National Income and Product Accounts; CEA calculations.

in overall health spending has been slower during the post-ACA period than it was prior to the ACA.

There is also little evidence that changes in cost sharing are an important explanation for the slow cost growth in types of coverage other than employer coverage. The largest change in Medicare’s benefit design in recent years was the creation of Medicare Part D in 2006. Creation of Medicare Part D did drive temporarily faster growth in drug spending by Medicare beneficiaries; however, the estimates of trends in per beneficiary Medicare spending that were presented in Figures 4-31 through 4-33 already adjusted for the large increase in drug spending associated with the creation of Medicare Part D. With respect to Medicaid and CHIP, systematic data on cost sharing obligations are not available, but both programs have historically included negligible beneficiary cost sharing, and there is no reason to believe that this has changed in recent years. Thus, it is doubtful that changes in cost sharing play a meaningful role in explaining slower spending growth in those programs in recent years.

Non-ACA Trends in the Health Care Delivery System

The inability of factors affecting the demand for medical care—including economic and demographic trends, as well as changes in cost sharing—to explain the slow growth in health care spending under the ACA

suggests that changes in the health care delivery system have played the predominant role in recent years' slow health care spending growth. The next section discusses the important role that the ACA's changes in medical provider payment have played in slowing health care spending growth, but the fact that health care spending had started slowing prior to the ACA's passage, as documented in Figure 4-31, suggests that the ACA is not the only reason that health care spending growth has been slower during the post-ACA period than in the past. A pair of such factors is discussed below.

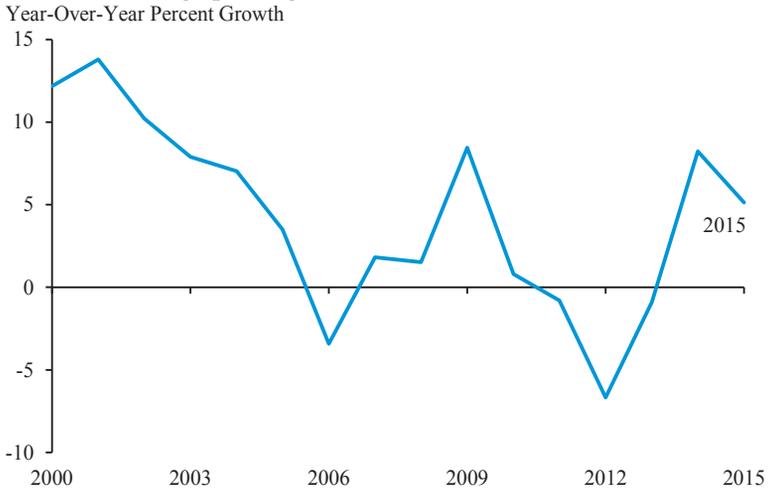
The slower growth under the ACA relative to the preceding decade may, in part, reflect the removal of factors that put upward pressure on spending growth during years preceding the ACA, particularly during the early 2000s. The late 1990s and early 2000s saw a number of states pass laws that restricted the ability of private insurers to use a range of so-called "managed care" strategies, strategies that appear to have contributed to slower health care spending growth during the 1990s (Cutler, McClellan, and Newhouse 2000; Glied 2000). Recent economic research examining these state laws has concluded that they put substantial, but temporary upward pressure on health care spending in the years after they took effect (Pinkovskiy 2014). This may partially explain why health care spending growth under the ACA has been so much slower than the first half of the 2000s, though it cannot explain why spending growth has been slower under the ACA than during the second half of the 2000s.

Another possible explanation for why health care spending has grown more slowly in recent years is that the pace at which new medical technologies are being introduced has slowed. As noted earlier in this section, economists generally believe that the development of resource-intensive new medical technologies has been the main driver of the rapid growth in health care spending over the long term (Newhouse 1992; Cutler 2004). If these types of technologies are arriving at a slower pace than in the past, then that could explain why health care spending has grown at a slower pace.

The trajectory of medical technology likely can account for much of the recent swings in prescription drug spending growth. As illustrated in Figure 4-41, per enrollee prescription drug spending in private insurance grew very slowly in the years both immediately before and after passage of the ACA after having grown quite rapidly in the early 2000s.²⁹ Slow growth during this period appears to have resulted from a slew of patent expirations for blockbuster drugs that allowed less expensive generic versions of these

²⁹ Figure 4-41 focuses on private insurance because Medicare generally did not cover prescription drugs before 2006 and because, as noted previously, trends in per enrollee Medicaid spending are more difficult to interpret due to changes in the composition of program enrollment.

Figure 4-41
**Real Per-Enrollee Prescription
 Drug Spending in Private Insurance, 2000–2015**



Note: Inflation adjustments use the GDP price index.

Source: National Health Expenditure Accounts; National Income and Product Accounts; CEA calculations.

drugs to enter the market, combined with a dearth of new drug introductions (Aitken, Berndt, and Cutler 2009; IMS 2013). This period of slow growth ended as a wave of costly new medications entered the market starting in 2014 (IMS 2016). Figure 4-41 and more-timely data from the Bureau of Economic Analysis suggest that prescription drug spending growth has begun to slow again as the effect of these new drug introductions on prescription drug spending has waned.

However, prescription drugs account for only a sixth of overall health care spending (ASPE 2016c),³⁰ and it is far from clear that changes in the trajectory of medical technology can account for the reductions in growth of other categories of health care spending that was documented in Figure 4-32. Chandra, Holmes, and Skinner (2013) document slower growth in utilization of certain surgical procedures in the years prior to the ACA and highlight similar evidence from Lee and Levy (2012) for certain imaging services, which they argue implies that a slower pace of technological change

³⁰ The estimate that prescription drugs account for one-sixth of total health care spending cited here incorporates both prescription drugs sold directly to consumers and prescription drugs purchased and administered by a physician or other medical provider. The other data presented in this chapter only incorporate spending on prescription drugs sold to consumers because non-retail spending on prescription drugs is not included in the prescription drug category of the National Health Expenditure Accounts.

began restraining health care spending growth in the years prior to the ACA’s passage. But this evidence primarily reflects changes in how existing medical technologies were being used, not the pace at which new technologies are being introduced, so it is unclear that these data should be taken to reflect a change in the trajectory of medical technology, as opposed to some other change in medical practice that may have a wide variety of potential causes.

