Containing the Growth of Spending in the U.S. Health System

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Executive Summary

Health care costs have grown considerably faster than the economy for many years. Data from 2000 to 2010 show that national health expenditures (NHE) have increased at an average annual rate of 6.6 percent, while gross domestic product (GDP) has grown only 4.1 percent annually (table 1).[1] Although the rapid growth in U.S. health care spending and strategies for slowing it have become a focal point in debates over federal and state health care reform, strategies for slowing expenditure growth are more controversial, and evidence of their potential effectiveness is often elusive.

Research and analysis have focused in on four major and interrelated reasons for the persistent high spending growth: (1) overinsurance due to the tax treatment of employer-sponsored insurance, (2) the development and dispersion of medical technology, (3) an increasing prevalence of chronic disease, and (4) the consolidation of health care providers and insurers. All of these factors were addressed to some degree in the Affordable Care Act of 2010 (ACA). The law includes a new excise tax on high-cost health care plans, incentives to create competition among insurers in the health insurance exchanges, reductions in certain Medicare payments, and a broad range of pilot programs aimed at redesigning delivery systems, changing provider incentives, and improving care coordination (especially for patients with chronic conditions). The ACA also began to address the potential effects of medical malpractice on costs of care by providing grants for state demonstration projects to explore alternatives to settling malpractice cases, but many physicians would favor caps on the amount of noneconomic damages a jury can award.

There are approaches to cost containment that the ACA did not consider, as well as ways the provisions in the ACA could be strengthened. In this paper we consider a number of these options for containing the growth in U.S. health care spending and make our best estimates of possible savings.[2] Options include more aggressive limits on the tax exclusion for employer-based insurance, malpractice reform, targeted disease

prevention policies, care coordination for those with chronic illnesses, lowering spending at the end of life, bundled payment mechanisms, strengthening the health insurance exchanges, the introduction of a public plan option in the health insurance exchanges, rate setting focused on the health insurance exchange markets, and all-payer rate setting.

In order to estimate potential savings from these cost containment policies, it was necessary to generate current law baseline estimates of spending, by payer and by service for the 10-year period 2014–2023. The Office of the Actuary (OACT) at the Centers for Medicare and Medicaid Services (CMS) produced aggregate spending projections by payer, reflecting the impacts of the ACA. The actuaries projected spending through 2019 for the following payers: Medicare, Medicaid/ Children's Health Insurance Program (CHIP), employer-sponsored insurance (ESI), exchanges, and other private health insurance as well as other public, other private, and out-of-pocket (OOP) spending. In addition, since many of the cost containment policies being considered require targeted adjustments to spending by service category, we projected spending for hospitals, physicians, and prescription drugs. We also projected spending on "other services" and administrative costs. Because we use a 10-year window beginning in 2014 and CMS projected through 2019 only, we make additional projections for the years 2020–2023. For each payer (private, Medicaid, Medicare, and out-of-pocket) and each service (hospitals, physicians, drugs, other services, and administrative costs), we assume that the growth rate for 2019 continues annually through 2023. We then sum up all services and administrative costs, by payer, to get total expenditures for 2020–2023.

For each policy option, we generated estimates of the effects of the policy on the level and rate of growth of spending for targeted populations and services. Such estimates were based on the available literature as well as on, in some cases, reasonable and conservative assumptions. These effects were then applied to the baseline spending estimates to generate the expected

savings from each policy option. Although we have tried to provide a useful and defensible analytic framework, we recognize that others may interpret some parts of the literature differently and make different assumptions that would yield different results. We briefly describe the specific assumptions used in each section of the report. [Additional information is available on the Urban Institute website.](#)

Our results are summarized in table ES-1. The evidence suggests that all of the options we considered could produce some reduction in spending, but that the effects are likely to vary considerably. Policies such as trying to rationalize spending on end-of-life care or introduce bundled payments for selected episodes of acute care and a limited number of procedures would produce limited savings of roughly 0.3 percent between 2014 and 2023. Evidence suggests that end-of-life care can be improved substantially and yield cost savings. We considered outcomes and potential cost sa vings associated with palliative care use, earlier and improved end-of-life discussions with patients and their families, greater use of "ethics" consultations, and earlier referral for hospice use.[3] In terms of bundled payments, we used findings from the PROMETHEUS payment model to estimate the effects of requiring that bundled payments be used in Medicare, Medicaid, and exchange health plans and assumed that about 20 percent of other private health plans would adopt this payment approach.[4]

Policies related to improving care coordination for patients with chronic conditions, malpractice reforms, and promoting prevention might each cut spending by between 0.5 and 1.0 percent. Although many studies of care coordination have not been promising, evidence from recent demonstrations suggests that payment and care system changes that are well targeted and rely on nurse and primary care physician teams to engage patients and their families have more potential for cost savings.[5] In addition, if a reasonable number of Medicare-Medicaid dual eligibles could be placed in the more effective chronic care management programs, savings could be substantial. A key is to develop models to meet the needs of residents of nursing homes and facilities for the developmentally disabled or mentally ill.

Malpractice reforms would include tort law reforms, especially placing caps on noneconomic damages. Other tort reforms have not been proven to have an effect on malpractice premiums and would be unlikely to influence costs or physician behavior. Based on the available literature, we conclude that tort reform would have a direct effect on costs by lowering liability insurance premiums and an indirect effect by reducing unnecessary utilization that results from incentives for physicians to practice defensively. We acknowledge that most preventive efforts are not cost-effective but focus on three where the evidence is stronger: taxes on tobacco and on sweetened beverages, as well as asthma prevention programs targeted at children.

We considered additional options, but some of these could be difficult to implement. For example, based on our analysis of the ACA's conceptualization of the proposed health insurance exchanges, we felt there were a number of ways to strengthen them. These included standardizing benefits, requiring fixed contributions from employers buying coverage through the exchange, imposing minimum rebates from drug

Table ES-1. Total savings from all policy options

Policy Option	2014		2023		2014-2023	
	Billions	% of NHE	Billions	% of NHE	Billions	% of NHE
Capping the tax exclusion	-44.9	-1.6%	-73.0	-1.4%	-575.6	-1.5%
Malpractice reform	-2.7	-0.1%	-45.5	-0.9%	-283.3	-0.7%
Disease Prevention	-14.8	-0.5%	-31.4	-0.6%	-224.4	-0.6%
Care coordination	-9.0	-0.3%	-46.4	-0.9%	-331.3	-0.9%
End-of-life care	-7.8	-0.3%	-14.9	-0.3%	-110.6	-0.3%
Bundled payments	-1.9	-0.1%	-14.4	-0.3%	-97.9	-0.3%
Strengthening exchanges	-16.2	-0.6%	-46.6	-0.9%	-297.6	-0.8%
Public plan						
Level only	-17.4	-0.6%	-35.1	-0.7%	-266.6	-0.7%
Level and growth	-17.4	-0.6%	-54.4	-1.1%	-338.1	-0.9%
Exchange-based rate setting						
Level only	-23.2	-0.8%	-46.1	-0.9%	-352.8	-0.9%
Level and growth	-23.2	-0.8%	-65.1	-1.3%	-422.8	-1.1%
All-payer rate setting						
No rate increase for Medicaid	0.0	0.0%	-299.2	-5.9%	-1318.2	-3.5%
Rate increases for Medicaid	24.3	0.9%	-300.8	-5.9%	-1187.2	-3.1%

NHE = national health expenditures

manufacturers to plans for drugs covered under exchange plans, and negotiating with plans to drive down premiums. We estimate that if policy makers were able to adopt these potentially difficult efforts to strengthen the exchanges, the additional savings would be about 0.8 percent over our entire study period.

Although capping the tax exclusion for employer contributions for health insurance premiums is often viewed as a major lever for controlling spending, we estimate savings at only 1.5 percent over the study period, with the effect being fairly similar in each year. Most studies correctly show that this policy would dramatically lower tax expenditures and increase government revenues. However, few studies have traced out how this would affect actual health care spending. The basic assumption is that as the tax subsidy is reduced, people would choose policies with higher levels of cost-sharing and that this would result in lower levels of utilization. Our interpretation of a 2010 synthesis of the literature by Katherine Swartz is that higher cost-sharing would have little effect on the 50 percent of people with virtually no health care spending (who account for 3.0 percent of total spending) or on the top 10 percent of spenders with extreme health care needs (who account for 65 percent of total spending). If higher cost-sharing results in the remaining people reducing spending by 10 percent, and if we get half that amount of savings from people between the 90th and 95th percentiles of spenders, the overall effects of this policy on spending would be about a 1.5 percent reduction.

Because providers have gained significant market power in their negotiations with health plans, we also considered options that would increase demand-side market power. Each is a form of using rate setting to gain control over prices. One option would be to have exchanges negotiate directly with providers and require all plans in the exchange to pay no more than these negotiated rates. This approach would give all plans participating in the exchange the ability to control prices paid to providers. Another would be to establish a public plan and allow it to compete in exchanges. The public plan would drive competing private plans to negotiate more effectively. We estimate that the savings from having rate setting for all plans in the exchange (1.1 percent over the study period) would be slightly greater than would be achieved by including a public option (0.9 percent).

A second approach to rate setting would be to require that it apply to all payers in the health care system. This would be the most dramatic approach to cost containment considered in this study. Controlling all payers' rates would produce savings for public programs without running substantial risks related to creating access problems for beneficiaries or imposing cost shifting on private payers. This type of pricing system could eliminate, or at least reduce, potentially unwarranted differentials in prices across payers or different types of providers (e.g., across physician

specialties). We considered two different policy options. In one, Medicaid rates would gradually get closer to Medicare rates and increases in private rates would slow. In the other, Medicaid would increase initially to close much of the current price gap, and then all payers would increase at similar rates, with the rates varying by service. Savings over the 10-year period would be slightly greater under the first option (3.5 percent) compared to the second (3.1 percent). By 2023, both options would have lowered spending by 5.9 percent below the baseline projection. In either case, all-payer rate setting would produce the greatest reduction in health care spending of all the policies considered in this study.

A number of these policies are alternatives to one another (e.g., public option and exchange-based rate setting) and others may interact, so that these estimates should not be viewed as additive. Nonetheless, it seems possible to achieve savings of 5.0 to 10 percent over and above the savings that would occur if policies developed by the ACA were successful. This assumes that a combination of these additional strategies, including a rate setting option or a public plan plus some or all of the remaining approaches, would be implemented. Note that most of these policies by themselves would not necessarily achieve major reductions in spending. But a combination of several of these policies should lead the nation to a rate of growth closer to the increase in GDP.

Introduction

The growth in U.S. health care spending and strategies for slowing it have become a focal point in debates over federal and state health care reform. While the problem is easy to quantify, strategies for slowing ever-rising expenditures are more controversial, and evidence of their potential effectiveness is often elusive. In this paper we consider a number of options for containing the growth in health care spending in the United States and estimate possible savings.[6]

We begin by describing the problem and providing data on national health expenditures relative to gross domestic product (GDP) for the past decade, 2000–2010, as well as projections for the next decade. We then review the various cost containment provisions of the Affordable Care Act of 2010 (ACA) as well as a number of options that would go beyond the ACA. In both the past and coming decades, health care spending has grown and will grow significantly faster than growth in GDP, highlighting the widely held concerns with the current path of spending. While the ACA has been criticized for its lack of attention to cost containment, there are in fact a number of provisions that should have a positive effect on controlling the rate of growth in costs. These include the provisions that would expand competition within exchanges, the reductions in Medicare payments, and the excise tax on high-cost health insurance plans.

The primary focus of this paper is on additional strategies that could be implemented, either in conjunction with, or as expansions of those in the ACA. These include a cap on the tax exclusion for employer-based insurance, malpractice reforms, targeted disease prevention policies, a series of policies that would better coordinate care for the chronically ill and disabled, more options at the end of life, bundled payment mechanisms, policies to strengthen the health insurance exchanges, a public insurance plan option, using the exchange to negotiate rates with providers, and an all-payer rate setting system. The paper provides a consistent framework to analyze a broad array of options and makes explicit the research evidence and assumptions behind the estimates. We conclude that no individual policy by itself, pursued responsibly, is a game changer; rather, several, if not most, need to be adopted in order to lower health care spending and reduce its rate of growth to a rate closer to growth in the economy.

Section 1. The Problem

Health care costs have grown considerably faster than the economy for many years. Data from 2000 to 2010 show that national health expenditures (NHE) have increased at an average annual rate of 6.6 percent, while GDP has grown at 4.1 percent annually (table 1).[7] Some of this gap was caused by the slow growth in GDP from 2000 to 2003 and 2008 through 2010. In the years of stronger economic growth, the increase in national health expenditures still exceeded GDP growth, but by a smaller margin. Growth in health expenditures has slowed in the current recession but still exceeds GDP growth by a considerable margin.

Differences in spending growth vary across third party programs. Medicare spending increased by 8.3 percent between 2000 and 2009 (after removing the effect of the

Table 1. Historical and projected expenditures by insurance coverage, 2000–2010

	2000	2009	2010[3]	2000–2009	2000–2010
	#	#	#	Average Annual Growth Rate[4]	Average Annual Growth Rate[4]
NHE ($ billions)[1]	$1,378	$2,486	$2,600	6.8%	6.6%
Medicare ($ billions)[1]	$224	$502	$534	9.4%	9.1%[4]
Medicaid Spending for All Enrollees ($ billions)[2]	$171	$345	----	8.1%	----
Private Health Insurance ($ billions)[1]	$458	$801	$845	6.4%	6.3%
NHE Per Capita[1]	$4,878	$8,086	$8,389	5.8%	5.6%
Medicare Spending Per Enrollee[1]	$5,778	$11,039	----	7.5%	----
Medicaid Spending Per Enrollee[2]	$5,381	$7,356	----	3.5%	----
Private Health Insurance Premiums Per Enrollee[1]	$2,321	$4,237	----	6.9%	----
GDP ($ billions)[1]	$9,952	$14,119	$14,854	4.0%	4.1%
GDP Per Capita[1]	$35,166	$45,990	$47,915	3.0%	3.1%

1. Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group: https://www.cms.gov/NationalHealthExpendData/downloads/tables.pdf, https://www.cms.gov/NationalHealthExpendData/downloads/NHEProjections2009to2019.pdf. Figures represent calendar year estimates. "Per enrollee" includes primary policy holder plus dependents.

