



MISSED OPPORTUNITIES: THE CONSEQUENCES OF STATE DECISIONS NOT TO EXPAND MEDICAID

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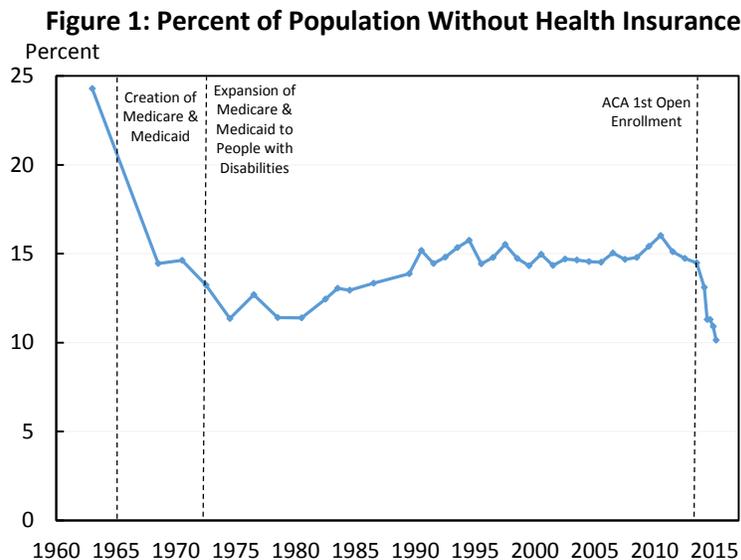
Contents

Executive Summary.....	3
Direct Benefits of Expanded Insurance Coverage for the Newly Insured.....	4
Benefits of Expanding Medicaid for State Economies	6
I. Background on States’ Option to Expand Medicaid Under the Affordable Care Act	8
II. Methodology for Estimating the Effects of States’ Decisions to Expand Medicaid.....	10
Effects on Insurance Coverage.....	10
Effects on Access to and Use of Medical Care	14
Effects on Health Outcomes	20
Effects on Financial Security	26
Effects on State Economies	29
Conclusion.....	36
References	37
Appendix A: Estimating the Age and Gender Mix of Individuals Who Would Gain Coverage if Their State Expands Medicaid	41
Appendix B: Estimating Effects on Federal Outlays if States Expand Medicaid	43

Executive Summary

The Affordable Care Act has dramatically expanded access to high-quality, affordable health insurance coverage. Since the law's major coverage provisions took effect at the start of 2014, the Nation has seen the sharpest reduction in the uninsured rate since the decade following the creation of Medicare and Medicaid in 1965, and, as depicted in Figure 1, the Nation's uninsured rate now stands at its lowest level ever. Combining these recent gains with earlier gains after the law's provision allowing young adults to remain on a parent's plan until age 26 took effect, more than 16 million Americans had gained health insurance coverage as of early 2015 (ASPE 2015).

One important way in which the Affordable Care Act is expanding coverage is by providing financial support to States that opt to expand Medicaid eligibility to all non-elderly individuals with incomes below 138 percent of the Federal Poverty Level. To date, 28 States and the District of Columbia have seized this opportunity. But 22 States—including many of the States that would benefit most—have not yet expanded Medicaid (although Montana has passed legislation to expand Medicaid and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion). These 22 States have seen sharply slower progress in reducing the number of uninsured over the last year and a half, and researchers at the Urban Institute estimate that, if these States do not change course, 4.3 million of their citizens will be deprived of health insurance coverage in 2016.



Source: CEA analysis of National Health Interview Survey, Cohen et al. (2009), Klemm (2000), and CMS (2009) through 2014:Q3; Gallup-Healthways Well-Being Index used to extrapolate through 2015:Q1. Note: Data are generally either annual or bi-annual through 2015:Q1 and quarterly thereafter. See CEA (2014a) for details.

This analysis uses the best evidence from the economics and health policy literatures to quantify several important consequences of States' decisions not to expand Medicaid. That evidence, which is based primarily on careful analysis of the effects of past policy decisions, is necessarily an imperfect guide to the future, and the actual effects of Medicaid expansion under the Affordable Care Act could be larger or smaller than the estimates presented herein. But this evidence leaves no doubt that the consequences of States' decisions are far-reaching, with major implications for the health of their citizens and their economies.

Direct Benefits of Expanded Insurance Coverage for the Newly Insured

One direct consequence of States' decisions not to expand Medicaid is that millions of their uninsured citizens will not experience the improved access to health care, better health outcomes, and greater financial security that come with insurance coverage.