ACA Reforms to Provider Payment

As discussed above, the ACA is not the only factor that explains why health care spending has grown so much more slowly in the years since the ACA became law than in the preceding years. However, there is also clear evidence that payment reforms introduced in the ACA, plus the “spillover” effects of those reforms on the private sector, have exerted substantial, quantifiable downward pressure on health care spending growth since 2010. Furthermore, there is reason to believe that the ACA’s efforts to change the structure of provider payment have had additional effects that go beyond what can be readily quantified.

The most direct effect of the ACA on health care spending growth has been from the ACA’s provisions to better align the rates Medicare pays to medical providers and private insurers with the actual cost of services; these provisions were described in detail earlier in this chapter. CBO estimates imply that these provisions have reduced the annual growth rate of Medicare spending by 1.3 percentage points from 2010 through 2016, generating a cumulative spending reduction of close to 8 percent in 2016.³¹ These provisions of the ACA, therefore, can account for around a third of the reduction in per beneficiary Medicare spending growth relative to the pre-ACA decade that was reported in Figure 4-32. Notably, more than half of this reduction in spending growth—or around 0.8 percentage point per year—comes from ACA provisions that reduce annual updates to various categories of medical providers to reflect productivity growth. These provisions will continue to

³¹ These calculations account for the ACA’s reductions to annual updates in traditional fee-for-service payment rates, reductions in Medicare Advantage benchmarks, and reductions in Medicare Disproportionate Share Hospital payments, but not other Medicare provisions included in the ACA. The magnitude of the savings from these provisions were estimated using CBO’s original score of the ACA (CBO 2010c); the percentage reductions reflect CBO’s March 2009 baseline projections for Medicare, which were the baseline projections used in scoring the ACA (CBO 2009). These calculations use CBO’s original score of the ACA rather than its subsequent estimates of ACA repeal because those subsequent scores assume that Medicare’s payment rules would not return to exactly what they would have been without the ACA if the ACA were repealed (CBO 2012a; CBO 2015a). For comparability with the other estimates included in this chapter, the CBO estimates were converted to a calendar year basis by assuming that the applicable amounts for a calendar year were three-quarters of the amount for the corresponding fiscal year and one-quarter of the amount for the subsequent fiscal year.

reduce the growth rate of Medicare spending to a similar extent in the years to come.

In addition, recent research has concluded that reductions in Medicare's payment rates lead to corresponding reductions in the payment rates that private insurers are able to secure from medical providers, as discussed earlier in this chapter. If the magnitude of these spillover savings matches the prior literature, then the ACA's provisions reducing annual payment updates have reduced growth of private insurance spending by between 0.6 and 0.9 percentage point per year from 2010 through 2016, generating a cumulative reduction in private insurance spending of between 3 and 5 percent in 2016.³² These spillover effects on private insurance can account for half or more of the reduction in the growth of the prices private insurers pay for hospital care that was reported in Figure 4-30; they can explain between an eighth and a fifth of the reduction in the growth of private insurance spending per enrollee relative to the pre-ACA decade that was reported in Figure 4-32. Moreover, because the underlying Medicare provisions permanently reduce the growth of Medicare payment rates, these spillover effects on growth in private insurance spending would be expected to continue indefinitely as well.

While assessing the aggregate effects of the ACA's provisions to deploy alternative payment models is more challenging, early evidence is encouraging. Research examining the first three years of the Medicare Shared Savings Program, Medicare's largest ACO program, has estimated that ACOs have reduced annual spending for aligned beneficiaries by 0 to 3 percent, with early evidence suggesting that ACOs start at the bottom of that range and move toward the top as they gain experience (McWilliams et al. 2016; McWilliams 2016). Research examining the first two years of CMMI's smaller Pioneer ACO model found savings of a broadly similar magnitude (Nyweide et al. 2015; McWilliams et al. 2015), while evidence from the first two years of CMMI's Bundled Payments for Care Improvement initiative, CMMI's largest bundled payment program, found savings of around 4 percent of episode spending among participating hospitals relative to non-participating hospitals (Dummit et al. 2016).

These results are encouraging, but they also suggest that APMs have generated only modest direct savings to the Medicare program to date. Importantly, the estimates reported above reflect the gross reduction in Medicare spending under the APMs, before accounting for performance

³² The lower bound of this range reflects the White (2013) estimate that each dollar reduction in Medicare payment rates reduces private payment rates by \$0.77, while the upper bound reflects the Clemens and Gottlieb (forthcoming) estimate that each dollar reduction in Medicare's payment rate reduces private payment rates by \$1.12.

payments made to providers. These performance payments have offset much of the gross savings reported above, at least in the Medicare Shared Savings Program (McWilliams 2016). In addition, while APMs have spread rapidly in the Medicare program since 2010, they still account for a minority of Medicare payments, so the savings estimates reported above apply to only a portion of program spending.

While the direct savings to the Medicare program may be relatively modest so far, these initiatives may be generating more substantial savings in the rest of the health care system. As discussed earlier in this chapter, research has suggested that providers use a common “practice style” with all of their patients, causing payment interventions implemented by one payer to generate savings for other payers whose enrollees see the same providers. If that evidence applies in this case, then Medicare’s APM initiatives are already generating meaningful savings for private payers. Notably, unlike the savings that APM participants generate for Medicare, spillover savings are not offset by performance payments to providers. For this reason, it is conceivable that Medicare’s APM initiatives have generated larger net savings for private payers than for the Medicare program itself so far.