2. Sources: Urban Institute fiscal year estimates based on data from Medicaid Financial Management Reports (HCFA/CMS Form 64), Medicaid Statistical Information System (MSIS), and KCMU Medicaid enrollment data collected by Health Management Associates. Expenditures exclude payments made under Children's Health Insurance Program (CHIP), Medicare premiums paid by Medicaid for persons eligible for both programs, Disproportionate Share Hospital (DSH) payments, drug rebates, administrative costs, and accounting adjustments. Total spending reflects sums of spending by eligibility group, which is calculated by taking the 2000 MSIS spending level for each eligibility group and applying the corresponding growth rates. Medicaid expenditures from 2000–2007 have been adjusted to exclude estimated prescription drug spending for dual eligibles.

3. Projected estimates as of September 2010 based on the 2008 version of the National Health Expenditures released in January 2010.

4. The numbers reflect Medicare average annual spending growth rates, including the very large spending growth between 2005 and 2006 due to the shift of prescription drug costs from Medicaid to Medicare. Omitting the expansion to include drug coverage reduces spending growth by about one percentage point.

shift of prescription drugs from Medicare to Medicaid), while GDP grew at 4.0 percent. Part of the increase in Medicare spending growth was due to increased enrollment. Still, Medicare spending per enrollee increased by an average rate of 6.5 percent—considerably faster than national health expenditures per capita (5.8 percent) or GDP per capita (3.0 percent). Similarly, a large part of growth in Medicaid spending, which grew by 8.1 percent between 2000 and 2009, is attributable to enrollment growth. Spending per enrollee overall increased by only 3.5 percent (partially because of changes in the composition of the Medicaid population).[8] While Medicaid spending per enrollee increased more slowly than did national health expenditures per capita (5.8 percent), the growth was still faster than GDP per capita (3.0 percent). Private insurance premiums per insured person increased considerably faster (6.9 percent) than both national health expenditures per capita and GDP per capita, as well as growing faster than per enrollee spending in the public insurance programs.

National health expenditures, accounting for the effects of the ACA, are projected to grow from 17.5 percent of GDP in 2010 to 19.6 percent of GDP in 2019, with only a very small share of the increase due to the ACA.[9] National health expenditures are forecast to grow faster than GDP per capita well into the future—about 6.5 percent per year compared to about 5.1 percent per year, respectively (table 2).[10] Medicare's annual spending growth is projected to slow down to 5.8 percent because of health reform provisions that will lower costs and because of the influx of baby boomers during this period who are younger and healthier than current enrollees.[11] Enrollment will grow by an average of 2.9 percent per year because of the aging of the baby boomers into the program. (Medicare's spending growth (and national health expenditures) will actually be higher, assuming physician fees will be increased significantly as part of the fix to the sustainable growth rate.) Medicaid spending is projected to increase as well. It will have a large increase in 2014 because of health reform, but is projected to grow at about 7.0 percent per year once the reform is fully phased in.[12] Unlike the 8.6 percent growth rate shown in table 2, the 7.0 percent

growth rate does not include the impact of health reform expansion. Private expenditures are also expected to grow faster (6.3 percent per year) than GDP (5.1 percent per year).[13]

Thus, the increasing costs of health care, both in the public and private sectors, mean that health care is absorbing an increasing share of GDP and is projected to do so well into the future. These projections imply enormous pressure on the federal budget and the U.S. economy. An increasing share of the federal budget will go to support Medicare and Medicaid, in part because of the baby boom affecting Medicare and growing income inequality (increases in the number of low-income people) affecting Medicaid. Increased spending per enrollee, along with the enrollment growth in both programs, mean a rising share of the federal budget will go to support the two major health entitlement programs. In response, either non-health government spending will have to decline, taxes will have to increase, or the U.S. debt will grow. Given the need for revenue increases to solve the existing deficit problem, it is hard to foresee the public appetite for further tax increases to support Medicare and Medicaid over the long haul.

Similarly, rising private health insurance premiums will have adverse effects on wage growth and on the standard of living that individuals will be able to afford. The slower wage growth resulting from rising health care costs will lower the tax base that is available to support the federal budget. Chernew et al. have shown that health care spending growth in excess of GDP + 2.0 percent will eventually mean a decline in the share of national income that can be devoted to goods and services other than health.[14] Slowing health cost growth to GDP + 1.0 percent would mean that a higher and higher share of income growth will be devoted to health care, but the total amount available for non-health care spending will also increase. The increase in private health insurance premiums will mean that, without financial assistance, health insurance will become increasingly unaffordable for many Americans. In the context of the ACA, these levels of premium growth will mean that the cost of government subsidies will increase, making the coverage expansions due to the

Table 2. Projected expenditures by insurance coverage, 2010-2019

Expenditures in billions, coverage in millions, per capita spending in thousands	2010	2019	Average Annual Growth Rate
Total National Health Expenditures	2600.2	4571.5	6.5%
Per capita NHE	8.4	13.7	5.6%
Medicaid Expenditures	427.3	896.2	8.6%
Medicare Expenditures	534.4	891.4	5.8%
Private Expenditures	845.0	1467.2	6.3%
GDP	14853.8	23283	5.1%
Population (millions)	310	334.8	0.9%

Note: Expenditure and coverage estimates are from CMS Office of the Actuary September 2010, and reflect impact of ACA.

law increasingly difficult to maintain. In addition, over time, more individuals and families will be exempted from the requirement to obtain insurance coverage because they lack an available insurance option that is deemed to be affordable to them (i.e., less than 8.0 percent of family income). The more people not obtaining insurance coverage, the more difficult it will be to maintain the insurance market reforms designed to make coverage accessible for everyone, regardless of their health status.

Section 2. Causes of High Rates of Growth in Medical Spending

Why do health care costs continue to grow faster than the economy as a whole? We highlight four reasons that research and analysis have identified, all of which are interrelated in some respects. We discuss each in turn: overinsurance due to the tax treatment of employer-sponsored insurance, the development and dispersion of medical technology, changing prevalence of chronic disease, and the consolidation of health care providers.

Overinsurance Due to Tax Treatment of Employer-Sponsored Insurance

Some analysts and observers believe that health care expenditure growth can be tied to consumers spending too little of their own money for care, since many are shielded from the true cost of their care by health insurance. Relatedly, they feel that federal tax provisions are significant contributors to the problem of overinsurance.[15] Contributions to employer-sponsored insurance (ESI) are not taxed as income for workers receiving such benefits. As a result, one dollar in employer-based health insurance benefits is more valuable than a dollar of wages for those with a tax liability, and the value of that health insurance benefit increases with the taxpayer's marginal tax rate as well as with the premium paid for the coverage. In other words, the value of the tax exclusion is greatest for those with higher incomes, and is least for the lowest-income population. In addition, the value of the exclusion is greatest for those with the most expensive employer-based plans.

The structure of this tax benefit suggests that many, particularly those with higher incomes, will be inclined to want more of their employment compensation package through health insurance benefits than they would if ESI contributions were treated the same as cash wages. Such employees may prefer more benefits and coverage options with lower cost-sharing requirements (e.g., out-of-pocket maximums, deductibles, co-payments, and co-insurance) than they otherwise would. If this is the case, lower cost-sharing requirements will tend to increase covered individuals' use of medical services and increase costs, all else being equal. While there is no empirical evidence as to whether the tax treatment affects the level of spending or the rate of growth in spending, it is certainly plausible that both could be affected.

However, evidence suggests that the story is more complex. Typical cost-sharing requirements associated with employer-based coverage have climbed in recent years. Meanwhile, the rate of increase in health insurance premiums has continued at a relatively steady rate. This experience suggests that the desire for lower premiums has overtaken the tax-related incentives for highly comprehensive coverage, as employers provide less generous policies; it could still of course be true that cost-sharing in employer plans would be even greater were it not for the tax exemption. However, while cost-sharing has been increasing, the growth rate in health care spending continues unabated. For example, according to the Kaiser Family Foundation/Health Research and Educational Trust's employer health insurance survey, the share of covered workers enrolled in a plan with a general annual deductible of $1,000 or more for single coverage increased almost threefold between 2006 and 2010.[16] Average deductibles in preferred provider option (PPO) plans over the same period increased by about 45 percent. Shifts to increasing co-payments and co-insurance over this period parallel these changes. The employer-sponsored insurance market is therefore not characterized by increasingly comprehensive coverage, or even sustained levels of coverage. Instead, employers are shifting more of the medical financing burden onto the insured individuals themselves. This shifting financial burden may be reduced if workers are using less care as a result of cost-sharing increases. At the same time, as noted above, average employer-based insurance premiums have increased roughly 7.0 percent per year, and overall health care spending consistently outpaces income growth. This may be related to the fact that, even as cost-sharing increases, most expenditures are incurred by those with very high levels of health care spending, which exceed even the higher levels of deductibles associated with consumer-directed health care plans.[17]

Development and Dispersion of Medical Technology

There is strong agreement among empirical analysts that medical technology is the primary cause of the growth in health care spending.[18] This issue is not necessarily completely distinct, however, from concerns about cost-sharing limits, as insurance protection from the full costs of expensive technologies will tend to increase consumer demand for them. The diffusion of new technology (medical devices, procedures, and pharmaceuticals) increases costs through a number of pathways, as summarized by Chernew.[19] The first pathway is obviously the direct spending on new technologies. Additionally, new technologies affect spending through complementary services. This indirect spending occurs due to the utilization of older technologies that are necessary in order to take advantage of the new ones, to patients who would not have been treated at all absent the new technology, or to an increase in life spans resulting from the new technology, thereby leading to use of other medical services down the road. For example, better treatments for coronary artery disease may lead to more individuals

surviving long enough to develop and be treated for end-stage renal disease.[20] Some substitution of new technologies for older ones does occur, which can result in some cost offsets. However, the evidence is strong that the cost-increasing nature of new technologies far outweighs any savings from substitution effects.

Depending upon the approach taken, empirical work has suggested that anywhere from a quarter to 70 percent of real per capita medical cost growth in the past 50 years is attributable to technology. These studies[21] use a residual method, where the effect of measurable contributors to cost growth (e.g., population characteristics, the distribution of health insurance coverage status, inflation, income, health status) are accounted for, and the remaining increase in spending (i.e., the residual) is attributed to growth in technology.

Others have taken an affirmative or case study approach and directly analyzed the effect of particular technologies on health care spending growth.[22] Still others studied the growth in physician expenditures and found that spending growth and technological innovation were strongly correlated.[23] All the approaches confirm that advancing medical technology is a central cause of the growth in health spending.

While the evidence of technology's contribution to health care spending growth is compelling, today's political environment makes it difficult to develop broadly acceptable approaches to developing and implementing cost-effectiveness or comparative-effectiveness standards for new and existing medical practices. Even in situations where the scientific evidence is clear, discussion of tying insurance reimbursement decisions to anything outside of safety standards can evoke accusations of "death panels" and related hyperbole.

Changes in Chronic Disease Prevalence

The work of Thorpe and colleagues provides evidence that the declining underlying health of the population is contributing to health care cost growth.[24] The authors have provided evidence that it is the increase in the "prevalence of treated disease" as well as the rise in spending per treated case that is the most important determinant of the growth in private health care spending.[25] They cite in particular the rise in obesity, stress, and air pollution as contributing to the increased prevalence of various diseases. The clinical thresholds for diagnosing and treating diseases have also changed, so that specific diseases are more likely to be treated. They also acknowledge that the rise in treated cases has spurred new technologies that are associated with these trends (e.g., drugs to treat diabetes, hypertension, high cholesterol, and cancer among overweight and obese patients).

Among the Medicare population, Thorpe and Howard found an increase in the percentage of individuals with five or more chronic conditions, from 31 percent in 1987 to 50 percent in 2002.[26] In addition, the proportion of Medicare enrollees who were overweight or obese increased from 44 percent in 1987 to 57 percent in 2002; these populations were far more likely than others to have five or more chronic conditions. This contributed to higher expenditures; the share of Medicare spending attributable to obese or overweight persons increased from 39 percent in 1987 to 55 percent in 2002.

Insurer and Provider Consolidation

Another explanation for the rapid growth in health care costs, particularly in the past decade of slow economic growth, is the growing market consolidation in both insurer and provider markets.[27] The increasing concentration in the insurance and hospital industries has made these markets less competitive and thus more costly. Hospital systems, typically those with major teaching hospitals that dominate markets, become impossible for insurers to exclude from their networks, allowing those systems to demand higher payment rates. Insurers can often pass on the rising hospital costs to employers and individuals because there are few alternative insurers in many markets, and the consumers want plans that include the most prestigious providers. Many hospital systems with substantial market share have the power to determine the amounts that they will be paid by insurers.

Insurance markets have become increasingly consolidated in recent years. Robinson found that in 36 of the 50 states, three or fewer insurers accounted for 65 percent or more of the commercial market in 2003.[28] Another study found that 99 percent of the combined health maintenance organization (HMO) and PPO markets studied (313 metropolitan statistical areas and 43 states) were highly concentrated, according to Department of Justice/Federal Trade Commission standards, that is, using values of the Herfindahl-Hirschman Index.[29] One reason for the lack of competition is that entry into insurance markets is quite difficult. To be successful, insurers must be able to establish broad provider networks and at the same time be able to negotiate discounts with hospitals and physicians. Without substantial enrollment, it is difficult to obtain such discounts. Without discounted provider rates, it is hard to enter markets and expand market share.

Provider markets, particularly hospital markets, have also become increasingly concentrated in recent years. According to a 2006 study, 88 percent of large metropolitan areas are considered to have highly concentrated hospital markets.[30] A number of studies have shown that hospital rates are higher in more highly concentrated markets.[31] One study found that mergers between close competitors increase prices by as much as 40 percent, not only among merged hospitals, but also among their rivals in those markets.[32] Entry into the hospital market is very difficult as well. Markets differ, however. In geographic areas where there is little concentration among insurers but concentrated hospital

markets, insurers have little ability to negotiate prices with hospitals. A dominant insurer should do better in obtaining discounts from hospitals. But it can still have difficulty negotiating with dominant "must-have" hospital systems. In some markets, dominant insurers have no incentive to be aggressive negotiators because they have no significant competitors. Employers care about the cost of insurance but workers also want broad networks, reducing the leverage of insurers. Small insurers lack bargaining power with providers and thus cannot compete with larger insurers on premiums. Finally, there is no real competition in many hospital markets because smaller hospitals cannot challenge the dominant system on the range of available services, such as new technologies.

The lack of effective competition and the lack of market power on the demand side have contributed to health care costs growing considerably faster than growth in the economy. One central explanation for rising health care costs has been that people face too little cost-sharing, in part because of tax benefits. But as we argue above, cost-sharing has increased dramatically in recent years with little apparent effect on cost growth. The larger problem has become the health care system's lack of demand-side power to balance the strength on the supply side. The problem can be addressed in a number of ways, but not without a consensus that the system needs to be more heavily regulated. Some significant tools have been included in the ACA, but others could be used to strengthen the hand of consumers further.