Improved Access to Care

Having health insurance improves access to health care. This analysis estimates that if the States that have not yet expanded Medicaid did so:

- *1.0 million more people would have a usual source of clinic care.*

Having health insurance increases the likelihood that individuals have a usual source of clinic care, like a primary care physician's office. If the 22 States that have not yet expanded Medicaid did so, an additional 1.0 million people would have a usual source of clinic care once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 1.0 million people.

- *491,000 more people would receive all needed care in a year.*

Having health insurance increases the probability that individuals report receiving "all needed care" over the prior year. If the 22 States that have not yet expanded Medicaid did so, an additional 491,000 people would receive "all needed care" over a given year once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 478,000 people.

- *Hundreds of thousands more people would receive recommended preventive care each year.*

Having health insurance increases the probability of receiving several types of recommended and potentially life-saving preventive care, including:

- **Cholesterol-level screenings:** If the 22 States that have not yet expanded Medicaid did so, then each year an additional 626,000 people would receive cholesterol-level screenings once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 609,000 people.

- Mammograms: If the 22 States that have not yet expanded Medicaid did so, then each year an additional 163,000 women between the ages of 50 and 64 would receive mammograms once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 155,000 women in this age group.
- Papanicolaou tests (“pap smears”): If the 22 States that have not yet expanded Medicaid did so, then each year an additional 262,000 women would receive pap smears once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 252,000 women.

➤ *Millions of people would be better able to obtain other needed medical care.*

Having health insurance also increases receipt of other types of medical care. For example, if the 22 States that have not yet expanded Medicaid did so, they would enable an additional 11.6 million physician office visits each year once expanded coverage was fully in effect. States that have already expanded Medicaid will enable an additional 11.3 million physician office visits each year.

Better Health and Longer Lives

By improving access to needed care, having health insurance improves mental and physical health. This analysis estimates that if the States that have not yet expanded Medicaid did so:

➤ *572,000 additional people would report being in excellent, very good, or good health.*

Having health insurance improves the likelihood that an individual assesses himself or herself to be in good health. This analysis estimates that if the 22 States that have not yet expanded Medicaid did so, 572,000 additional people would report being in excellent, very good, or good health once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 556,000 people.

➤ *393,000 fewer people would experience symptoms of depression.*

Having health insurance improves mental health. This analysis estimates that if the 22 States that have not yet expanded Medicaid did so, there would be 393,000 fewer people experiencing symptoms of depression once expanded coverage was fully in effect. States that have already expanded Medicaid will reduce the number of people experiencing symptoms of depression by 382,000.

➤ *5,200 fewer people would die each year.*

Having health insurance reduces the risk of death. This analysis estimates that if the 22 States that have not yet expanded Medicaid did so, 5,200 deaths would be avoided annually once expanded coverage was fully in effect. States that have already expanded Medicaid will avoid 5,000 deaths per year.

Greater Financial Security

Having health insurance provides protection from financial hardship due to sickness. This analysis estimates that if the States that have not yet expanded Medicaid did so:

- *193,000 fewer people will face catastrophic out-of-pocket medical costs in a typical year.*

Having health insurance dramatically reduces the risk that individuals face catastrophic out-of-pocket medical costs. If the 22 States that have not yet expanded Medicaid did so, 193,000 fewer people would face catastrophic medical costs (defined as costs in excess of 30 percent of income) each year once expanded coverage was fully in effect. States that have already expanded Medicaid will eliminate catastrophic medical costs for 187,000 people each year.

- *611,000 fewer people will have trouble paying other bills due to the burden of medical costs.*

Having health insurance reduces individuals' risk of having to borrow money to pay bills or skip a payment entirely in order to pay medical bills. If the 22 States that have not yet expanded Medicaid did so, 611,000 fewer people would report this type of financial strain over the course of a year once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 594,000 people each year.

Benefits of Expanding Medicaid for State Economies

States' decisions to expand Medicaid will also generate substantial benefits for their economies by increasing their citizens' standard of living, improving the resilience of their economies in the face of economic shocks, and increasing the long-term productivity of their workforces.

Higher Standard of Living

By expanding Medicaid, States can pull billions in additional Federal funding into their economies every year. This analysis estimates that if the 22 States that have not yet expanded Medicaid did so, States would receive an additional \$29 billion in net Federal spending in 2016 if expanded coverage was fully in effect. States that have already expanded Medicaid will receive an additional \$37 billion in net Federal spending in that year.