In addition, as noted earlier in this chapter, private payers appear to have been making efforts to deploy APMs in parallel with Medicare, and it is unlikely that these efforts would have occurred in the absence of efforts to deploy these models in Medicare. While there is little systematic evidence on how successful these private sector efforts have been at reducing costs, these savings could be substantial. Furthermore, as also noted earlier in this chapter, one long-term benefit of transitioning to APMs is fostering the development of technologies and treatment approaches that generate the most value for patients, rather than the technologies and treatment approaches that are most profitable under fee-for-service payment. While changes of this type are likely to take years or even decades to reach their full effect, if even small shifts in this direction have already occurred, it would have large implications for total health care spending because these types of shifts would affect all providers, not just those participating in APMs.

Finally, whatever has happened so far, there are several reasons to believe that the savings generated by Medicare’s APM initiatives will grow over time. First, as noted above, ACOs in the Medicare Shared Savings Program appear to achieve greater gross savings as they gain experience; similarly, research examining an earlier private ACO-like contract found that savings grew steadily as providers gained experience with the contract (Song et al. 2014). Second, the Administration has been making continual improvements in its APMs, such as by improving the methodologies used to align beneficiaries to ACOs and to set ACOs’ spending benchmarks. These

improvements will strengthen ACOs' ability to achieve savings and their incentives to do so. Third, program rules for many APMs are structured so that the performance payments earned for any given level of gross savings will shrink over time, generating larger net savings to Medicare even if gross savings remain constant. Fourth, as discussed previously, a larger share of Medicare dollars are expected to flow through APMs in the coming years.

Recent Trends in Health Care Quality

The reforms implemented under this Administration were designed to improve the quality of care, not just reduce health care costs. Reducing costs in ways that worsen the quality of care will often reduce the total value generated by the health care sector. By contrast, reducing costs while maintaining or improving the quality of care, which the evidence presented at the beginning of this section of this chapter suggested is often possible, has the potential to greatly increase the total value generated by the health care sector.

In practice, studying trends in health care quality is inherently more challenging than studying trends in health care costs. The essential information about health care costs can be captured in a few key pieces of data—the types of service used, the prices paid for those services, and the resulting total spending—and these same basic measures are applicable across all health care settings. By contrast, health care quality has many important dimensions, including a range of different aspects of patients' experiences while receiving care and myriad health outcomes. Furthermore, the most relevant dimensions vary widely from one setting to another. As a result, indicators of health care quality are unavoidably less comprehensive than indicators of health care costs. In addition, whereas health care costs are measured in dollars and so can be readily aggregated and compared across domains, different dimensions of health care quality are measured in widely varying units, which makes aggregation effectively impossible.

For both of these reasons, all-encompassing indicators of health care quality like those that exist for health care costs do not exist. However, quality measures that capture particular important dimensions of care do exist, and a few of these are discussed below. These measures indicate that recent years' slow growth in health care costs has been accompanied by important improvements in health care quality, implying that ongoing changes in health care delivery system are not just reducing health care spending, but also increasing the total value that the health care system creates. Notably, these improvements in the quality of care appear to be attributable, at least in part, to reforms introduced by the ACA.

Declines in the Rate of Hospital-Acquired Conditions

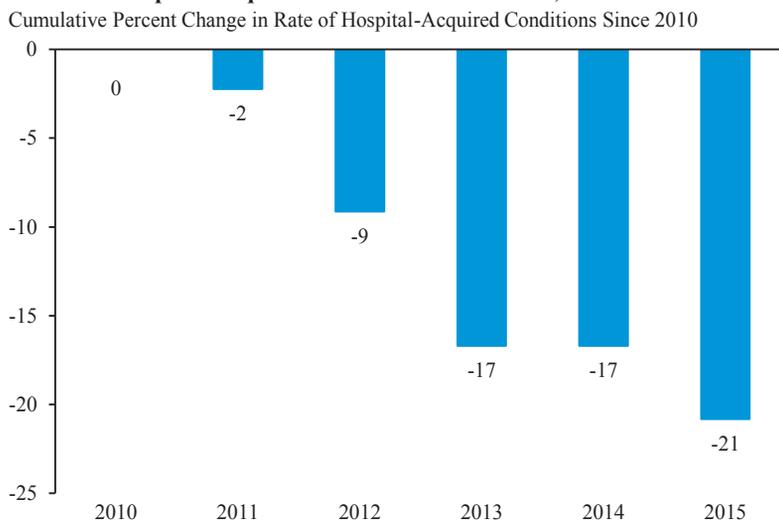
One of the most comprehensive ongoing efforts to monitor health care quality on a system-wide basis is the Agency for Healthcare Research and Quality's (AHRQ) work to track the incidence of 28 different hospital-acquired conditions, including pressure ulcers, several types of infections, and complications due to medication errors, on a nationwide basis (AHRQ 2015; HHS 2016b). The AHRQ data series combines data from a variety of sources, including reviews of medical charts, administrative hospital discharge records, and hospital reports to the Centers for Disease Control and Prevention.

The AHRQ data indicate that the rate of hospital-acquired conditions has fallen significantly since this data series began in 2010, as illustrated in Figure 4-42. The rate of hospital-acquired conditions stood at 145 per 1,000 discharges in 2010 and had fallen to 115 per 1,000 discharges in 2015, a decline of 21 percent. Using prior research on the relationship between these hospital-acquired conditions and mortality, AHRQ estimates that the reduction in the rate of hospital-acquired conditions since 2010 corresponds to approximately 125,000 avoided deaths cumulatively from 2010 through 2015. AHRQ similarly estimates that these reductions in hospital-acquired conditions have generated cost savings of around \$28 billion cumulatively from 2010 through 2015.