The Contribution of Malpractice and Defensive Medicine

The risk of malpractice litigation and rising medical malpractice premiums have contributed to the belief that malpractice contributes greatly to the U.S. health care spending. There is considerable dispute about the role of malpractice in spending growth, and thus we do not include it among the major drivers. Mello et al. estimate that the medical liability system, including claims payment, administrative costs, and defensive medicine, account for 2.4 percent of health care spending.[33] It is clear that certain tort reforms have significant effects on awards and some effect on malpractice premiums. But their effects on overall spending and on growth in spending seems quite limited. The big unknown is how much defensive medicine, that is, extra testing and procedures to avoid malpractice suits, contributes to a higher level of costs. For example, it would have to be clear that the care that is provided "defensively" would not continue to be provided in the name of "good and careful" medicine, particularly in a fee-for-service world.

Section 3. The Affordable Care Act

The ACA includes a number of strategies intended to slow the growth rate of health care spending. These include incentives to create competition across insurers in the health insurance exchanges, reductions in certain Medicare payments, and a new excise tax on high-cost health care plans, among others.

Competition in Exchanges

Under the ACA, health insurance exchanges will be developed in each state to facilitate the purchase of private insurance coverage by nonelderly individuals/families and small employers (100 or fewer employees).[34] Among other roles, the exchanges will certify qualified health plans, contract with insurance carriers, determine eligibility for financial subsidies for exchange plans or Medicaid, distribute subsidies, provide consumer-friendly information to help purchasers compare plans, and facilitate enrollment. Qualified individuals with incomes below 400 percent of the federal poverty level (FPL) (generally, legal residents without employer-sponsored insurance offers and who are not eligible for public insurance programs) will be eligible for federally financed subsidies that lower the cost of purchasing nongroup health insurance in the exchange. The structure of the exchanges and the approach used to benchmark the amount of the premium subsidies should engender strong competitive pressures among insurers.

Insurers providing small group and nongroup coverage in or out of the exchanges will only be allowed to offer plans that fit into four tiers of actuarial value (AV):[35] bronze (60 percent AV), silver (70 percent AV), gold (80 percent AV), and platinum plans (90 percent AV)—with each level differing primarily on cost-sharing requirements, as all will be required to offer the essential benefits that will be defined by the Department of Health and Human Services.[36] Within each AV tier, multiple insurers can offer products. Subsidies will be tied to the premiums of the second-lowest-cost silver plan offered in the area. Individuals who want a silver plan with a premium in excess of this benchmark will have to pay the full marginal cost of such a plan. Those with incomes below 250 percent of the FPL will also qualify for federal cost-sharing subsidies.

In theory, requiring enrollees to pay the full difference between higher-cost plans and the benchmark plan should lead to strong competition among insurers. Insurers will compete on network adequacy, service, and especially price. There will be risk adjustment to compensate insurers who get a bad mix of risks. The structure generally meets the criteria for managed competition. Individuals can be expected to gravitate toward less expensive plans, those that have limited networks, those that are effective at managing care, and those using less costly providers. Individuals would also be expected to have plans with reasonably high deductibles and more cost-sharing. How much this would affect health care spending is discussed below. One limitation is described above—having large numbers of insurers is not necessarily a blessing in the health care market if this means they lack market power with respect to providers.[37] An additional problem with

competition in exchanges is that it is limited to the people who are enrolled in exchange plans. Of course, the plans outside the exchanges will to some degree be competing with the plans inside, and if the plans inside are able to control health care costs more successfully, more people will tend to gravitate toward purchasing coverage in the exchange.

Reduced variation in the types of plans offered in the small-group and nongroup markets and consumer information produced by exchanges to assist individuals and groups in becoming more effective purchasers will also increase competitive pressures in these markets. Currently, these markets are often characterized by tremendous variation in plan options but very limited information made available a priori to potential consumers about the coverage they may be purchasing. Combined with the mechanisms for carriers to avoid high-risk enrollees, carrier resources are often focused on risk selection as opposed to competition based on price and quality. The exchange structure and the insurance regulation reforms included in the ACA should serve to redirect carrier resources toward increasing the efficiency of providing care, thus lowering premium prices and increasing market share.

Medicare Payment Reductions

The second cost containment feature of the ACA is the reduction in annual updates for inpatient hospital, home health, skilled nursing facilities, hospice, and other Medicare providers; the inpatient updates being the most important. Actuaries from the Centers for Medicare and Medicaid Services (CMS) estimate that these cuts in spending will average almost 10 percent by 2019.[38] For many hospitals, the payment cuts will force reductions in costs; if hospitals are not able to shift costs onto private insurers, they will need to control spending.

Hospitals with significant market power, however, can probably shift costs onto private insurers and avoid the need to contain costs. The Medicare Payment Advisory Commission (MedPAC) recently produced an analysis that showed that in areas where insurers have more market power over hospitals, there is more financial pressure and hospital costs are lower, leading to positive Medicare operating margins.[39] They also found that where hospitals have strong market power relative to insurers, hospital costs are higher and Medicare margins are negative. Hospitals under financial pressure because they cannot shift costs to private payers tend to control their costs. Hospitals facing little demand-side market power have the ability to raise prices and obtain higher revenues, but they also have higher costs. The MedPAC results suggest that cost shifting can only occur where there are weak payers and strong providers. A recent study by Robinson essentially confirms the MedPAC results: In competitive provider markets, hospitals cannot cost shift and thus control costs, while the reverse is true in concentrated markets.[40] Another recent study also confirms the MedPAC findings, concluding that on average providers

shift 21 cents for each dollar lost on Medicare; this implies that they cannot or do not shift the other 79 cents.[41] Thus, the efforts of the ACA to reduce Medicare payments should reduce hospital costs in many markets, but not all.

Excise Tax on High-Cost Employer-Sponsored Insurance Plans

Beginning in 2018, the ACA will impose a new excise tax on employer-sponsored plans costing more than a threshold premium level. The intent of this provision is to reduce the incentive for employers to provide plans that are significantly more comprehensive than the typical employer-based insurance plan. This approach is an attempt to address the concerns described in the previous section, related to the perverse incentives associated with the income tax exemption for employer-based insurance that increases in value with premiums. The threshold premium level for single coverage will be $10,200 in 2018; the level for policies covering more than one person will be $27,500 that year.

The thresholds will be adjusted upward if premium growth in the Blue Cross Blue Shield standard option under the Federal Employees Health Benefits Plan grows faster than an average of about 5.6 percent per year between 2010 and 2018, essentially allowing for the possibility that employer-based premiums may rise faster than expected in the near term, making the established premium thresholds less reflective of relatively "high-cost plans." The thresholds will also be adjusted upward for employers with a workforce age and gender composition that would tend to make their health insurance premiums higher than the national average. The law also increases the thresholds for workers and retirees covered under employer plans in certain high-risk industries (e.g., police officers, firefighters, first responders, construction workers, agricultural workers, and others); their threshold for single coverage is increased by $1,650 and for other coverage by $3,450 in 2018. The threshold premium levels will increase each year by the consumer price index for urban consumers (CPI-U).[42]

The law imposes a 40 percent tax on the difference between the employer-sponsored insurance premium (total, including employer and employee paid portions) and the applicable threshold premium level. The amount of the tax will be computed by the insurance carriers and added into the premium paid by those purchasing the insurance, thereby increasing the purchase price of the coverage to which it applies.

The Congressional Budget Office (CBO) and the Joint Committee on Taxation (JCT) estimate that the excise tax will increase government revenue by $12 billion in 2018 and $20 billion in 2019, the two years of the provision's implementation in the 2010–2019 budget window.[43] The effect of the excise tax will grow rapidly in subsequent years. Previously, when analyzing an earlier but similar proposal, the JCT estimated that less than

20 percent of the revenue produced by such a provision would come from direct imposition of the tax on those with high-cost plans.[44] The remaining 80 percent of revenue results indirectly. Due to the presence of the new tax, employers currently providing high-cost plans to their employees would change the coverage provided, either by increasing cost-sharing requirements (deductibles, co-insurance, co-payments, out-of-pocket maximums) or decreasing covered benefits, thus lowering premiums below the threshold levels. The difference in premiums, previously untaxed contributions to employer plans, would be transferred into higher taxable wages, consistent with economic theory and empirical evidence.[45] The bulk of the revenue therefore results from the higher taxes workers will pay because of the shift in their compensation from health insurance benefits to wages that results from efforts to avoid paying the new excise tax.

The largest effect of the new excise tax, therefore, is predicted to be a shift in compensation away from health insurance benefits to wages as a consequence of some employers purchasing less comprehensive health insurance for their workers. This implies a consequent reduction in the utilization of health care services when these employees are faced with larger deductibles, co-payments, out-of-pocket maximums, and possibly fewer covered benefits as well.

The magnitude of the savings in health expenditures that will result from higher out-of-pocket costs is very difficult to quantify, even though there is an extensive literature related to the effects of cost-sharing on health expenditures. This literature has been summarized and analyzed most recently in a synthesis by Katherine Swartz.[46] The most comprehensive analyses of the effects of cost-sharing on spending were done using the results of the Rand Health Insurance Experiment (HIE) in the 1970s.[47] While the structure of health insurance policies and the patterns of use and spending in health care have changed significantly since then, those studies are still instructive. HIE researchers found that higher cost-sharing does reduce health care utilization, but only patient-initiated health care spending. Once a patient was under the care of a physician, the use of medical care did not vary as a function of cost-sharing, suggesting that the physician was directing medical use decisions at that point, not the patient.

Thus, those least likely to be involved in the health care system—those with the lowest health care needs—will be most likely to be affected by increased cost-sharing. Given the strongly skewed distribution of health care spending, with 65 percent of total spending accounted for by only 10 percent of the population,[48] significant health savings will not be achieved unless the highest spenders are affected as well. Assuming higher spenders are relatively unaffected, because they are likely seriously ill or have most of their expenditures above out-of-pocket caps in insurance plans, savings from the rest of the population should occur, but will be relatively small in the aggregate.

More recent studies have found that reductions in certain types of care, for example physician visits and prescription drugs, achieved by increased cost-sharing for particular medical services, could lead to increased costs.[49] If patients respond to increased cost-sharing for some services by substituting other services or delaying care until the necessary services are more costly, increased cost-sharing may not decrease overall health care spending. Because cost-sharing as currently used is not well targeted to unnecessary as opposed to necessary care, across-the-board increases in cost-sharing may have particularly significant implications for health outcomes for those with chronic illnesses and the low-income population. Taken together, the magnitude of the effects of the high-cost plan tax on total health care spending is difficult to quantify.

Other Provisions

There are a number of other provisions in the ACA that have the potential to contain costs.[50] The ACA authorizes the establishment of a nonprofit corporation, the Patient-Centered Outcomes Research Institute, to conduct and broadly disseminate comparative-effectiveness research. This research effort is intended to inform "patients, clinicians, purchasers, and policy-makers in making informed health decisions" regarding relative health outcomes, clinical effectiveness, and appropriateness of medical treatments and services. The law outlines the factors for the new Institute to use in setting research priorities, including disease incidence, prevalence, and burden in the United States (particularly emphasizing chronic conditions; gaps in evidence; practice variations and health disparities; potential for improving patient health, well-being, and the quality of care; and the effect on national health expenditures).

The law allows for the research produced by the Institute to be used in making coverage, reimbursement, and incentive decisions under the Medicare program, although a number of safeguards are put in place. For example, the Secretary of Health and Human Services (HHS) is prohibited from denying coverage of services or items "solely on the basis of comparative clinical effectiveness research," and the law emphasizes that the research findings are not to be construed as mandates for coverage and reimbursement decisions. Moreover, the analytical information collected by the Institute may not be used for Medicare reimbursement and coverage decisions "in a manner that treats extending the life of an elderly, disabled, or terminally ill individual as of lower value than extending the life of an individual who is younger, nondisabled, or not terminally ill."

Another provision establishes an Independent Payment Advisory Board (IPAB) that would make recommendations for payment cuts if Medicare expenditures grow at a high rate. There are limits on the policies and providers it can affect. For example, it may not recommend policies that would change eligibility and

beneficiary cost sharing or increase revenues. In addition hospitals and hospices could not be affected until 2020. The ACA allows for the establishment of Accountable Care Organizations, which would be designed to take responsibility for care of patients, coordinate care, and improve efficiency. There are provisions to reduce payments to hospitals with high levels of readmissions and to develop a national pilot program to create bundled payments for all or most acute care services associated with a hospital episode. Finally, the ACA creates a new office to improve the coordination of care between Medicare and Medicaid for dual eligibles, a population that accounts for about 15 percent of U.S. health spending. The CBO attributed little savings to these proposals because of the absence of much research evidence. This of course is not the same as saying these policies will have no impact. Note that we do assume savings in some cases.

Section 4. What's Left

While the ACA includes a number of strategies aimed at reducing health care spending, additional approaches are likely to be necessary over time. We discuss a number of options, including those most frequently raised in policy circles, and describe their potential for affecting cost growth. These include more aggressive limits on the tax exclusion for employer-based insurance, malpractice reform, care coordination for those with chronic illnesses, community-based disease prevention, bundled payment mechanisms, lowering spending at the end of life, strengthening the health insurance exchanges, introducing a public plan option in the health insurance exchanges, rate setting focused on the health insurance exchange markets, all-payer rate setting, the use of value-based insurance design, coverage policy, and fraud reduction.

Methods for Estimating Cost Containment Options

In order to estimate potential savings from a variety of cost containment policies, it was necessary to generate baseline spending estimates, by payer and by service, for the period 2014–2023. The Office of the Actuary (OACT) at CMS produced aggregate spending projections by payer, reflecting the impacts of the ACA. Spending is projected through 2019 for the following payers: Medicare, Medicaid/CHIP, ESI, exchanges, and other private health insurance, as well as other public, other private spending, and out-of-pocket (OOP) spending. These projections are used as an aggregate baseline for estimating potential savings from various policies. Many of the cost containment policies being considered, however, require targeted adjustments to spending by service category, including hospitals, physicians, and prescription drugs. The most recent

CMS estimates adjusted for the impact of the ACA do not include expenditure projections by service category, but its earlier versions did include such projections. In order to create a post-ACA baseline by payer and by service, we calculated the ratio of post-ACA

expenditures to pre-ACA expenditures for each payer and year from 2010 to 2019. We then used this ratio to adjust pre-ACA spending by payer and by service. This maintains the service-specific growth rates that existed pre-ACA, but adjusts spending to equal post-ACA totals. Payers on the pre-ACA NHE projections are limited to Medicare, Medicaid, private, and OOP, so the post-ACA estimates for ESI, exchanges, and other private health insurance are summed to calculate private insurance spending. Specific service estimates include hospital, physician, and drug spending. We also calculate spending on "other services" and administrative costs. The Medicare baseline does not assume a fix to physician payment rates, which will almost certainly occur; thus, our Medicare baseline may be slightly low.