These additional Federal dollars will increase the overall standard of living for States' citizens by increasing low-income individuals' ability to access care, relieving cash-strapped families of high out-of-pocket costs, and reducing uncompensated care. Notably, if the 22 States that have not yet expanded Medicaid did so, uncompensated care costs would be \$4.5 billion lower in 2016 if expanded coverage was fully in effect. States that have already expanded Medicaid will reduce uncompensated care by \$4.4 billion in that year.

Greater Macroeconomic Resilience

Improved access to care and financial security for the newly insured combined with a reduced burden of uncompensated care for others in the State will help boost demand for medical and non-medical goods and services throughout States' economies. This increase in demand is likely

currently accelerating the recovery from the Great Recession in States that have already expanded their Medicaid programs. Looking ahead, State Medicaid expansions will safeguard access to health care and cushion household budgets in the face of the job and income losses that occur during future recessions, helping reduce the severity of future downturns while better protecting families from their consequences.

Healthier, More Productive Workers

By improving workers' access to care and their physical and mental health, Medicaid expansions will help people live longer, healthier lives. Recent research implies that these improvements in workers' health may improve those workers' productivity in the long run, boosting States' long-run economic performance.

The remainder of this report provides more detail on States' option to expand Medicaid under the Affordable Care Act, discusses the effects of States' choices for their uninsured citizens and their economies, presents the methodology used to quantify those effects, and provides tables and figures with State-by-State detail.

I. Background on States' Option to Expand Medicaid Under the Affordable Care Act

Medicaid is a program jointly funded by the Federal government and the States that provides health insurance to eligible low-income people. Each State operates its own Medicaid program and has considerable flexibility in determining eligibility criteria. The Affordable Care Act (ACA) gives States the option to expand their Medicaid programs to all non-elderly individuals in families with incomes below 133 percent of the Federal Poverty Level (FPL). Program rules provide for an additional five percent "income disregard," bringing the effective eligibility threshold to 138 percent of FPL: \$16,243 for a single adult or \$33,465 for a family of four in 2015.

This expansion benefits a wide swath of low-income adults. Prior to the Affordable Care Act's Medicaid expansion, the median eligibility level for working parents was only 61 percent of the FPL, and, in nearly all States, non-disabled adults without children were not eligible at all (Heberlein et al. 2013). Children at these income levels are eligible for Medicaid or the Children's Health Insurance Program regardless of whether their State expands their Medicaid program. As depicted in Figure 2, as of June 4, 2015, 28 States and the District of Columbia had taken advantage of this option to expand Medicaid. One state, Montana, has not yet expanded the program, but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

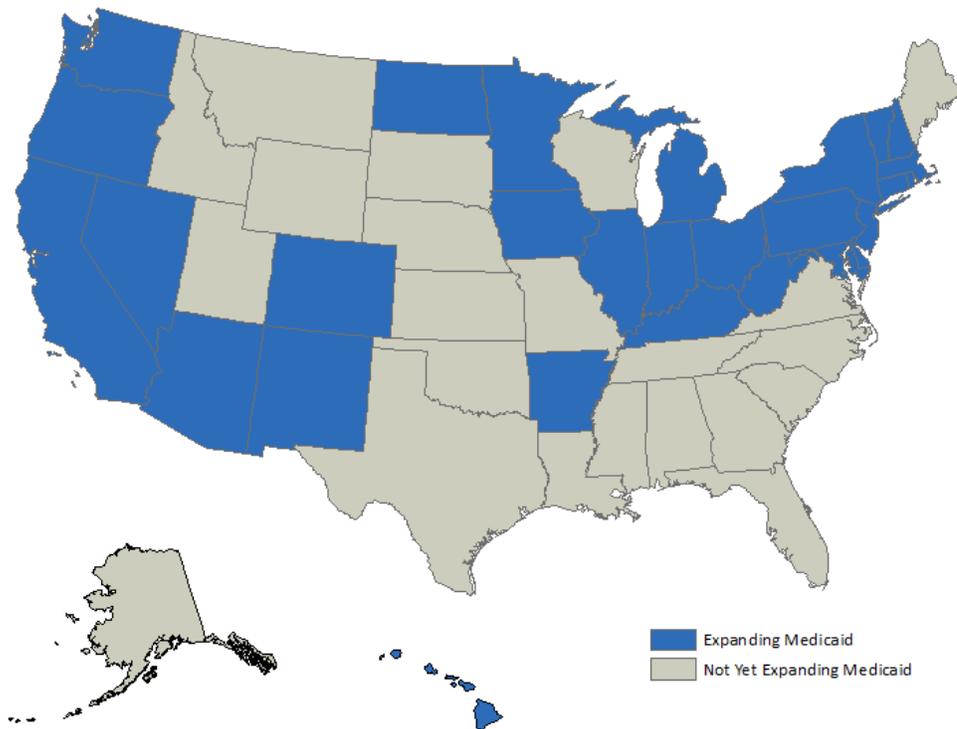
The Federal government will cover the vast majority of the costs of expanding Medicaid eligibility under the Affordable Care Act. Through 2016, the Federal government will pay 100 percent of the costs of covering newly eligible individuals, falling gradually to 90 percent in 2020 and subsequent years. This is a considerably larger Federal contribution than for eligibility categories in existence before the Affordable Care Act, for which program costs are shared between the Federal government and the States according to a formula that targets additional assistance to lower-income States, with the Federal share ranging between 50 percent and 74 percent in fiscal year 2015.¹