The factors that are driving the reduction in hospital-acquired conditions have been less thoroughly studied than the factors driving recent years' slow growth in health care costs, but there is reason to believe that the ACA has played an important role here as well. Two of the value-based purchasing reforms implemented under the ACA—the Hospital Value-Based Purchasing Program and the Hospital-Acquired Condition Reduction Program—tie hospitals' Medicare payment rates to a range of quality measures, including rates of hospital-acquired conditions. The first year of incentive payments under these programs were based on performance during 2011 and 2013, respectively, and hospitals may also have begun adjusting their behavior even earlier. In addition, drawing on funding from CMMI, the Administration created the Partnership for Patients initiative, which set up mechanisms to help hospitals identify and share best practices for improving the quality of patient care. Hospital industry participants have reported that the Partnership was highly effective in achieving its goals (AHA/HRET 2014). The Partnership was recently incorporated on a permanent basis into CMS' Quality Improvement Network-Quality Improvement Organization program.

Figure 4-42

Cumulative Percent Change in Rate of Hospital-Acquired Conditions Since 2010, 2010–2015



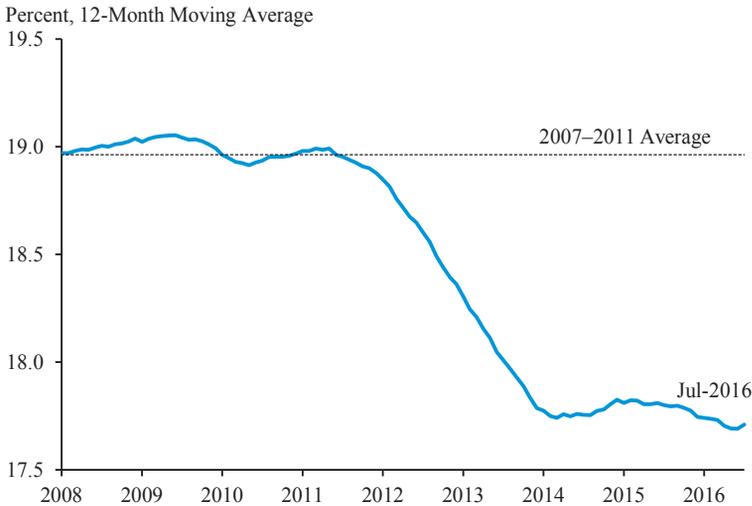
Source: Agency for Healthcare Research and Quality; CEA calculations.

Declines in the Rate of Hospital Readmissions

Another valuable indicator of health care quality is the rate of hospital readmissions, instances in which a patient returns to the hospital soon after discharge. Hospital readmissions often result from the occurrence of a serious complication after discharge, so hospital readmission rates are a useful indicator of the health outcomes patients achieve after leaving the hospital (Jencks, Williams, and Coleman 2009; Hines et al. 2014). Evidence suggests that many readmissions also reflect low-quality care during the initial hospital stay or poor planning for how a patient will receive care after discharge, which means that readmission rates are also a useful indicator of the quality of the care being provided during that initial stay (MedPAC 2007).

Hospital readmission rates have declined sharply in recent years. After several years of stability, the 30-day hospital readmission rate among Medicare patients began falling sharply starting in late 2011, as illustrated in Figure 4-43. This decline continued at a rapid pace through early 2014, with modest additional declines since then. The readmission rate for the 12 months that ended in July 2016 was 1.3 percentage points (7 percent) below the average rate recorded for 2007 through 2011. Cumulatively, the decline in hospital readmission rates from April 2010 through May 2015 corresponds to 565,000 avoided hospital readmissions (Zuckerman 2016).

Figure 4-43
**Medicare 30-Day, All-Condition
Hospital Readmission Rate, 2008–2016**



Source: Centers for Medicare and Medicaid Services; CEA calculations.

The ACA appears to have played a major role in reducing hospital readmission rates. The ACA’s Hospital Readmissions Reduction Program (HRRP) reduces payment rates for hospitals in which a relatively large fraction of patients return to the hospital soon after discharge. Notably, the decline depicted in Figure 4-43 began around the time that the rules governing the payment reductions under the HRRP were finalized in August 2011.³³ In addition, Zuckerman et al. (2016) also document that the reduction in readmission rates has been particularly large for the specific conditions targeted under the HRRP, which is also consistent with the hypothesis that the HRRP was the main driver of this decline. Alongside the changes in financial incentives created by the HRRP, the Partnership for Patients may also have helped reduce readmissions during this period by helping hospitals identify and adopt best practices for doing so.

Importantly, recent declines in hospital readmission rates reflect real reductions in patients’ risk of returning to the hospital after discharge, not mere changes in how patients who return to the hospital are being classified, as some analysts have suggested (for example, Himmelstein and

³³ While the first payment reductions under this program did not occur until October 2012, hospitals’ incentives to reduce readmissions began as soon as the rules were finalized (or earlier, to the extent that hospitals anticipated the structure of the payment rules) because payment reductions are based on performance in prior years.

Woolhandler 2015). These analysts argued that some hospitals had tried to circumvent the HRRP's payment reductions by re-classifying some inpatient readmissions as outpatient observation stays. As a result, they argued, the observed decline in hospital readmissions rates substantially overstated the actual decline in patients' risk of returning to the hospital after discharge.

However, Zuckerman et al. (2016) demonstrate that no such shift to observation status has occurred. Although there has been a decade-long trend toward greater use of outpatient observation stays among patients who return to the hospital, there was no change in this trend after introduction of the HRRP, contrary to what would have been expected if the HRRP had caused inpatient readmissions to be re-classified as observations stays. Similarly, the authors find no correlation between the decline in a hospital's readmission rate and the increase in the share of a hospital's patients who experience an observation stay following discharge, which is also inconsistent with the re-classification hypothesis.