Because we use a 10-year window beginning in 2014 and CMS projected through 2019 only, we make additional projections for the years 2020–2023. For each payer (private, Medicaid, Medicare, and OOP) and each service (hospitals, physicians, drugs, other services, and administrative costs), we assume that the growth rate for 2019 continues annually through 2023. We then sum up all services and administrative costs, by payer, to get total expenditures for 2020–2023.

For each policy option, we generated estimates of the effects of the policy on the level and/or growth rate of spending for targeted populations. Such estimates were based on the available literature as well as on, in some cases, reasonable and conservative assumptions. These effects were then applied to the baseline spending estimates to generate the expected savings from each policy option. The savings to Medicare of some policies may be too low because the Medicare baseline is likely understated, as discussed above. A brief description of the assumptions is provided in each section below, and additional details are available at the Urban Institute website.

Policy Options

Cap and Phase-Out Tax Exclusion for Employer-Based Insurance

As discussed in the previous section, the ACA does include changes that would impose federal income and social security taxes on portions of the premiums associated with high-cost employer health insurance plans. For years, however, economists and policy makers have discussed more dramatic changes to the tax treatment of employer sponsored plans— approaches that would generate more tax revenue and could have more significant effects on health care spending.

For example, some have advocated a complete repeal of the tax exclusion—often replacing it with individual tax credits for the purchase of private insurance—while others have suggested capping the exclusion at significantly lower levels than the ACA—often with the cap growing at rates slower than the trend in employer-

based insurance premiums. Alternative approaches could be designed to impose taxes on more purchasers of employer-based insurance, providing stronger incentives for workers to seek out lower-cost employer-based options. To the extent that these lower-cost plans achieve their savings by lowering utilization of health care through higher cost-sharing requirements, reduced benefits, tighter controls on utilization of services, or even lower payments to providers, such a policy could lead to lower overall spending on health care nationally.

Unfortunately, the empirical evidence on the effect of repealing or limiting the tax exclusion has been focused on the tax revenue implications or on the implications for the probability that an employer will offer health insurance to its employees. Estimates are not available for the effect on total health care spending or even health care spending by those affected by the tax. In one study, Clemans et al. estimate that eliminating the tax exclusion would have generated $240 billion in federal revenue (income and payroll taxes) in 2010, or $3.5 trillion over 10 years.[51] Alternatively, they estimate the revenue effects of capping the exclusion at different levels and indexing the cap using different rates of growth. For example, they find that capping the exclusion at the median premium level and increasing the cap by the growth in GDP would have generated an additional $17 billion in revenue in 2010, or $541 billion over 10 years. But they did not estimate the behavioral responses necessary to quantify the effect on health care expenditures, consistent with the approach taken in estimates by the CBO, the JCT,[52] and others.

So while such tax code changes are theoretically expected to reduce health care spending, at this time, we do not have estimates of the magnitude of such a change. As Swartz[53] explains in her synthesis of the literature on the effect of cost-sharing on health care spending, we should consider three segments of the population when identifying the potential for cost-sharing approaches to lower overall health care spending. The first group consists of the lowest-spending half of the population, which accounts for only 3.0 percent of total health spending. Increasing cost-sharing for this group may have some effect on lowering their spending, but because their share of spending is so low, decreasing their spending will have no discernible effect on total health care costs. The second group consists of the top 10 percent of spenders; their spending accounts for about 65 percent of total health care spending. In this group, 15 percent of costs were spent on those between the 90th and 95th percentiles and 50 percent on those in the 96th to 100th percentiles. Both populations have high medical needs, with medical decisions driven more by physicians than patients. Even with the higher deductibles and co-payments that are typical today, the vast majority of spending associated with this populations would occur once out-of-pocket maximums associated with health insurance apply, thus making their spending largely insensitive to price, particularly for the top 5 percent.

The third group, whose spending falls between the 50th and 90th percentiles of the health care spenders, are those who have the greatest potential to change their utilization of health care services due to less comprehensive policies. This group, together with the lowest-spending half of the population, accounts for roughly of 35 percent of total health care spending. We assumed that all those below the 90th percentile could be affected by a change in tax policy resulting in 10 percent savings on these individuals. We assumed that the change in tax policy could save 5.0 percent on those between the 90th and 95th percentiles. Despite the fact that this is an extremely high-spending group, we assumed that it is not possible to save on the top 5.0 percent. Achieving 10 percent savings would be equivalent to having a 25 percent increase in price because of capping the tax deduction and assuming a 0.4 percent price elasticity. In other words, we assume that a change in the tax code would be set such that people would respond by accepting policies that increase OOP costs by 25 percent. This would result in 10 percent savings. Alternatively, they could enroll in integrated health care systems that would have the same effect.

Table 3. Policy Option: Capping the tax exclusion

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2697.5	4989.4	37473.1
Change in total spending for all payers	-44.9	-73.0	-575.6
Savings as a % of baseline total spending for all payers	-1.6%	-1.4%	-1.5%
Change in spending for Medicare	0.0	0.0	0.0
Savings as a % of baseline spending for Medicare	0.0%	0.0%	0.0%
Change in spending for Medicaid	0.0	0.0	0.0
Savings as a % of baseline spending for Medicaid	0.0%	0.0%	0.0%
Change in spending for private insurance	-44.9	-73.0	-575.6
Savings as a % of baseline spending for private insurance	-3.9%	-3.7%	-3.7%

Note: This option assumes a savings of 10 percent on those below the 90th percentile, and a savings of 5 percent on those in the 91st to 95th percentiles.

Under these assumptions, health care expenditures would fall by $576 billion or 1.5 percent (table 3). This is relatively small in comparison to the impact on federal and state tax revenues of capping the tax exclusion. It is a surprisingly small effect because it affects only those with employer-sponsored insurance who are on balance relatively healthy. This estimate may be high because it may not be possible to save as much as 5.0 percent on those between the 90th and 95th percentiles. Further, it assumes that a 25 percent increase in price could be achieved on top of the impact of the tax on high cost plans that is incorporated in the baseline expenditures. It also does not factor in any impact of reductions in spending on health outcomes, which could result in higher long-term expenditures. On the other hand, we make no assumption that capping the tax exclusion would affect the growth rate of health spending.

Malpractice Reform

Medical malpractice is frequently cited as a major cause of high health care costs. As mentioned above, Mello et al. conclude that the medical liability system accounts for 2.4 percent of health care spending.[54] There are two mechanisms to achieve savings. The first is placing caps on noneconomic damages that will reduce malpractice premiums paid by physicians and hospitals and thus reduce charges for services. Other tort reforms have not been proven to have any effect on malpractice premiums.[55] The second is lowering the risk of malpractice suits to reduce the amount of defensive medicine and reduce unnecessary utilization, thereby reducing health care costs.

The evidence on the impact of tort reforms is somewhat mixed. There is evidence from some states where tort reforms in fact reduced malpractice claims, which in turn have reduced malpractice premiums paid by health care providers.[56] The biggest impact seems to come from caps on malpractice awards, particularly, awards for pain and suffering.[57] The CBO has estimated that a $250,000 cap on noneconomic damages would reduce physician malpractice premiums by 25 to 30 percent.[58]

The CBO has estimated that this would result in savings of about 0.3–0.4 percent of national health spending for 2007.[59]

The evidence on defensive medicine is much less clear. Many providers argue very strongly that malpractice liability fears are a major factor behind many diagnostic tests and other procedures. This may well be the case for certain specialties (e.g., cardiologists and cardiac surgeons, orthopedists, and obstetricians), but less of a factor for others. It is also not clear whether the tests and procedures that are now done for "defensive purposes" would not continue to be done by physicians simply because they provide assurance that diagnoses are accurate—in other words, simply because it is good conservative medicine. It is also true that these services can be quite profitable in a fee-for-service world. Estimates of state tort reforms on defensive medicine have varied. One study suggests savings of about 4.0 percent, primarily from cutting hospital spending.[60] Other studies find much smaller savings in the range of 0.0–0.27 percent of health spending.[61] Sloane and Chepke have estimated the cost of defensive medicine at about 1.0 percent of health spending.[62] Even if the impact of reform on defensive medicine is closer to 0.5 percent of total health spending, the savings coupled with savings from malpractice premiums and the related impact of defensive medicine on health care costs could result in savings of around 1.0 percent of national health expenditures.[63] The wild card here is the effect on defensive medicine. If it is as great as some physicians argue, savings could be higher, perhaps significantly.

Based on the available evidence, we assume savings from malpractice reform (caps on awards for non-economic damages) of 0.9 percent of national health expenditures (table 4). Because the effects of any reforms will not be fully realized immediately, we also assume a five-year phase-in period over which premiums and provider behavior will adjust. Under these assumptions, we estimate a savings of $2.7 billion in the first year and $45.5 billion when fully phased in 2023, for a total of $283.3 billion over 10 years, or 0.7 percent of national health expenditures (table 4).

Table 4. Policy Option: Malpractice reform

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2739.7	5016.9	37765.5
Change in total spending for all payers	-2.7	-45.5	-283.3
Savings as a % of baseline total spending for all payers	-0.1%	-0.9%	-0.7%
Change in spending for Medicare	-0.6	-10.7	-65.9
Savings as a % of baseline spending for Medicare	-0.1%	-0.9%	-0.7%
Change in spending for Medicaid	-0.7	-12.2	-72.2
Savings as a % of baseline spending for Medicaid	-0.1%	-0.9%	-0.7%
Change in private spending	-1.5	-22.6	-145.2
Savings as a % of baseline private spending	-0.1%	-0.9%	-0.7%

Notes: Savings are distributed across payers according to the baseline distribution of total spending. Private spending includes private insurance and OOP spending.

Disease Prevention

The ACA includes provisions supporting coverage of certain evidence-based preventive services that can be delivered by traditional providers and reimbursed like other clinical services, but there is no criterion that the services have expected cost savings. Many of the services recommended by the Task Force on Community Preventive Services are screening for the presence of disease risk factors or disease itself. The recommended screening tests have been shown to be effective in identifying cases early in the disease process, thereby improving the chances for preventing or curing the disease or for prolonging survival and improving quality of life. Two factors work against saving money, however. First, while the populations for which such services are covered are often limited by age and gender, the services are intended to be applied to a broad spectrum of the population, only a fraction of which will test positive for elevated disease risk. Even if the screening is inexpensive on a per-unit basis, the more people who receive it, the more expensive it is likely to be. Second, those who test positive typically receive intensive treatment to prevent the progression of disease, a cost that is attributable to the prevention intervention. To the extent that total lifetime costs of beginning treatment at a more advanced stage are greater than those of beginning at an earlier stage, the potential for cost savings is greater, but this is not always the case. Prevention services targeted at communicable diseases, whether through screening or vaccination, stand a greater chance of saving money, as the benefits of immunity can extend beyond the individual treated.

The options we describe here are in a different class of disease prevention activity from those addressed by the ACA. They are: increasing the federal excise tax on cigarettes, home-based asthma trigger reduction, and imposition of a tax on sweetened beverages. Based on a systematic review of the literature on their effectiveness, two of the interventions have been recommended by the Task Force, a panel of independent nonfederal public health and prevention experts appointed by the director of the Centers for Disease Control and Prevention.[64] The third has not undergone a review by the Task Force, but evidence assembled by researchers at the U.S. Department of Agriculture suggests price sensitivity in the consumption of sweetened beverages as well as effects on caloric balance that would result in weight reductions. All three options discussed here rely on a model developed by Urban Institute (UI) researchers who used the Medical Expenditure Panel Survey – Household Component (MEPS) to estimate the relationship between health care spending and behavioral, demographic, and disease characteristics and simulate the effects of changes in those characteristics.[65]

The cost savings of the tax approaches come from reductions in the prevalence of health problems through behavior modification (reductions in smoking and calorie intake) and the resulting decrease in the use of health services. Unique among the class of disease prevention interventions, however, the savings estimates are improved by assuming no intervention costs to the government. Tax costs are assumed to be simply transfers from consumers of tobacco and sweetened beverages to the representative taxpayer. This finding is consistent with CBO analyses that find prevention savings only in tax approaches. The savings from asthma trigger reduction result from the very targeted nature of the intervention to individuals with a high probability of elevated health care spending, combined with the evidence of effectiveness of the intervention for those receiving it.

Increasing the federal excise tax on cigarettes. The effectiveness of increased taxes for reducing smoking rests on the fundamental economic principle that increasing the price of a commodity will reduce demand for it.[66] Price responsiveness is measured by the price elasticity of demand, which is the percent change in demand for a 1.0 percent change in price. For normal goods, the elasticity will be negative in sign: An increase in price will reduce demand, and a reduction in price will increase demand. Evidence suggests that demand for tobacco products is normal but inelastic—that is, a 1.0 percent increase in price will reduce demand, but by less than 1.0 percent. Because of the well-known and documented relationship between smoking, health problems, and, through them, medical spending, reducing the proportion of smokers in the population can be expected to reduce medical spending per person.

The results presented here are based on simulated changes in initiation and continuation of smoking by age in response to an increase in cigarette prices.[67] In that simulation, we assumed a $1 increase in the federal excise tax and applied it to the population-weighted average consumer price (price plus all taxes), computed from existing detailed data on state prices and taxes. The average percentage change in price was about 20 percent. We similarly computed a population-weighted average prevalence of adult smoking as the base for the intervention effect. The assumed sizes of the prevalence responses by age to a 1.0 percent increase in price (-0.37 percent for persons ages 18–24, -0.25 percent for persons ages 25–39, and -0.006 percent for persons age 40 or older) were taken from the study containing the median effect among adults (-0.15 percent) cited in the Task Force review.

Based on the evidence regarding the relationship between duration of smoking and health effects, for the younger group, we assumed that quitting before age 25 has an impact similar to that of never initiating smoking. For this group, the adverse health and longevity outcomes related to smoking were many years away. Thus, lower medical spending resulting from reduced smoking initiation can be expected to be seen primarily in longer-run estimates, when younger cohorts reach age 40 or older. Some of the costs that may be avoided in the shorter run, such as excess spending associated with premature births to smoking mothers or the impact

of secondhand smoke on family members, are not captured by spending data for the sampled adult in the MEPS. We did not address such ancillary effects in the base model. Consequently, the bulk of health impacts and savings accounted for in the period analyzed in this report result from quitting among older smokers rather than the potentially larger impacts of reduced smoking initiation rates that would accrue farther in the future. The results therefore indicate a relatively modest savings of 0.07 percent of national health expenditures over a 10-year period.