States electing to expand their Medicaid programs are likely to realize large savings in other areas of their budgets that offset even the modest increase in State Medicaid spending after 2016. Researchers at the Urban Institute have estimated that, if all States expanded Medicaid, reductions in uncompensated care currently financed by State governments would more than offset any additional Medicaid costs, generating \$10 billion in savings over ten years for all States, although the net impact will vary by State (Holahan, Buettgens, and Dorn 2013). That analysis also omits other potential State savings, including reduced costs to States of providing mental health services that would now be covered by Medicaid. Related research has concluded that these other savings may be substantial (Buettgens et al. 2011).

¹ Coverage provided through the Children's Health Insurance Program is eligible for a higher matching rate. The Federal share for CHIP coverage ranged between 65 to 82 percent in fiscal year 2015.

Medicaid is an important component of the Affordable Care Act's overall approach to expanding health insurance coverage. Individuals with incomes under 100 percent of the FPL are not eligible for tax credits and cost-sharing assistance through the Health Insurance Marketplaces and, as a consequence, will generally not have access to affordable health insurance coverage if their State does not expand Medicaid. Furthermore, Medicaid typically offers lower out-of-pocket costs than Marketplace coverage, so expanding Medicaid will lower the cost of coverage for individuals in families with incomes above 100 percent and below 138 percent of the FPL.

Figure 2. States Expanding and Not Yet Expanding Medicaid



II. Methodology for Estimating the Effects of States' Decisions to Expand Medicaid

To estimate the consequences of State decisions to expand Medicaid, this analysis proceeds in two steps. First, we obtained estimates of States' Medicaid expansion decisions on insurance coverage and the amount of Federal funding entering State economies; these estimates were either taken directly from or derived from publications by the Urban Institute and the Congressional Budget Office. Second, we used research on the effects of past policy decisions to translate those direct effects into impacts on the ultimate outcomes of interest: access to care, financial security, health and well-being, and the performance of States' economies.

The available research literature unambiguously demonstrates that State decisions to expand Medicaid will have large effects in all of these areas, effects that are reflected in the estimates reported in this analysis. Nevertheless, it is important to keep in mind that, while all of the studies this report draws upon are rigorous, all research has limitations. Statistical analyses are subject to imperfections that can cause estimates to systematically overstate or understate the effects of the policy changes studied, as well as sampling errors reflecting limited sample sizes. In addition, the effects of past policy changes may not be a perfect guide to the effects of future policy changes. As a consequence, while the estimates presented in this analysis represent the best available estimates of the effects of expanding Medicaid, the actual effects could turn out to be larger or smaller than the estimates presented in this report.

The remainder of this section describes our methodology in greater detail.

Effects on Insurance Coverage

The most direct consequence of a State's decision to expand Medicaid is to increase insurance coverage in that State. Because the other benefits of expanding Medicaid flow from this basic effect, estimates of how expanding Medicaid affects insurance coverage are a crucial input into the rest of the analyses undertaken in this report.

This report relies upon published estimates from the Urban Institute's Health Insurance Policy Simulation Model (HIPSM), which provide State-by-State estimates of how each State's decision about whether to expand Medicaid would affect the number of uninsured individuals in that State (Holahan et al. 2012; Holahan, Buettgens, and Dorn 2013; Buettgens, Holahan, and Recht 2015). The HIPSM national estimates of how the Affordable Care Act will affect insurance coverage are broadly similar to those produced by other analysts, including the Congressional Budget Office (CBO 2012a) and the RAND Corporation (Eibner et al. 2010).