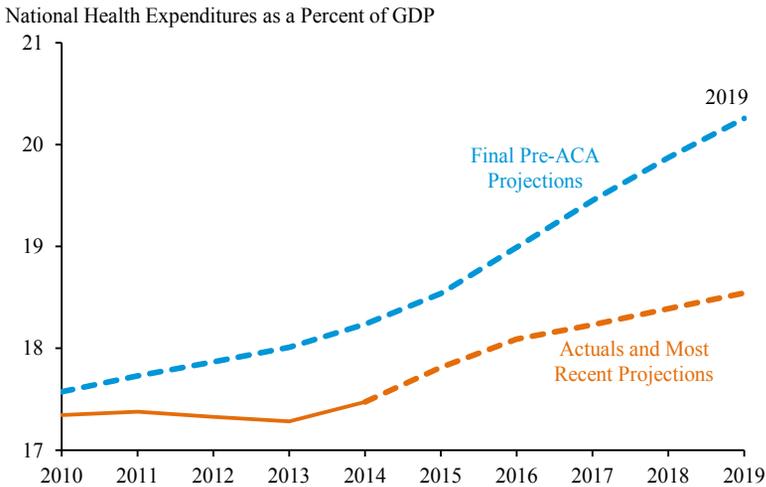
Quality Performance in Alternative Payment Models

Early evidence from evaluations of the APMs being deployed under the ACA also provides an encouraging picture of how these models will affect quality of care. The evaluation of the Medicare Shared Savings Program that was discussed in the last subsection found that ACOs improved quality of care along some dimensions, while not worsening it on others, at the same time as ACOs generated reductions in spending (McWilliams et al. 2016). Evaluations of the first two years of the Pioneer ACO model found broadly similar results: improvements on some measures of quality performance, with no evidence of adverse effects on others (McWilliams et al. 2015; Nyweide et al. 2015). Similarly, evidence from the first two years of CMMI's Bundled Payments for Care Improvement initiative, found that the savings achieved under that initiative came at no cost in terms of quality of care (Dummit et al. 2016). This evidence implies that APMs will be successful in improving the overall value of the care delivered, not just reducing spending.

Economic Benefits of a Better Health Care Delivery System

Recent progress in improving the health care delivery system is already having major economic benefits. Most visibly, slower growth in the cost of health care generates large savings that are then available for other valuable purposes, raising Americans' overall standard of living. Recent shifts in projections of aggregate national health expenditures illustrate the magnitude of these savings. Relative to the projections issued just before the ACA became law, national health expenditures are now projected to be 1.7 percentage points lower as a share of GDP in 2019 than projected

Figure 4-44
Projected National Health Expenditures, 2010–2019



Note: Pre-ACA projections have been adjusted to reflect a permanent repeal of the SGR following the methodology used by McMorrow and Holahan (2016). For consistency, actuals reflect the current estimates as of the most recent projections release.
 Source: National Health Expenditures Accounts and Projections; CEA calculations.

just before the ACA became law, as illustrated in Figure 4-44, despite the fact that tens of millions more Americans are now projected to have health insurance.³⁴ Over the ACA’s entire first decade, national health expenditures are now projected to be \$2.6 trillion lower than projected before the ACA became law. The remainder of this subsection discusses the downstream consequences of lower health care costs, including increased employment in the short run, higher wages in both the short and long run, lower premiums and out-of-pocket costs, and an improved fiscal outlook for Federal and State governments.

While this subsection focuses primarily on the economic benefits of reductions in the cost of health care, it is important not to lose sight of the fact that improvements in the quality of care also have important economic benefits. Most importantly, higher-quality care ultimately allows people to live longer, healthier lives, which is immensely valuable in its own right. In addition, as noted in the discussion of the benefits of expanded insurance coverage in the first section of this chapter, better health also appears to improve the likelihood that individuals are able to work and increases their

³⁴ The pre-ACA projections have been adjusted to reflect a permanent repeal of the Sustainable Growth Rate physician payment formula following the methodology used by McMorrow and Holahan (2016).

productivity on the job. These benefits, while not as readily quantifiable as the benefits discussed below, are also important.

Higher Wages, Lower Premiums, and Lower Out-of-Pocket Costs for Workers

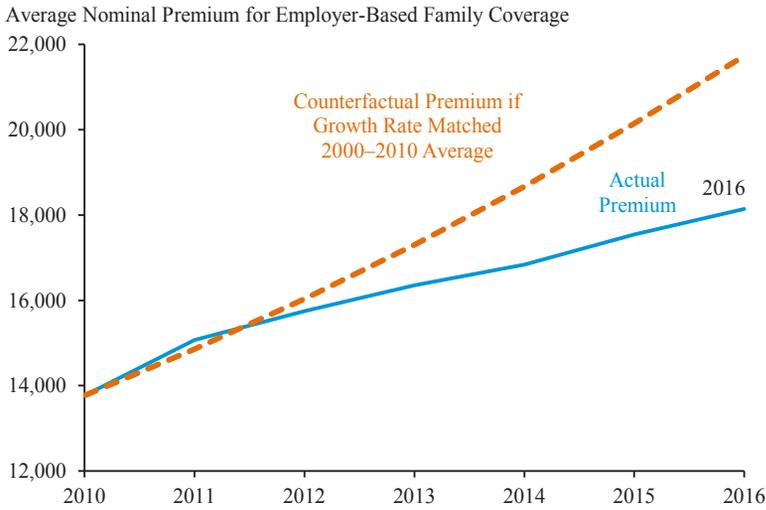
Roughly half of Americans see the benefits of a more efficient health care system in the form of lower costs for the coverage they get through an employer. Health care for individuals enrolled in employer coverage is financed through a combination of premiums and out-of-pocket costs, so when the underlying cost of health care falls, premiums and out-of-pocket costs fall as well. Reductions in out-of-pocket costs and the portion of premiums paid by employees accrue directly to workers. The remaining savings, which initially accrue to employers as lower premium contributions, ultimately benefits workers as well; economic theory and evidence demonstrate that reductions in the amounts employers pay toward premiums translate into higher wages in the long run (for example, Summers 1989; Baicker and Chandra 2006).