Home-based asthma trigger reduction. The second option modeled is an approach recommended by the Task Force to reduce the incidence of unplanned health care utilization resulting from asthma attacks in children.[68] The Task Force found that "home-based multi-trigger, multicomponent interventions with a combination of minor or moderate environmental remediation with an education component provide good value for the money invested." These interventions aim to reduce exposure to multiple indoor asthma triggers (allergens and irritants) using home visits by trained personnel. The specific activities of the intervention depend on which triggers are found in the house. Most programs also include education or self-care training. "Savings from averted costs of asthma care" is cited as one basis for this judgment. The Task Force found insufficient evidence to recommend the approach for adults with asthma.

Based on the Task Force evidence, using MEPS data on children ages 3–17 with a diagnosis of asthma, we simulated a reduction in the number of unplanned asthma-related events in emergency departments, doctor's offices, clinics and outpatient departments, and in inpatient hospital stays. Consistent with the evidence reviewed by the Task Force, we assumed an average reduction of 0.57 such events per year for each child identified with moderate to severe asthma. Intervention costs are assumed to be $800 for initial intervention and $400 for follow-up every four years.

As in many of the studies included in the Task Force

review, we do not distinguish among types of unscheduled visits, but allow reductions in proportion to the occurrence of the events in the data. The MEPS data show that the cost of a visit to a clinic, outpatient department, or physician does not vary with the number of visits a child has in a year. In contrast, the cost of hospital stays varies substantially. There is no clear pattern associated with the hospital stays by the number of outpatient visits in the data. Further details of the modeling are described in a previous UI report.[69] The results indicate savings of approximately 0.03 percent of NHE over 10 years.

Imposition of a tax on sweetened beverages. Relying on economic logic similar to that described for tobacco taxation, the imposition of a tax on caloric sweetened beverages would be expected to decrease consumption of those beverages. A recent study by the Economic Research Service of the U.S. Department of Agriculture combined the results of the Nielsen Homescan study and the National Health and Nutrition Examination Surveys and found that a 20 percent tax-induced price increase could reduce daily caloric intake such that the prevalence of overweight among adults would be reduced by 4.5 percent and the prevalence of obesity by 3.0 percent.[70] Among children the "at risk of overweight," prevalence would decline by 4.7 percent, and the prevalence of overweight would be reduced by 2.9 percent. Based on these effect sizes, we used the UI model described above to simulate the effects of one-category shifts in weight class (e.g., among adults obese to overweight; overweight to normal weight) on the expected utilization of health services, and their resulting costs. The results indicate that the proposed tax increase could result in savings of 0.5 percent of national health expenditures over 10 years.

Taken together, the three interventions are estimated to save $14.8 billion in 2014 and $31.4 billion in 2023 (table 5). Over 10 years, savings of $224 billion, or 0.6 percent of NHE, could be realized. Savings would accrue to public and private payers alike, with Medicare and Medicaid showing savings of $34.4 billion and $124.6 billion, respectively, alongside private savings of $65.3 billion over the decade.

Table 5. Policy Option: Disease prevention

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2727.6	5031.1	37824.4
Change in total spending for all payers	-14.8	-31.4	-224.4
Savings as a % of baseline total spending for all payers	-0.5%	-0.6%	-0.6%
Change in spending for Medicare	-2.4	-4.8	-34.4
Savings as a % of baseline spending for Medicare	-0.4%	-0.4%	-0.4%
Change in spending for Medicaid	-7.5	-18.3	-124.6
Savings as a % of baseline spending for Medicaid	-1.1%	-1.3%	-1.3%
Change in private spending	-4.9	-8.3	-65.3
Savings as a % of baseline private spending	-0.3%	-0.3%	-0.3%

Notes: This includes savings from a targeted asthma intervention, a cigarette tax, and a sweetened beverage tax. Private spending includes private insurance and OOP spending.

Care Coordination

A very high share of health care spending in the United States is attributable to people with multiple chronic conditions. There are about 9.0 million people dually eligible for both Medicare and Medicaid, a large number of whom have multiple chronic conditions. We have estimated that the cost for Medicare/Medicaid dual eligibles was $304.5 billion in 2010—$164.7 billion for Medicare and $140.3 billion for Medicaid.[71] This is about 15 percent of total U.S. health care spending. There are also a large number of disabled individuals receiving Medicaid who are not dual eligible, whose expenditures are estimated at $116.5 billion in 2010.[72] There are also 2.3 million Medicare beneficiaries who are not dual eligible but who have five or more chronic conditions. They account for another $145.3 billion, of which $96.8 billion is paid by Medicare.[73] There are a large number of other individuals who have private insurance with five or more chronic conditions as well. In total, these individuals with disabilities and/or multiple chronic conditions account for about $635 billion in 2010, about 30 percent of personal health care spending.[74]

A number of these individuals suffer from a lack of care coordination. Many go to several different providers with little obvious coordination of their care. Moreover, the split of responsibility between Medicare and Medicaid adds to inefficiency and unnecessary spending.

There has been a history of efforts to improve disease and chronic care management in the fee-for-service world. The results of many studies of these initiatives have not been promising.[75] They generally incorporate efforts to teach chronic care patients self-management skills, but generally add a level of patient monitoring on top of the existing acute/long-term care system with no real change in the underlying incentives in that system. As a result, costs are higher, with little impact on efficiency in the provision of care.

More recently, there have been a number of approaches that appear likely to be more successful.[76] Payment and care system changes that rely on nurse and primary care physician teams that engage patients and their families seem to have more potential for cost savings. Randall Brown, using evidence from Medicare demonstration programs, argued that successful programs need to have the following characteristics: targeting interventions to those most likely to benefit, in-person contact, access to timely information on hospital admissions and emergency room visits, close interaction between care coordinators and primary care physicians, and emphasis on teaching self-management skills.[77] Studies of models employed by the Geisinger Health System, Intermountain Health Care Primary Care Medical Home model, and the Johns Hopkins' Guided Care model are providing evidence of significant reductions in emergency room visits, hospital admissions, and costs.

Other models of care would provide new incentives for primary care practices to manage the care of the

chronically ill by paying a certain amount per month depending on the complexity of the case. For example, payments can be set higher for those who use institutional and noninstitutional long-term care services. These payments would be significant, yet small in comparison to the costs incurred by these populations.

For dual eligibles, the lack of coordination between Medicare and Medicaid policies creates opportunities to cost shift between the programs in both directions because no one is accountable for overall cost and outcomes of care. In general, Medicare pays for acute care physician and hospital services and post-acute care nursing home and home health services. Most prescription drugs are covered separately under Medicare Part D. Medicaid pays for cost sharing with many Medicare services, but primarily provides long-term care benefits. These arrangements have created incentives to shift care across settings where a different payer is responsible.

Coordination between Medicare and Medicaid is essential. If a reasonable number of dual eligibles could be placed in effective chronic care management programs, savings could be substantial. Different models would need to be developed for nursing home residents and facilities for the developmentally disabled or mentally ill; those models would be different than models for the chronically ill who are not long-term care recipients. Developing many different models, creating the right incentives, and developing effective chronic care management programs are not small undertakings, but the potential for financial savings is substantial.

Estimating the cost savings that are possible from chronic care management programs is difficult given the variation in research findings. We assumed that two-thirds of dual-eligible long-term care users, half of the Medicare chronically ill and Medicaid disabled who are not long-term care users, and one-quarter of the privately insured in large and small firms would eventually be enrolled in chronic care management models. Based on the findings from the more recent studies cited above, we estimated savings of about 5.0 percent after management costs and incentive payments. The results show that if strong policies were introduced in 2014 and were fully phased in by 2016, they would achieve savings of about 0.9 percent of national health expenditures or $331.3 billion (table 6). Medicare would save $188.2 billion, or 2.1 percent, and Medicaid $112.6 billion, or 1.2 percent. Smaller savings would be achieved by private plans for the chronically ill simply because they have much healthier populations and we have assumed lower participation rates. A very high percentage of the savings would come from reductions in care provided to long-term care users; most of the savings would be in reducing acute care services provided to these populations, namely reduced hospitalizations, readmissions, and prescription drug expenditures.[78] These estimates should be considered an upper bound, with the lower bound probably closer to zero savings.

Table 6. Policy Option: Care coordination

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2733.4	5016.0	37717.5
Change in total spending for all payers	-9.0	-46.4	-331.3
Savings as a % of baseline total spending for all payers	-0.3%	-0.9%	-0.9%
Change in spending for Medicare	-5.1	-26.4	-188.2
Savings as a % of baseline spending for Medicare	-0.8%	-2.2%	-2.1%
Change in spending for Medicaid	-3.1	-15.7	-112.6
Savings as a % of baseline spending for Medicaid	-0.5%	-1.2%	-1.2%
Change in spending for private insurance	-0.8	-4.3	-30.4
Savings as a % of baseline spending for private insurance	-0.1%	-0.2%	-0.2%

Notes: In this option, private insurance savings include some OOP savings for Medicare and privately insured populations with five or more chronic conditions. Therefore, the savings as a percentage of baseline private insurance spending are somewhat overstated. The distribution of savings across payers is based on the following assumptions: (1) 70 percent of the savings on dual long-term care beneficiaries is Medicare, the remainder is Medicaid; (2) 80 percent of savings on dual beneficiaries with no long-term care is Medicare, the remainder is Medicaid; (3) savings on the nonduals is all Medicaid; (4) 67 percent of the Medicare chronically ill savings is federal, the remainder is private.

End-of-Life Care

Health care at the end of life is very expensive. There is an opportunity to reduce spending without having to deny care, even care that provides small benefit relative to costs. Between 27.2 and 30.6 percent of Medicare expenditures in a given year were for the 5.0 percent of beneficiaries who died during that year,[79] and this share of Medicare spending has been quite constant over a couple of decades.[80] One study found that spending for the last 60 days of life accounted for 52 percent and spending for the last 30 days accounted for 40 percent of total spending for the patient's last year of life.[81] About half of spending in the last month was for hospital care, and one in five patients die in an intensive care unit (ICU). Of those who die in an ICU, their average stay was about 13 days.[82]

Clearly, most of the spending for patients in their last months is inevitable and often desirable and appropriate. Spending is appropriately directed to patients who are seriously ill, only some of whom die. Indeed, studies that focus only on those who die often ignore the reality that other patients who might have been comparably sick but received high-intensity, "rescue" care did not die. Further, much of the end-of-life spending is not designed for rescue, but rather attempts to treat progressive, disabling symptoms that require some active medical intervention, including hospitalization and even intensive care in some situations.

Nevertheless, there is substantial and growing evidence that much end-of-life spending is not sought by patients and is counter to patients' and their families' expressed preferences.[83] End-of-life care is also often associated with worse outcomes in terms of quality of remaining life.[84] A recent Institute of Medicine (IOM) conference was devoted to the topic of the futility of very expensive, end-stage cancer chemotherapy and the various reasons for its proliferation, including reluctance of health professionals to undertake difficult discussions about terminating aggressive treatment and the

profitability of chemotherapy administration to oncologists.[85] The IOM conference emphasized approaches that would result in improved information to patients about prognosis and treatment options. Overall, there is evidence that patients with various terminal conditions may not be well informed about the costs and benefits of treatment, and that physicians may prescribe treatments known to be ineffective.[86] There are several potential options to reduce the excess costs of medical care at the end of life, while improving the quality of that care. Clearly, a move away from a health system dominated by single specialty practices and toward one centered on integrated delivery systems could provide the mix of professional skill sets and perspectives that would facilitate a more patient-centered approach to end-of-life care options.

But progress can be made even in the absence of a major reorganization of health care delivery. Currently, hospital palliative care teams and units have been shown to improve pain management and physical symptoms as well as family satisfaction with the care their loved one is receiving.[87] Although access to palliative care has increased substantially over recent years, its availability can be further encouraged through broader deployment, which can be promoted through basic reimbursement for palliative care activities. While hospice is covered by Medicare, there is evidence that it is more accessible in some geographic regions than others. In addition, there is significant evidence that hospice is brought into care too late to have its maximal benefit—with services often being initiated within the last few days of life.[88] Encouraging providers to discuss hospice earlier and working to standardize access geographically could increase use.

Several studies have examined the cost savings associated with palliative care use, earlier and improved end-of-life discussions with patients and their families, greater use of "ethics" consultations, and earlier referral for hospice use.[89] Studies have also found that the use

of hospice and other palliative care is not associated with shorter life expectancy, and is in some cases associated with longer survival times, suggesting that savings are not due to rationing of care.[90] Finally, reimbursement and aspects of practice, such as consent forms, should be altered to encourage physicians to discuss end-of-life care with patients earlier in the treatment process and to provide more forthcoming assessments of risks and benefits of continued treatment.

The last year of life costs represent more than 25 percent of Medicare spending. We estimate significant savings from modest approaches to alter clinical decisions for patients at the end of life. A 5.0 percent reduction in end-of-life costs would save Medicare 1.25 percent. This would amount to $110.6 billion over 10 years, or 0.3 percent of national health spending (table 7). There would likely be savings to Medicaid as well, which we do not include here. There are potential savings for younger patients as well, but these are probably much smaller—there are relatively fewer affected patients and an understandably greater willingness to spend aggressively on younger patients compared to what informed, aged Medicare patients want for themselves.

Bundled Payments

The current fragmented fee-for-service payment system could be replaced by a payment system designed to incentivize coordination of care across settings, thus decreasing costs and increasing quality of care. Bundled payments represent such an approach by replacing discrete payments for each service and provider with a global payment for all providers and services related to a particular episode or condition. In the context of acute and procedural episodes (e.g., hip replacement), a bundled payment would include reimbursement for an inpatient or outpatient episode and related care provided in other settings for a specified interval of time. A bundled payment for a chronic condition would cover all care related to that condition for a specified period (e.g., 12 months).

The Affordable Care Act established bundling pilot programs for Medicare, with the focus on 10 inpatient episodes to be determined by the Secretary of HHS. A Medicaid inpatient bundled payments pilot was also established, but it was limited to no more than eight states. Bundled payments are also part of proposed payment reforms in Massachusetts and have been proposed as options for "bending the curve" of health care costs.[91] Although private and public payers are experimenting with bundled payments (e.g., Geisinger Health System's ProvenCare initiative and Minnesota's "Baskets of Care"), their use has not been widespread.[92]

Bundled payments could allow hospitals and other providers more flexibility in allocating resources and give them opportunities to share savings from their efforts to reduce complications and readmissions. These shared savings create incentives for providers to coordinate patient care across settings. Bundled payments also increase the accountability of providers for the quality of care they provide by having them bear the risk of costs associated with complications.