The slow growth in health costs under the ACA has generated substantial savings for workers. The average premium for employer-based family coverage was nearly \$3,600 lower in 2016 than it would have been if nominal premium growth since 2010 had matched the average rate recorded over the 2000 through 2010 period, as estimated using data from the KFF/HRET Employer Health Benefits Survey and illustrated in Figure 4-45. Incorporating data on out-of-pocket costs makes these savings considerably larger. Combining these KFF/HRET data on premiums with data on out-of-pocket costs from the Household Component of the Medical Expenditure Panel Survey using the methodology described in Figure 4-34 implies that the average total spending associated with an employer-based family policy is \$4,400 lower in 2016 than if trends had matched the preceding decade.³⁵

As noted above, both economic theory and evidence imply that workers will receive the full amount of these savings in the long run. In practice, however, compensation packages take time to adjust, so it is conceivable that some of employers' savings on their portion of premiums have not fully translated into higher wages in the short run. To the extent that is the case, then slower growth in health care costs has had the effect of reducing employers' per-worker compensation costs in the short run, increasing their incentives to hire and potentially boosting overall employment. The empirical evidence on these effects is limited, but some studies have found evidence

³⁵ As depicted in Figure 4-39 and discussed in the main text, different data sources report somewhat different trends in the out-of-pocket share. However, this calculation is not very sensitive to which data source is used.

Figure 4-45
**Average Nominal Premium for
 Employer-Based Family Coverage, 2010–2016**



Source: Kaiser Family Foundation and Health Research and Educational Trust, Employer Health Benefits Survey; CEA calculations.

that slower growth in health care costs is associated with faster employment growth (Baicker and Chandra 2006; Sood, Ghosh, and Escarce 2009).

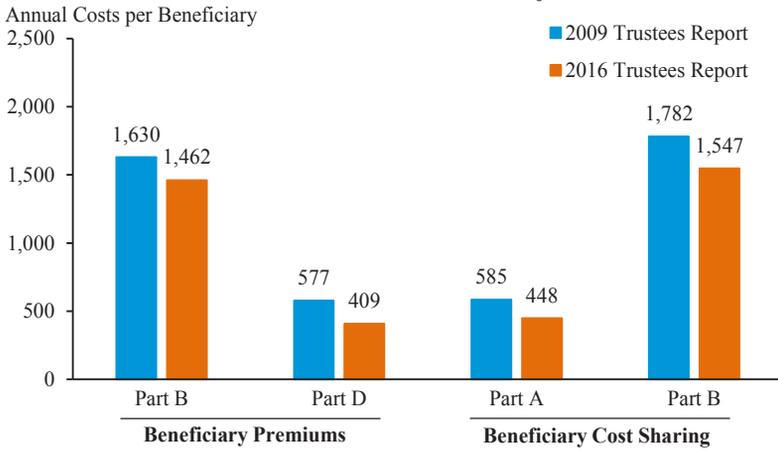
Lower Premiums and Out-of-Pocket Costs in Other Forms of Coverage

Slow growth in health care costs has also reduced premiums and out-of-pocket costs for people who get coverage outside the workplace. For example, due to recent years' slow health care cost growth, per beneficiary Medicare spending has come in well below earlier projections. As discussed in detail in the next section, this development is generating major savings for the Federal Government. However, this development is also reducing the premium and cost-sharing obligations borne by Medicare beneficiaries.

Focusing first on premiums, Medicare beneficiaries generally pay a premium to enroll in Medicare Part B, which covers outpatient services, and Medicare Part D, which coverage prescription medications.³⁶ The standard Medicare Part B premium is set to cover approximately 25 percent of program costs, while the base Medicare Part D premium is set to cover 25.5 percent of the cost of a standard plan design. Consequently, when per

³⁶ Very few beneficiaries pay a premium to enroll in Medicare Part A (which covers inpatient hospital services and certain other services) because almost all beneficiaries are entitled to coverage based on their prior work history.

Figure 4-46
**Premiums and Cost Sharing for Medicare Beneficiaries
 Under 2009 and 2016 Trustees Projections**



Note: Premium amounts reflect the standard Part B premium and the base Part D premium. The 2009 Trustees Projections were adjusted to reflect a scenario in which physician payment rates are held fixed in nominal terms, rather than being reduced sharply in accordance with the Sustainable Growth Rate formula then in law.

Source: Medicare Trustees; Centers for Medicare and Medicaid Services; CEA calculations.

beneficiary spending in those portions of the Medicare program falls, the Part B and Part D premiums fall roughly proportionally.

Indeed, 2016 premiums for both of these parts of Medicare are substantially below projections issued with the 2009 Trustees Report, the last report issued before the ACA became law, as illustrated in Figure 4-46. Whereas the standard monthly premium for Part B for 2016 was projected to be \$135.80 per month under the policies then in place, the actual 2016 Part B premium was \$121.80 per month, a reduction of 10 percent (Clemens, Lizonitz, and Murugesan 2009).^{37,38} Similarly, the base Medicare Part D premium was projected to be \$48.10 in the 2009 Trustees Report, but the actual

³⁷ This 2009 projection of the Part B premium cited here is from a scenario in which physician payment rates were assumed to remain fixed in nominal terms, rather than being cut sharply as prescribed under the Sustainable Growth Rate (SGR) formula then in law. Congress routinely blocked the SGR cuts, so this provides a more accurate picture of the spending trajectory under the policies in place in 2009. Projections for this alternative scenario are available in a supplemental memo published by the CMS Office of the Actuary alongside the 2009 Medicare Trustees Report (Clemens, Lizonitz, and Murugesan 2009).

³⁸ Most Medicare beneficiaries paid a lower Part B premium in 2016 because of the application of the Medicare program’s “hold harmless” provision, which limits the Part B premium increases for certain beneficiaries when there is a low Social Security cost-of-living adjustment. The higher premium is used here because it is more reflective of underlying program costs. These estimates are therefore conservative.

2016 Part D premium was \$34.10 per month, a reduction of 29 percent (Medicare Trustees 2009). For a typical beneficiary enrolled in both parts of the program, the annual premiums savings will total \$336 in 2016.