There are a number of ways to structure and set the price levels for bundled payments. Medicare is testing one model in the Acute Care Episode (ACE) demonstration. The ACE demonstration provides a bundled payment, based on bids submitted by the participating sites, for hospital inpatient services during the acute care stay and concurrent physician services for a set of eight orthopedic and cardiovascular procedures. In addition, a payment equal to 50 percent of the Medicare savings (up to their annual Part B premium) is made to patients who choose to receive care from the participating providers. The ACE demonstration is being tested in a limited number of hospitals in four states, and only preliminary data are available, making it infeasible to extrapolate broader savings estimates at this time.

Another model being tested among private insurers is the PROMETHEUS Payment model.[93] PROMETHEUS has developed bundled payment models for five

Table 7. Policy Option: Reforming end-of-life care for Medicare beneficiaries

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2734.6	5047.5	37938.1
Change in total spending for all payers	-7.8	-14.9	-110.6
Savings as a % of baseline total spending for all payers	-0.3%	-0.3%	-0.3%
Change in spending for Medicare	-7.8	-14.9	-110.6
Savings as a % of baseline spending for Medicare	-1.3%	-1.3%	-1.3%
Change in spending for Medicaid	0.0	0.0	0.0
Savings as a % of baseline spending for Medicaid	0.0%	0.0%	0.0%
Change in spending for private insurance	0.0	0.0	0.0
Savings as a % of baseline spending for private insurance	0.0%	0.0%	0.0%

Note: This assumes that 25 percent of Medicare spending is on end-of-life care and that savings of 5 percent are possible, resulting in savings on Medicare spending of 1.25 percent.

inpatient procedural episodes, three acute medical episodes that involve a hospitalization, seven chronic conditions, and six outpatient procedural episodes. Implementation pilots are currently under way in six states. The model uses clinical guidelines and expert opinions to create a budget for an entire care episode, which includes all covered services bundled across all providers, adjusted for the severity and complexity of each patient's condition.[94] We base our estimates of the potential savings related to bundled payments on this approach. However, we do not consider the effects of bundled payments for chronic conditions, owing to the likely administrative complexity associated with that approach.

PROMETHEUS constructs bundled payments to cover the costs for all typical care, plus a percentage of potentially avoidable complication (PAC) costs (usually 50 percent) over the designated episode. All spending associated with an episode or condition is classified as typical (recommended by expert and clinical guidelines) or due to a PAC based on historical inpatient stay claims; outpatient facility, professional, and other ancillary claims; and pharmacy claims relevant to the episode during the episode time window. Providers can profit under the system by providing effective care that minimizes PAC costs and by providing typical care more efficiently.

To estimate potential systemwide savings from implementing bundled payments for these episodes, we base our per-episode savings estimates on the PROMETHEUS payment system. We estimate potential savings for the following episodes:

- Acute medical: acute myocardial infarction;
- Inpatient procedural: bariatric surgery, coronary artery bypass graft surgery, hip replacement, knee replacement, hysterectomy, and percutaneous coronary intervention (PCI, commonly referred to as coronary angioplasty); and
- Outpatient procedural: colonoscopy, gallbladder surgery, and knee arthroscopy.

Given the nature of the episodes, all savings are modeled for the adult population, age 18 and older. We model these savings under a scenario where acute and procedural bundled payments are the exclusive and required method for reimbursement for the selected episodes in Medicare, Medicaid, and private insurance plans in the exchange.[95] Outside the exchange, we assume that the potential savings from bundled payments would become apparent and, as such, 20 percent of private plan spending for these episodes would be covered by this payment approach. First, we estimate the per-patient savings that can be achieved from using a bundled payment for each episode. Second, we estimate the incidence of the episodes among each payer (i.e., the number of patients who have the episode in a given year). An episode with high per-patient savings but a relatively low incidence will generate a relatively small amount of savings to the entire system. On the other hand, an episode with modest per-patient savings and a high incidence in the population could generate sizable savings. We present savings estimates as if the potential savings are realized through a four-year transition. In 2014, we assume that only one-quarter of the potential savings would be realized, with an additional one-quarter added in each of the next three years. For the remaining six years of the study period, there would be full savings.

Table 8 presents the total estimated savings from implementation of bundled payments as modeled here. Spending for these episodes comprises a substantial share of national health expenditures (data not shown).[96] We estimate that 5.0 percent of the projected $3.4 trillion in national health expenditures in 2014 will be related to these episodes.[97] Thus, although we have focused only on a limited number of episodes, they are significant ones considering their substantial share of national health care spending. Savings from applying bundled payments vary across episodes, ranging from less than 5.0 percent per episode for hip and knee replacements, to nearly 12 percent per episode for PCI.

Based on our assumption of how acute and procedural bundled payments would be used by public and private payers, the system could save $1.9 billion in 2014 and

Table 8. Policy Option: Bundled payments

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2740.5	5048.0	37950.9
Change in total spending for all payers (savings)	-1.9	-14.4	-97.9
Savings as a % of baseline total spending for all payers	-0.1%	-0.3%	-0.3%
Change in spending for Medicare	-1.3	-9.3	-62.8
Savings as a % of baseline spending for Medicare	-0.2%	-0.8%	-0.7%
Change in spending for Medicaid	-0.2	-1.4	-9.6
Savings as a % of baseline spending for Medicaid	0.0%	-0.1%	-0.1%
Change in spending for private insurance	-0.5	-3.7	-25.5
Savings as a % of baseline spending for private insurance	0.0%	-0.2%	-0.2%

Note: Savings by payer are total savings for covered individuals and include OOP savings. Savings as a percentage of baseline spending by payer are therefore overstated.

$14.4 billion in 2023. Over this 10-year period, savings would amount to $97.9 billion or 0.3 percent of total spending. The majority of the savings comes from patients with Medicare ($62.8 billion) and private health insurance ($25.5 billion), with Medicaid savings comprising a smaller amount ($9.6 billion). The relatively small dollar savings from Medicaid primarily reflects the smaller number of adults with Medicaid relative to Medicare and private insurance (in 2009, about 14 million adults were enrolled in Medicaid, whereas 42 million had Medicare and 123 million had private insurance), but it also reflects the lower dollar savings per episode for Medicaid patients as a result of lower reimbursement rates in Medicaid.

These savings estimates are not large because we have excluded potential savings from bundled payment for chronic conditions. Chronic conditions have greater potential for savings because, if successful, bundled payments could lead to a reduction in costly hospitalizations. Estimates of savings from bundled payments presented elsewhere that included the effect of chronic condition bundles suggest that those savings could be five to six times larger than the estimates shown here.[98]

Strengthening the Exchanges

The ACA establishes insurance exchanges that will open in 2014 to individuals and small groups.[99] These exchanges have the potential to focus insurance competition on the provision of affordable, high-quality care and lower insurance-related overhead costs. If they meet expectations, insurance exchanges will make it much easier to compare insurance choices, sign up for coverage, and stay enrolled. Although the ACA establishes a solid foundation, several supporting policies would strengthen the exchanges' ability to inform choice, reduce complexity, and focus competition among health insurance plans, leading to improved access and quality and lower costs. We discuss four policies that could build on the ACA to strengthen exchanges.

Standardize benefits provided within exchange plan levels.
Providing standardized or similar plans within each tier of coverage (bronze, silver, gold, and platinum) offered by the exchange would make it easier for consumers to compare prices. The actuarial value standard combined with essential benefit minimums provided for within the law will reduce the variation in benefits/cost-sharing appreciably relative to today, but consumers are still likely to face more complex choices within a tier than they would find ideal. More standardization and thus increased comparability would reinforce incentives for insurers to price premiums as competitively as possible. We assume that such a policy will reduce exchange spending in 2014 by 5.0 percent.[100] It is likely that this policy would also reduce the rate of growth in spending in the exchange, but we do not assume that here. Under these assumptions, savings of approximately 0.5 percent of national health

expenditures over 10 years are expected from moving to such an approach.

Require small businesses participating in the exchange to make fixed contributions.
Employers buying coverage through the exchange could be required to make fixed contributions to their workers' health insurance coverage regardless of plan chosen, giving workers an incentive to choose lower-cost plans. Plans would have an incentive to keep premiums down in order to attract more market share. Such an approach is philosophically consistent with that taken in the law's provision of subsidies for modest-income households purchasing coverage on their own. Household subsidies are pegged to the premium of a benchmark plan,[101] and individuals choosing a plan with a premium higher than the benchmark are responsible for paying the full amount of the difference themselves. This policy design provides strong incentives for subsidized individuals and families to choose more moderately priced plans offered within a specified tier of coverage.

The economic literature clearly demonstrates that individuals are more price sensitive when choosing between multiple plan options than they are when deciding whether or not to purchase insurance coverage at all.[102] A 10 percent increase in premium might reduce the probability of purchasing insurance by only 5.0 percent, but a 10 percent differential in premiums between two plans might lead to as much as a 50 percent reduction in the high-cost plan's market share. If a more efficient plan with a lower premium growth rate is available in the market (with the growth rate lower because of more efficient use of technology, for example), a fixed contribution policy could reduce the time it would take for the small employer exchange market to reach an efficient growth rate. This would occur as workers moved from the higher-cost to lower-cost plans considerably more quickly. For instance, using an example provided by Nichols,[103] the per enrollee premium growth rate could be reduced by an average of 1.3 percentage points over the first 10 years of implementation. We assume a more conservative savings of 3.0 percent off the level of spending in the small employer exchanges in the first year, with no growth rate reduction. This leads to an estimated savings of 0.2 percent of national expenditures over 10 years.

Require drug manufacturers to pay a minimum rebate on brand-name drugs covered under exchange plans.
The CBO, in policy discussions related to Medicare Part D, has concluded that few if any savings would result from relying upon the Secretary of HHS to negotiate drug prices.[104] However, the CBO has determined that savings could result from requiring manufacturers to pay rebates on brand-name drugs covered by public insurance programs. The CBO analysis is based upon the experience of the Medicaid program's rebate policy, which requires two types of rebates: one computed on the average price that a manufacturer receives on retail

and mail-order pharmacy sales, and one on drug price increases that exceed inflation.

A similar approach could be applied to coverage obtained through the exchanges. While the rebate under the Medicare option would go to the federal government in its entirety, the option proposed here for the exchange would divide the rebate between the insurance plans participating in the exchange based upon relative enrollment with some adjustments for variation in drug benefit generosity. In a competitive market, these rebates should be passed back to consumers (individuals, employers, and government) in the form of lower premiums. Based on CBO estimates in the Medicaid context that suggest average annual savings on pharmaceutical spending of 12 to 13 percent, we assume an annual savings of 12 percent on drug spending within the exchange, resulting in savings of 0.2 percent of national health expenditures.

Negotiate with health insurers participating in the exchange.
The lack of competitive pressures caused by consolidation in insurance and provider markets has reduced choice and contributed to rising costs. Exchanges could use the power the legislation has provided them to exclude plans from participating based upon price or growth, negotiating aggressively with insurers. Because a considerable amount of data collection authority has been provided to the HHS Secretary under the bill, exchanges could be well informed of the underlying costs driving price increases, thereby making them effective negotiators or gateways to enforce premium policy review.

While the law already allows for such negotiations to take place, not all states are likely to pursue such a strategy aggressively. It is also unclear how aggressive a stance the federal government will take in exchanges not run by states. There is also a limit to the potential

savings from the exchange negotiation with insurers. While the exchange can exert pressure on insurers to operate more efficiently, the exchange cannot increase the insurers' negotiating leverage with providers. With the law already encouraging administrative efficiency through medical loss ratio requirements, we assume that such a policy has the potential to limit spending growth to the increase in GDP+1.0 percent.[105] More aggressive negotiation in the exchange results in a modest savings of approximately 0.2 percent of national health expenditures over 10 years.

Summary of options to strengthen the exchanges.
Each of these four policies offers opportunities to promote competition and reduce costs within the exchanges. While implementing multiple policies may increase cost savings, it is likely that there will be substantial overlap in the savings achieved by each policy. Thus, we suggest a potential savings estimate of 0.8 percent of national health expenditures, or nearly $300 billion, from implementing all four policies (table 9). This reflects a reduction of one-third off the sum of the savings from all four policies.

A Public Plan

During the health care reform debate, the notion of the public option became extremely controversial. Some saw the public option as a way to put cost containment pressure on the health care system, responding to the growing concentration in the provider and insurance markets noted above. For others, a public plan became a way to move toward a government-run health care system. In our view, the public option should be thought of as a means to increase competitive pressures on providers and insurers.[106]

A public option would likely have lower administrative costs than private plans and establish or negotiate provider payment rates at lower levels than private payers are able or willing to pay today. The public option

Table 9. Policy Option: Strengthening the exchanges

(All dollar amounts in billions)	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2726.2	5015.9	37751.2
Change in total spending for all payers	-16.2	-46.6	-297.6
Savings as a % of baseline total spending for all payers	-0.6%	-0.9%	-0.8%
Change in spending for Medicare	0.0	0.0	0.0
Savings as a % of baseline spending for Medicare	0.0%	0.0%	0.0%
Change in spending for Medicaid	0.0	0.0	0.0
Savings as a % of baseline spending for Medicaid	0.0%	0.0%	0.0%
Change in spending for private insurance	-16.2	-46.6	-297.6
Savings as a % of baseline spending for private insurance	-1.4%	-2.3%	-1.9%

Note: This reflects the sum of savings on implementing standardized benefit packages, a minimum rebate for drugs, a fixed contribution for small employers and aggressive negotiation with insurers, less 33 percent, for expected overlap in savings from the individual policies.

may also address some concerns that many individuals have with private insurers. The public plan we have envisioned would be designed to follow traditional Medicare principles in many respects, but would differ in other ways. The public option would be a national plan that would compete in health insurance exchanges. Policies employed by the public plan would be set at the national level but would be adjusted for local input prices. The plan would have to follow all insurance rules that any private plan within an exchange must follow. The level of the public plan's benefits and cost-sharing would be consistent with those of plans operated in exchanges. The public plan would have to offer options consistent with the actuarial values delineated for exchange plans, with their varying cost-sharing features. The risk pool for the new public plan would be completely distinct from the current Medicare program.