Medicare beneficiaries are also responsible for cost sharing when they access services. Enrollees receiving Part A services through traditional Medicare pay fixed dollar cost sharing amounts when they use specified services; these dollar amounts are updated annually based on changes in provider payment rates under Part A. For Part B, traditional Medicare enrollees are responsible for a deductible, which is updated annually based on the overall trend in Part B costs, and, once the deductible is met, 20 percent coinsurance for most services. Because of the structure of these cost sharing obligations, they vary roughly in proportion to average per beneficiary spending in these parts of the program.

The rightmost columns of Figure 4-46 reports estimates of the average Part A and Part B cost sharing obligations incurred by individuals enrolled in traditional Medicare under projections issued with the 2009 Trustees Report and the most recent estimates for 2016.³⁹ Cost sharing obligations through Medicare Part A in 2016 are on track to be 23 percent lower than projected in 2009 and cost sharing obligations through Medicare Part B are on track to be 13 percent lower. Across both Parts A and B, the total estimated reduction in average cost-sharing obligations in 2016 is \$372, bringing the combined reduction in premium and cost sharing obligations to \$708.

The incidence of the cost sharing savings reported in Figure 4-46 will vary across beneficiaries depending on whether they have supplemental coverage in addition to their Medicare coverage that covers all or part of their cost sharing. Roughly a fifth of traditional Medicare beneficiaries have no supplemental coverage and will benefit directly from reduced cost sharing

³⁹ To create these estimates, projections of Medicare's average cost of providing Part A and Part B coverage through traditional Medicare in 2016 were obtained from the 2009 and 2016 Medicare Trustees Reports, as were projections of the Part B deductible (Medicare Trustees 2009; Medicare Trustees 2016). For 2009, the estimates were then adjusted to reflect a scenario in which physician payment rates remained fixed in nominal terms, rather than being cut sharply as prescribed under the Sustainable Growth Rate formula then in law; projections for this alternative scenario were published by the CMS Office of the Actuary along with the 2009 Medicare Trustees Report (Clemens, Lizonitz, and Murugesan 2009). Congress routinely blocked the SGR cuts, so this provides a more accurate picture of the spending trajectory under the policies in place in 2009. To estimate Part A cost sharing obligations, it was then assumed that beneficiary cost sharing constituted 8 percent of the total cost of Part A services. This percentage was estimated using information included in CMS' annual announcement of Part A cost sharing parameters; this approach slightly understates actual cost sharing obligations because it does not account for cost sharing for some small categories of services (CMS 2016c). To estimate Part B cost sharing liabilities, it was assumed that all beneficiaries use enough services to pay their full deductible and pay 20 percent coinsurance for all other services; this approach very slightly overstates actual cost sharing obligations.

(KFF 2016). Another fifth of traditional Medicare beneficiaries purchase individual Medigap coverage and so will see a portion of the cost sharing savings through lower cost sharing and a portion through lower premiums for their Medigap plan. Around three-fifths of traditional Medicare beneficiaries receive supplemental coverage through a State Medicaid program or a former employer. In these cases, a portion of the cost sharing savings may accrue to the sponsor of that supplemental coverage, although the extent to which that occurs will depend on each individual's particular circumstances.

Medicare beneficiaries will see savings in scenarios beyond those considered here. Beneficiaries enrolled in Part D of Medicare are seeing substantial additional cost sharing savings due to the combination of the ACA's provisions closing the coverage gap, which were discussed earlier in this chapter, and lower-than-expected prescription drugs costs. Those amounts are not included here because cost sharing obligations vary among Part D plans, which makes quantifying these savings more challenging. Similarly, this analysis does not examine cost sharing obligations for Medicare Advantage enrollees because the structure of cost sharing obligations in Medicare Advantage varies from plan to plan. In general, however, lower health care costs will tend to reduce cost sharing obligations for Medicare Advantage enrollees as well.

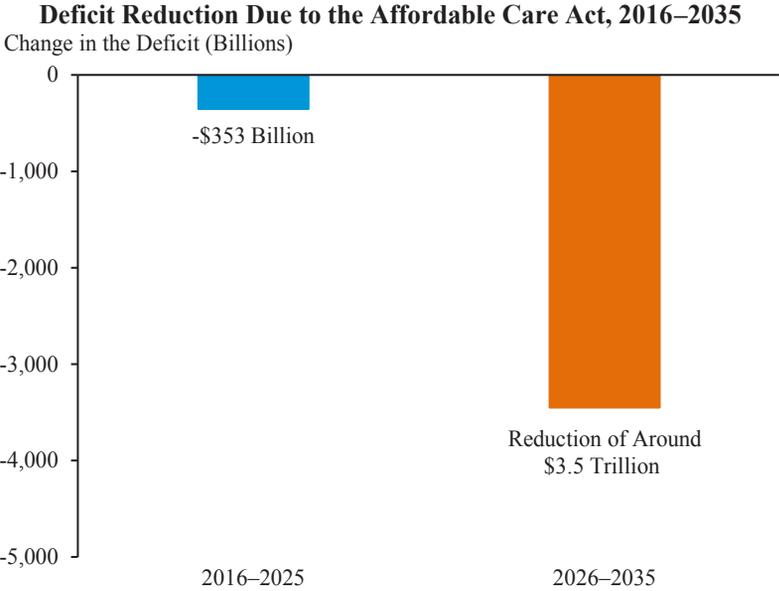
A Better Long-Term Fiscal Outlook

Federal and State governments finance a substantial fraction of health care spending in the United States, primarily through the Medicare and Medicaid programs, so reductions in health care costs also generate major savings in the public sector. Indeed, in large part because of the ACA's provisions reducing health care spending over the long term, the law has generated major improvements in the Federal Government's fiscal outlook, as depicted in Figure 4-47. CBO estimates imply that the ACA will reduce deficits by more than \$300 billion over the 2016-25 period (CBO 2015a).⁴⁰ Those savings grow rapidly over time and average 1 percent of GDP—around \$3.5 trillion—over the subsequent decade.