Essentially, the public plan would use Medicare payment systems, that is, the prospective payment system for hospital inpatient and outpatient care, skilled nursing facilities, home health care, and the physician fee schedule. In addition to attracting these new specialties, it would probably be necessary, at least at first, to require providers to participate in the public plan as a condition of participation in Medicare. Doing so would facilitate achieving sufficient provider participation. Of course, requiring providers to participate is not necessarily the same as having them serve a substantial number of enrollees. In order to attract participation by providers, payment rates would be set, at least initially, somewhat above Medicare rates. In other words, financial incentives would be important in getting providers to take all patients who seek care. We assume that MedPAC would provide oversight of payment policies and make recommendations about the level of payments for all providers. The public plan would essentially be a managed fee-for-service system, but probably have more active care management efforts than does the current Medicare program. For example, it should include and encourage the development of medical homes, particularly for the chronically ill. The public plan would benefit from lower administrative

costs, and would further benefit from lower payment rates than those now paid by commercial insurers. Although the rates would be higher than those of the current Medicare program, there is substantial room for these rates to be lower than current payment rates by commercial insurers to both hospitals and physicians. Based on data from MedPAC and other sources, we estimate that commercial insurers pay about 35 percent higher rates to hospitals and 23 percent higher rates to physicians.[107]

For purposes of estimating savings, we assumed that the public plan would pay physicians and hospitals half-way between Medicare and commercial rates and would save 5.0 percent through negotiations with prescription drug manufacturers. A public plan would also generate 5.0 percent savings on administrative costs. We made two alternative assumptions: (1) that the public plan affects the level of expenditures, and (2) that it not only affects the level of payment but also slows the growth in expenditures to the rate of growth in GDP+1.0 percent. The fees would be set so that, after an assumption about expected volume growth, increases in price and volume would achieve an expenditure target equal to the growth in GDP+1.0 percent. We also assumed that other plans in the exchanges would achieve savings by being able to bargain more effectively with providers. Plans with lower leverage over providers would be likely to fail. Stronger plans would be more successful and would be able to pay lower rates and offer lower premiums; part of this results from the fact that providers would be more willing negotiators because of fear of losing all private plans. We assumed that private plans would be able to achieve roughly 40 percent of the savings achieved by the public plan, in part because private plans with greater leverage would remain viable. Under the assumption that the public plan affects only the level of rates, savings over 10 years would be $266.6 billion, or 0.7 percent of national health expenditures (table 10). Savings are greater if we assume the public plan also affects the growth rates, that is, limits the growth in expenditures to the increase in GDP+1.0 percent. Under this assumption, spending in 2023 would fall by 1.1

Table 10. Policy Option: Public plan

(All dollar amounts in billions)	Level only			Level and Growth		
	2014	2023	2014-2023	2014	2023	2014-2023
Baseline total spending for all payers	2742.4	5062.4	38048.8	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2725.0	5027.4	37782.1	2725.0	5008.0	37710.6
Change in total spending for all payers	-17.4	-35.1	-266.6	-17.4	-54.4	-338.1
Savings as a % of baseline total spending for all payers	-0.6%	-0.7%	-0.7%	-0.6%	-1.1%	-0.9%
Change in spending for Medicare	0.0	0.0	0.0	0.0	0.0	0.0
Savings as a % of baseline spending for Medicare	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change in spending for Medicaid	0.0	0.0	0.0	0.0	0.0	0.0
Savings as a % of baseline spending for Medicaid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change in spending for private insurance	-17.4	-35.1	-266.6	-17.4	-54.4	-338.1
Savings as a % of baseline spending for private insurance	-1.5%	-1.8%	-1.7%	-1.5%	-2.7%	-2.2%

Note: These options do not include savings outside the exchange.

percent. Over the 2014 to 2023 period, savings would amount to $338.1 billion, or 0.9 percent of national health expenditures. Thus, the public option provides an opportunity for considerable savings relative to the baseline, even though it applies only to those obtaining coverage within the exchange.

Savings could be somewhat higher to the extent that plans outside the exchange would be able to reduce their payment rates by more aggressive negotiations with providers. Providers could find that the failure to negotiate with these plans could lead to more patients enrolling in the public option. We do not assume cost savings from non-exchange plans. It should also be noted that, assuming the public plan was one of the two lowest-cost plans in a market, the proposal would reduce the cost of government subsidies made to those purchasing coverage through the exchange.

Exchange-Based Rate Setting

An alternative to a public option would be to have exchanges themselves negotiate rates with providers. The plans participating in the exchanges would be required to pay no more than these negotiated rates, but they would be free to negotiate lower rates if possible. The underlying reason for exchange-based rate setting is the same as for the public option. Health care markets are by and large not competitive; they are not able to bring about adequate control over health care costs, with the concentration in the insurance and the hospital industries being a major contributor to health care cost growth.

Limiting rate setting to the exchange would likely be more politically acceptable than all-payer rate setting (discussed below). It would not affect Medicare and Medicaid rates but would place limits on rates charged by commercial plans participating in exchanges. Because premiums for the same plans offered in the small-group and nongroup markets outside the exchanges must charge the same premiums as inside, the negotiated rates would automatically apply to those plans as well. We believe that it would also be important for small-group and nongroup carriers selling coverage outside the exchange to be required to use the negotiated rates. Otherwise, providers would have more flexibility to avoid the lower rates, participating only with nonexchange plans.

Exchange-based rate setting would not benefit from the lower administrative costs of the public plan, but it could nonetheless achieve considerable savings. Savings would come about from reductions in commercial payment rates. There would be no offsetting increases in Medicare and Medicaid payments as in a system that attempted to rationalize rates across payers. Because the exchange would set payment rates to be used by all insurers, the latter would compete on service, utilization management, and possibly administrative costs. Delivery system reforms would be encouraged because plans that better rationalize the delivery of care could

pay providers better. Most likely the exchange would require each payer to adopt uniform payment systems, probably those used by Medicare. The rate setting system would pay rates above Medicare but below commercial plan rates; since, as discussed above, rates need to be sufficiently high to achieve enough active provider participation. The exchange might be able to achieve a somewhat lower rate of cost growth than exists today. Both the public option and exchange-based rate setting could have some effect on plans offered in the outside market. That is, the insurers offering outside the exchange, even in the large-group market, could end up losing market share to plans offered within the exchange. Thus, they might become tougher in negotiations with providers and achieve spillover cost containment effects.

An argument against exchange-based rate setting is that costs could be shifted to other payers. This issue was discussed above. The cost-shifting argument assumes that provider costs cannot be changed and that providers would not become more efficient in the face of financial pressure. In fact, providers that are not able to shift costs would have no choice but to reduce costs. The public option and exchange-based rate setting can achieve considerable savings, but much depends on how rates are set and whether the outside market is affected.

Our estimates indicate that exchange-based rate setting could save slightly more than the public option. It does not yield the administrative cost savings of the public plan, but all insurers participating in the small-group and nongroup markets would benefit from the lower rates. We again assume that rates are set to achieve expenditure targets, after factoring in expectations of volume growth. Under the assumption that the exchange-based rate setting system affects only the level of rates, savings in 2023 would be 0.9 percent of national health expenditures (table 11). Since we assumed the policy is implemented in 2014, savings over the 2014–2023 period would also be 0.9 percent of national health expenditures. Over the 10-year period, savings would amount to $352.8 billion. If the exchange-based rate setting system affects growth rates as well, holding expenditure increases to growth in GDP+1.0 percent, then savings would increase. In 2023, expenditures would be lower by 1.3 percent. Over the 10-year period, savings would amount to $422.8 billion, or 1.1 percent of national health expenditures. As with the public option, government subsidies would also fall.[108]

All-Payer Rate Setting
Probably the most dramatic approach to cost containment would be to establish an all-payer rate setting system. This could be done in a number of ways. It could be adopted nationally or just in states where health care costs are growing considerably faster than the increase in GDP. The argument for an all-payer rate setting system is that it is simply not possible to control the rate of growth in health expenditures by affecting

Table 11. Policy Option: Exchange-based rate setting

(All dollar amounts in billions)	Level only			Level and Growth		
	2014	**2023**	**2014-2023**	**2014**	**2023**	**2014-2023**
Baseline total spending for all payers	2742.4	5062.4	38048.8	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2719.2	5016.3	37696.0	2719.2	4997.3	37626.0
Change in total spending for all payers	-23.2	-46.1	-352.8	-23.2	-65.1	-422.8
Savings as a % of baseline total spending for all payers	-0.8%	-0.9%	-0.9%	-0.8%	-1.3%	-1.1%
Change in spending for Medicare	0.0	0.0	0.0	0.0	0.0	0.0
Savings as a % of baseline spending for Medicare	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change in spending for Medicaid	0.0	0.0	0.0	0.0	0.0	0.0
Savings as a % of baseline spending for Medicaid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change in spending for private insurance	-23.2	-46.1	-352.8	-23.2	-65.1	-422.8
Savings as a % of baseline spending for private insurance	-2.0%	-2.3%	-2.3%	-2.0%	-3.3%	-2.7%

Note: These options do not include savings outside the exchange.

only the payments under federal programs such as Medicare and Medicaid. Control over rates in these programs without control over the rest of the system would simply reduce access to federally financed programs. It could also invite cost shifting by strong providers in markets with weak payers. In an all-payer rate setting system, payments would be set to establish expenditure growth targets. Adoption of an all-payer rate setting system would be an acknowledgement that the degree of concentration in the insurance and hospital industries is incompatible with controlling health care costs, an argument outlined earlier.

The evidence from a number of states in the 1980s and 1990s suggests that all-payer rate setting systems were very successful in controlling the level of costs and rates of growth.[109] There were several reasons why states moved away from rate setting. First, states believed that managed care plans would be able to negotiate rates even below those negotiated by states and that they could control utilization as well. This movement, coupled with concerns over "capture" of the regulatory process in some states by the industry, led to the demise of all-payer rate setting, except in Maryland. Over time, aggressive managed care declined in popularity because of negative consumer reaction to utilization controls. But more recently, provider consolidation has made it more difficult for managed care and other insurance plans to negotiate rates.

An all-payer system also has the potential to address unjustified rate differentials among physician specialties in many markets. For example, physicians in various specialties have been able to increase fees charged to private insurers more rapidly than Medicare rates, especially in markets with more concentrated specialty groups. This has generally not been the case for primary care. As a result, there has been a widening gap between specialty and primary care payments, leading to a potential shortage of primary care physicians, as well as increasing payment differentials between private and Medicare payment rates for many specialists.

An all-payer rate setting system could also attempt to reduce payment differentials across payers. Rates do not have to be the same across payers, but greater equality than exists today is a goal. For example, Medicaid rates could be increased at the outset at somewhat faster rates than those of other payers, since the Medicaid payment levels are considerably lower than for other payers. Commercial insurance rates, on the other hand, could be reduced or at least set to grow at a slower rate. On balance, the rate of increase in rates among the major payers could lead to convergence of rates over time, but more important, reduce the overall rate of growth relative to what we observe today. The rate setting system would be used by all health plans paying some form of fee for service. Accountable care organizations (ACOs) and other risk-contracting provider groups would be exempt but would be affected. These organizations would now have to compete with insurers that are paying providers at lower rates. Targets that ACOs would face in order to identify savings would be lower because the expenditure base would be lower. Integrated systems would be more attractive to providers if their controls over volume permitted higher compensation.

A variety of adjustments to all payer rates would no doubt be necessary. These would include adjustments to teaching hospitals and for provider shortage areas, as well as for exogenous local cost differentials. There may also be a need to adjust for uncompensated care to the extent that these costs are not paid for through other policies. Physicians and hospitals would not be able to balance-bill, but some with particularly strong market power could decline to accept insurance. Those that declined insurance would bill their patients directly, and the patients could file claims with their insurers as they do today for providers not participating in their carrier's network. The extent to which providers could charge fees and rates beyond the all-payer rate-setting system would be limited by patients' ability and willingness to pay.

There was no all-payer rate setting system in the past, to our knowledge, that addressed rates paid to physicians. However, physician spending is a significant component of health care costs and growth, and extending such systems to cover physicians is an important component of an effective approach to cost containment. An all-payer rate setting system clearly would also have an interest in controlling prices paid for prescription drugs. Other providers, such as skilled nursing facilities, home health providers, medical device manufacturers, ambulatory surgery centers, and imaging centers, could all eventually be part of the overall system.

An all-payer rate setting system could have a substantial effect on cost growth. To the extent that we believe there is a need to control health care costs at a rate close to GDP growth, an all-payer system may well be essential. Setting rates paid by public programs alone will yield success in controlling the rates of growth in those programs. But those insured by public plans will have increasing problems gaining access to care if providers can refuse to participate in public programs because they have an uncontrolled private market to turn to. Joseph Newhouse reluctantly concluded in a recent article in *Health Affairs* that there may be no real alternative to all-payer rate setting.[110]

We produced estimates for two options for an all-payer rate setting system (table 12). Both will improve Medicaid rates relative to private and Medicare rates but still achieve additional savings relative to projected increases by slowing the rate of growth relative to the baseline. In both options, rate and fee increases will be set to achieve an expenditure target. In other words, the policy would project volume growth and set fees or rates to achieve the expenditure target. Actual expenditures could under- or overshoot the target. There would be no retroactive penalties as in Medicare's Sustainable Growth Rate policy—in part because it is not clear whether volume increases are caused by the lower fees or are exogenous. Under option A, hospital rates would

be set so that Medicaid expenditures would increase by GDP + 1.0 percent. Medicare and private insurance hospital expenditures would be limited to the growth in GDP. Growth rates for physician expenditures would be limited such that Medicare expenditures would grow by GDP + 1.0 percent and Medicaid expenditures would grow by GDP + 2.0 percent, while private expenditures would grow with GDP. Growth rates for drug expenditures for Medicare and private insurance would be limited to GDP + 1.0 percent. There would be no change in Medicaid drug pricing. This option would result in savings of $1.3 trillion. The private sector would see savings of $822.8 billion, or 5.3 percent, Medicare would achieve savings of $112.4 billion, or 1.3 percent, and Medicaid spending would fall by $383.1 billion, or 4.0 percent. (Medicare savings in both options would be greater if the Medicare baseline reflected the likely increase in physician fees.)

In the second option, Medicaid hospital rates would increase immediately by 5.0 percent and then increase over time such that Medicaid expenditures would grow with the increase in GDP. Medicare and private hospital rates would be set such that expenditures grew by the increase in GDP. Physician rates would increase for Medicaid by 18 percent to close some of the gap between Medicaid and Medicare/private rates. Rates would increase so that expenditures would grow at GDP + 1.0 percent. Physician rates for Medicare and private payers would be set such that after volume increases, expenditures would increase by GDP+1.0 percent and GDP, respectively. Prescription drug prices for Medicare and private insurance would be set to limit the growth in expenditures to GDP + 1.0 percent. Medicaid drug pricing would be unchanged. Under this option, expenditures would fall by $1.2 trillion relative to the baseline between 2014 and 2023, or by 3.1 percent. Private sector spending would fall by 5.3 percent, Medicare by 1.3 percent, and Medicaid by 2.6 percent. These options would reduce the growth in expenditures closer to the growth in GDP. Clearly, there would be

Table 12. Policy Option: All-payer rate setting

(All dollar amounts in billions)	Option A			Option B		
	2014	**2023**	**2014-2023**	**2014**	**2023**	**2014-2023**
Baseline total spending for all payers	2742.4	5062.4	38048.8	2742.4	5062.4	38048.8
Post-reform total spending for all payers	2742.4	4763.2	36730.6	2766.7	4761.7	36861.5
Change in total spending for all payers	0.0	-299.2	-1318.2	24.3	-300.8	-1187.2
Savings as a % of baseline total spending for all payers	0.0%	-5.9%	-3.5%	0.9%	-5.9%	-3.1%
Change in spending for Medicare	0.0	-25.3	-112.4	0.0	-25.3	-112.4
Savings as a % of baseline spending for Medicare	0.0%	-2.1%	-1.3%	0.0%	-2.1%	-1.3%
Change in spending for Medicaid	0.0	-92.0	-383.1	24.3	-93.6	-252.1
Savings as a % of baseline spending for Medicaid	0.0%	-6.8%	-4.0%	3.7%	-6.9%	-2.6%
Change in spending for private insurance	0.0	-181.9	-822.8	0.0	-181.9	-822.8
Savings as a % of baseline spending for private insurance	0.0%	-9.1%	-5.3%	0.0%	-9.1%	-5.3%

Notes:
Option A: Hospital growth rates for Medicaid limited to GDP+1, Medicare and private to GDP; physician growth rates for Medicare limited to GDP+1, private to GDP, and Medicaid to GDP+2; drug growth rates for Medicare and private limited to GDP+1, Medicaid no change.
Option B: Hospital rates increased for Medicaid (~5 percent) then grow at GDP, Medicare and private grow at GDP; physician rate increase for Medicaid (~18 percent), then grow at GDP+1, Medicare grows at GDP + 1, and private at GDP; drug growth rates for Medicare and private limited to GDP+1, Medicaid no change.

considerable political resistance to savings of this magnitude. Because nations tend to spend more on health care as their incomes grow, it is not necessarily desirable to hold health care cost growth to the growth in GDP, but at the moment we are vulnerable to rates of growth of GDP + 2.0 percent or more.

Other Policies

There a number of policies that we have not considered that could make some contribution to health care cost containment.

Value-based Insurance Design. There is a growing literature on the potential benefits of value-based insurance design (VBID), although much of the work in this area focuses on pharmaceuticals. Such an approach would require health insurance plans to justify cost-sharing and classification groups based on assessment of the relative effectiveness of treatment regimes. Aside from the political difficulties inherent in using comparative-effectiveness analyses in this way, producing the necessary information is costly and complex, and implementing such an approach would be administratively difficult. For example, some treatment regimes are effective for certain patients but not others, and associating appropriate cost-sharing levels with the relevant populations based upon their particular health circumstances is a very challenging prospect.

Under a model approach, high-value technologies and procedures would be associated with low or no cost-sharing, whereas low-value options would be associated with higher cost-sharing. While the philosophy behind the idea is very appealing—encourage compliance with high-value regimens while discouraging the use of no- or low-value options—the evidence on the cost-saving potential is not nearly as strong at present.

Most VBID initiatives have focused on lowering cost-sharing for high-value drugs without increasing it for low-value alternatives.[111] Even in the limited context of pharmaceuticals, full-fledged implementation of VBID is difficult, as it requires reliable cost-effectiveness and comparative effectiveness analysis on each class of drug to which it is applied, must take into account that certain drugs are more appropriate for the situations of certain patient subgroups than for others, and requires the development of sensitive standards of what is low value and what is high value. As a consequence, the number of drugs to which VBID can currently be applied is limited, administrative costs of doing much more may be significant, and consumer receptivity may be limited as well, if out-of-pocket costs for services identified as low value are increased substantially.

Coverage Policy. There is growing interest in developing a quasi-independent, possibly public-private partnership entity to perform comparative-effectiveness analysis not only to better inform clinicians, patients, and payers but also to help produce the evidence needed for making evidence-based, rather than political, decisions. Potential savings from more consistent reliance on

evidence of effectiveness and consideration of costs would apply not only to Medicare coverage of new technology but that of private payers as well. Indeed, it is hard for commercial insurers not to cover services for payment unless Medicare has come to the same decision. Commercial insurers and large self-funded companies have joined in calling for a focus on comparative effectiveness.

The need is evident from Medicare's experience in making coverage decisions. There are numerous examples of Medicare's attempt to limit coverage of new technologies that are overturned because of political pressure applied by Congress.[112] Thus, there are many approvals when the evidence on effectiveness is relatively weak.[113] Many of these coverage decisions have had major cost implications, and it is questionable that the higher expenditures represent good value for the program.[114]

Fraud and Improper Payments. In addition to the many drivers of high and rising health care costs that have already been discussed, improper payments, particularly by public health insurance programs, are often assumed to constitute a nontrivial proportion of health care spending. Improper payments encompass any payment that should not have been made or was made in the incorrect amount. This includes outright fraud as well as payment, billing, or coding errors.[115] Such payments can result, for example, when services are incorrectly coded by providers filing a claim, when insufficient documentation exists to support the claim, or when another insurer should be held responsible for the claim.[116] CMS reported an estimate for fiscal year 2010 of over $70 billion in improper payments for Medicare and the federal share of Medicaid. This includes $48 billion for Medicare and $22 billion for the federal share of the Medicaid program.[117] In 2009, overpayments of $23 billion were reported for Medicare fee-for-service, of which $5.4 billion, or 23 percent, was attributed to durable medical equipment (DME) contractors. DME contractors paid less than 4.0 percent of all claims, however, indicating a disproportionate share of improper payments for DME.[118]

CMS has recently enhanced its efforts to detect and correct improper payments through a variety of measures. Most important, the agency is attempting to shift its focus from recouping losses to preventing fraudulent and other payment errors before they occur. Enhanced screening of providers wishing to enroll in Medicare, Medicaid, or CHIP is an important element in preventing fraud. Under the ACA, providers presenting the highest risk of fraud, waste, or abuse must undergo a higher level of scrutiny. Suppliers of DME, such as motorized wheelchairs, as well as home health agencies are among the high-risk providers that will undergo additional screening under the new rules. In addition, Medicare reimbursement for many DME items has historically been far in excess of amounts paid by commercial insurers or those paying out of pocket, further increasing incentives to defraud the Medicare

program. To address this issue, CMS has implemented new supplier contracts and payment rates for DME that are expected to save more than $17 billion in Medicare expenditures over 10 years, according the CMS Office of the Actuary.[119] Additional avenues to reduce improper payments include, but are not limited to, improving prepayment claims review, focusing postpayment claims review on vulnerable areas, improving oversight of contractors, and developing robust processes to address service-specific errors that are identified.[120]

Conclusion

It is indisputable that health care spending that grows significantly faster than the growth in the economy is a serious national problem. We discussed various contributors to health care cost growth, including the tax subsidies that encourage the purchase of relatively comprehensive insurance; the introduction of new technologies; the onset of more chronic illness caused by obesity, stress, and air pollution; and increased provider consolidation. We argued that the Affordable Care Act contains promising provisions for controlling health care costs. It introduces several measures that would reform the health care delivery system and potentially make the system more efficient. These include the health insurance exchanges that are designed to intensify health insurer competition and will require individuals to pay the marginal cost of more expensive insurance choices. The ACA also includes reductions in Medicare payments to providers, the most important of which is hospitals. It imposes an excise tax on high-cost employer-sponsored insurance plans beginning in 2018, and includes a number of other provisions designed to reduce health care costs, such as a program for cost-effectiveness research, an independent advisory board to make recommendations for cost containment in Medicare, accountable care

organizations to improve the efficiency of care, provisions to reduce payments to hospitals with high levels of readmissions, and pilot programs to develop bundled payments for many acute care services. Any assumptions about cost savings from these initiatives are incorporated in the baseline.

We conclude that there a number of other polices that could be adopted in the effort to contain costs (table 13). The United States could cap and phase out the tax exclusion for employer-sponsored insurance, which would increase tax revenues but would also cut health care utilization. Capping the tax exclusion could yield savings of about 1.5 percent but would ultimately depend on how the cap was designed. The cap would replace the high-cost plan excise tax in the ACA. We discuss malpractice reform and estimate savings of 0.7 percent, though this estimate depends on the reform's effect on defensive medicine—an area where there is considerable disagreement. Disease prevention interventions are estimated to save 0.6 percent, with the bulk of those savings coming from a tax on sweetened beverages. We also discuss a range of policies that could improve the coordination of care for the disabled and chronically ill—populations that contribute greatly to U.S. health care spending. A successful care coordination program could potentially save about 1.0 percent of health spending. Improving end-of-life care for Medicare beneficiaries could save as much as 0.3 percent. Bundled payment mechanisms are also examined, and our estimates suggest potential savings of 0.3 percent from such policies.

Several policies that would aim to strengthen price competition in the health insurance exchanges are considered, and we estimate savings of approximately 0.8 percent. Two additional options are presented for improving efficiencies within exchanges. The first would be the introduction of a public plan that would compete

Table 13. Total savings from all policy options

Policy Option	2014		2023		2014-2023	
	Billions	% of NHE	Billions	% of NHE	Billions	% of NHE
Capping the tax exclusion	-44.9	-1.6%	-73.0	-1.4%	-575.6	-1.5%
Malpractice reform	-2.7	-0.1%	-45.5	-0.9%	-283.3	-0.7%
Disease prevention	-14.8	-0.5%	-31.4	-0.6%	-224.4	-0.6%
Care coordination	-9.0	-0.3%	-46.4	-0.9%	-331.3	-0.9%
End-of-life care	-7.8	-0.3%	-14.9	-0.3%	-110.6	-0.3%
Bundled payments	-1.9	-0.1%	-14.4	-0.3%	-97.9	-0.3%
Strengthening exchanges	-16.2	-0.6%	-46.6	-0.9%	-297.6	-0.8%
Public plan						
Level only	-17.4	-0.6%	-35.1	-0.7%	-266.6	-0.7%
Level and growth	-17.4	-0.6%	-54.4	-1.1%	-338.1	-0.9%
Exchange-based rate setting						
Level only	-23.2	-0.8%	-46.1	-0.9%	-352.8	-0.9%
Level and growth	-23.2	-0.8%	-65.1	-1.3%	-422.8	-1.1%
All-payer rate setting						
No rate increase for Medicaid	0.0	0.0%	-299.2	-5.9%	-1318.2	-3.5%
Rate increases for Medicaid	24.3	0.9%	-300.8	-5.9%	-1187.2	-3.1%

NHE = National health expenditures

within exchanges for covered lives. The public plan would pay providers at somewhat lower rates, have administrative efficiencies, and could force the rest of the system to respond by becoming more aggressive in its negotiations with providers. An alternative would be to have the exchanges negotiate rates on behalf of all private insurers that participate in the exchanges and in the non-exchange small-group and nongroup insurance markets. A public plan or exchange-based rate setting that affected both the level and growth in rates would save about 0.9 percent and 1.1 percent, respectively, and reduce subsidies in the ACA by an even higher percentage.

A final alternative that would go beyond setting rates within the exchanges would be an all-payer rate setting system. It would apply to all payers and many providers, particularly hospitals, physicians, and drug manufacturers. There is evidence from the 1980s and 1990s that all-payer rate setting can be successful. This is the most politically controversial of all the options that we examine, but could probably have the greatest effect on costs. An argument in its favor is that controlling provider payments of just those insurers participating in

public programs can lead to serious access problems for their beneficiaries. An all-payer rate setting system would ensure that rates were controlled for all Americans, no matter how they received insurance. We estimate that an all-payer rate setting system could achieve savings of about 3.0 percent of national health expenditures, but much would depend on how aggressively it was designed and implemented.

Several of these policies are alternatives to one another (e.g., public option and exchange-based rate setting), and others interact so that estimates are not additive. Nonetheless, it seems possible to achieve savings of 5.0 to 10 percent over and above the savings that would occur if policies developed by the ACA were successful. This assumes a combination of these additional strategies that included either a rate-setting option or a public plan, plus the remaining approaches we have discussed. All of these policies might also reduce the rate of growth in spending, thus increasing the effect relative to projected spending. Note that none of these policies alone, each of which would be a major change, would achieve major reductions in spending. But a combination of several of these policies should lead the nation to a rate of growth closer to the increase in GDP.

Endnotes

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95 Implicit in this is the assumption that providers would agree to accept bundled payments for the patients to whom they apply or that they would be required to do so. Providers may resist payments at the levels we consider here and, as such, payment rates would need to be increased to preserve access. This would mean that potential savings would be reduced and that the estimates we present below would need to be viewed as an upper bound on the potential savings from acute and procedural bundled payments.

96 K. Stockley and S. Zuckerman, Potential Savings from National Implementation of Bundled Payments, Urban Institute Working Paper (Washington, DC: The Urban Institute, March 2011).

97 The baseline spending estimates for the episodes only include spending by adults with private insurance, Medicare, and Medicaid. Spending by adults covered under other programs, or who are uninsured, is not included. Baseline national health expenditures include spending from all sources, as derived from Foster, Estimated Financial Effects of the 'Patient Protection and Affordable Care Act,' as Amended.

98 Stockley and Zuckerman, Potential Savings from National Implementation of Bundled Payments.

99 States have the option to open exchanges to groups with more than 100 employees beginning in 2017.

100 We assume that these savings will only apply to exchange spending in more competitive health insurance markets.

101 The benchmark is defined in the law as the second-lowest-cost silver plan premium (either single or family coverage as appropriate) available in the applicable exchange for a particular enrollee.

102 See Len M. Nichols, "Can Defined Contribution Health Insurance Reduce Cost Growth?" (Washington, DC: Centers for Studying Health System Change, June 2002) for an overview of related issues. As noted in that article, estimates of the price elasticity of demand for health insurance largely fall between -.4 and -.6 range, while the plan switching elasticities fall between -2.0 and -5.0.

103 Ibid. This example assumes a plan-switching elasticity of -3.0 with fixed contributions, but -.5 without such a structure. Nichols assumes two competing plans, one with an 80 percent market share in the baseline and a cost growth rate of 6 percent; the smaller competing plan is assumed to have a more efficient 3 percent cost growth rate.

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