The slowdown in health care cost growth more broadly has led to additional large improvements in the fiscal outlook. Between August 2010 and August 2016, CBO reduced its projection of net Medicare spending

⁴⁰ CBO (2015a) estimates how *repealing* the ACA would affect the deficit. CBO notes that the deficit increase due to ACA repeal is not exactly equal to the deficit reduction due to the ACA's enactment. Most importantly, CBO assumes that, even if the ACA were repealed, reductions in Medicare payment rates that have already been implemented under the ACA would remain in place. CBO estimates that these payment rate reductions will generate savings of \$160 billion over the 2016-2025 period. Thus, the estimates presented in Figure 4-47 likely understate the deficit reduction attributable to the ACA's enactment.

Figure 4-47



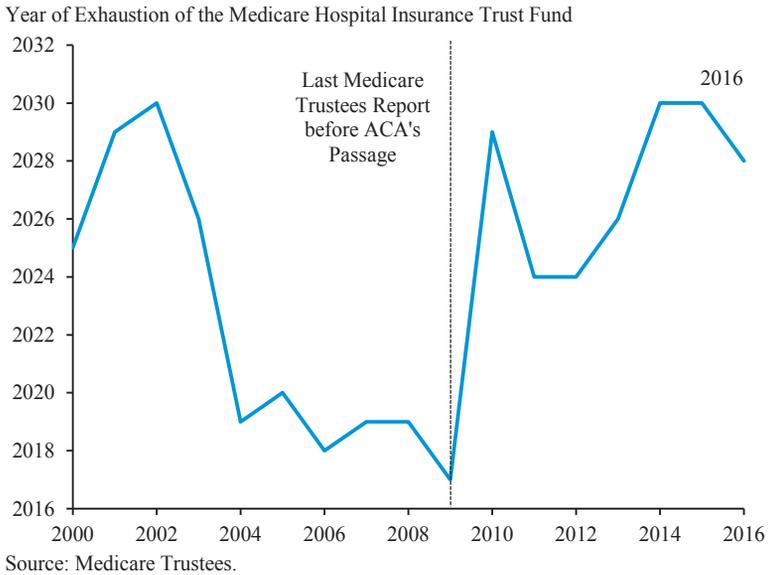
Note: CBO reports second-decade effects as a share of GDP. Amounts are converted to dollars using GDP projections from CBO's long-term budget projections.
 Source: Congressional Budget Office; CEA calculations.

under current policy in 2020 by \$125 billion or 15 percent (CBO 2010a; CBO 2016a).⁴¹ CBO has indicated that the reductions in its projections of Medicare spending in recent years largely reflect the persistent slow growth in health care costs (Elmendorf 2013). That \$125 billion reduction in projected spending constitutes 0.6 percent of CBO's current projection of 2020 GDP.

The combination of the deficit savings directly attributable to the ACA and the savings attributable to the broader slowdown in health care costs have greatly improved the United States fiscal outlook. In its most recent long-term budget projections, CBO estimated that the fiscal gap over the next 30 years—the amount of deficit reduction required to hold debt constant as a share of GDP over that period—was 1.7 percent of GDP (CBO 2016b). Without the ACA and the additional reductions in projected Medicare spending described above, the fiscal gap over this period would

⁴¹ For the purposes of this comparison, CBO's August 2010 baseline projections were adjusted to reflect the continuation of routine fixes to the Sustainable Growth Rate formula used to set Medicare physician payment rates. This adjustment was based upon the nominal freeze scenario reported in CBO's April 2010 Sustainable Growth Rate menu (CBO 2010b).

Figure 4-48
Forecasted Year of Medicare Trust Fund Exhaustion, 2000–2016



have been approximately 1.5 percent of GDP larger, nearly doubling the fiscal gap over that period.⁴²

These improvements in the long-run fiscal outlook will have important benefits for the economy. Reductions in long-term deficits increase national saving, which increases capital accumulation and reduces foreign borrowing, and thereby increase national income and living standards over time. Alternatively, reduced spending on health care could obviate the need to take other steps that would damage overall economic performance and well-being, such as reducing spending on infrastructure, education, or scientific research or increasing taxes on low- and middle-income families.

⁴² For this calculation, the ACA’s effect on the deficit was estimated based on CBO’s June 2015 estimate of ACA repeal (CBO 2015a). For 2016-2025, the year-by-year deficit effects reported in the CBO estimate were used directly. For subsequent years, the ACA was assumed to reduce the deficit by 1 percent of GDP, consistent with CBO’s statement that ACA repeal would increase the deficit by around 1 percent of GDP on average over the decade starting in 2026; this assumption is conservative since the ACA’s deficit reducing effects are likely to continue to grow beyond the second decade. The path of deficit savings associated with the reductions in projected Medicare spending from August 2010 to August 2016 reflects the difference in the year-by-year savings through 2020. Thereafter, these savings are assumed to grow at the rate projected for net Medicare spending in CBO’s most recent long-term budget projections (CBO 2016b). All calculations reported here use the economic assumptions reported in those long-term budget projections.

The reforms included in the ACA and the broader slowdown in health care cost growth have also improved the fiscal outlook for the Medicare program. In 2009, the year before the ACA became law, Medicare's Trustees forecast that the trust fund the Medicare Hospital Insurance Trust Fund would be exhausted in 2017. As of the Medicare Trustees most recent report, that date has been pushed back 11 years, to 2028, as depicted in Figure 4-48.

CONCLUSION

The evidence presented in this chapter demonstrates that the United States has made historic progress in expanding health insurance coverage and reforming the health care delivery system and that those gains are due in large part to the ACA and other actions implemented under this Administration. Recent years' reforms have also succeeded in creating the tools needed to support further progress on both of these dimensions. As the President has noted, however, fully seizing that opportunity will require continued thoughtful implementation by the Executive Branch, targeted legislative improvements by Congress, and constructive engagement by states and localities (Obama 2016). Whether and how policymakers rise to that challenge will have profound implications for the health care system and, by extension, Americans' health and economic well-being in the years to come.