The most recent published HIPSM estimates include only States that have not yet expanded their Medicaid programs (Buettgens, Holahan, and Recht 2015).² For those States, we have used the most recent estimates. For States not included in these most recent estimates, we

² These estimates also exclude Montana, which the authors categorize as an expansion state.

have adjusted the estimates reported in Holahan, Buettgens, and Dorn (2013) based on the average revision for States that appear in both sets of estimates.³ Throughout, we focus on the HIPSM estimates for 2016 because these should provide a reasonable guide of the long-run effects of Medicaid expansion on insurance coverage, after the initial “ramp-up.” Consistent with that, this analysis refers to these HIPSM estimates for 2016 as reflecting the effects of expanded Medicaid coverage “when fully in effect.” The detailed State-by-State estimates are reported in Table 1.

Actual experience has borne out model-based predictions that State Medicaid expansions would substantially increase insurance coverage. In particular, survey data have shown faster declines in the uninsured rate in expansion States than in non-expansion States since the Affordable Care Act’s main coverage provisions took effect (Long et al. 2015; ASPE 2015; CDC 2015a).

The differences between these two sets of States are particularly striking among adults with incomes below 138 percent of the FPL, the population directly affected by States’ Medicaid expansion decisions. Figure 3 depicts how coverage gains in this income group differ between expansion and non-expansion States using data from three different surveys (Long et al. 2015; ASPE 2015; CDC 2015b). Although the precise estimates differ across surveys due to differences in timing, income measurement, sampling error, and other factors, all three surveys show dramatically larger coverage gains in Medicaid expansion States. (This group of low-income adults has seen substantial increases in insurance coverage even in non-expansion States, primarily because uninsured individuals in these States with incomes between 100 and 138 percent of the FPL are typically eligible for subsidized Marketplace coverage.)

³ Specifically, we have calculated an “adjustment ratio.” The numerator of this ratio is the aggregate reduction in the number of uninsured estimated by the authors if all States included in the current report expand Medicaid (except that we exclude Wisconsin, for which the underlying policy assumptions appear to have changed between the two sets of estimates). The denominator of this ratio is the same quantity, calculated for the same set of states, but using the older HIPSM estimates. For the States for which up-to-date estimates are not available, we obtained adjusted estimates by multiplying the old HIPSM estimates by the adjustment ratio.

Figure 3: Change in Uninsured Rate for Non-Elderly Adults with Incomes < 138% FPL, Expansion v. Non-Expansion States

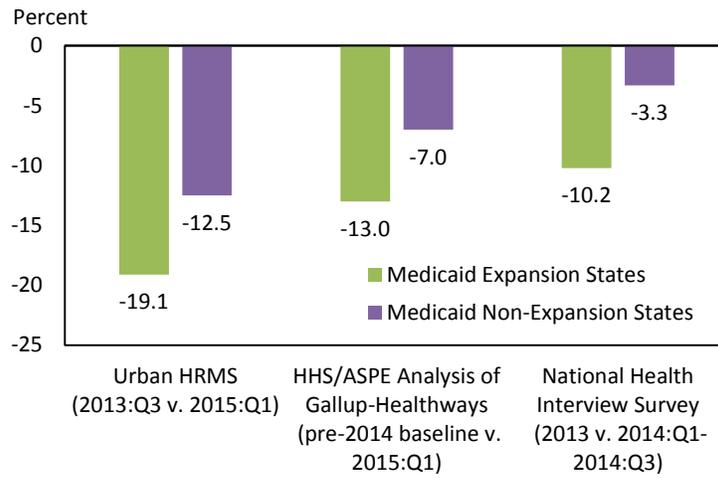


Table 1. Projected Increase in Number of People with Insurance Coverage if State Expands Medicaid

	Increase in Number of People with Insurance Coverage in 2016
Not Yet Expanding Medicaid	4,299,000
Alabama	177,000
Alaska	17,000
Florida	750,000
Georgia	389,000
Idaho	59,000
Kansas	77,000
Louisiana	193,000
Maine	40,000
Mississippi	139,000
Missouri	191,000
Montana*	32,000
Nebraska	42,000
North Carolina	313,000
Oklahoma	127,000
South Carolina	160,000
South Dakota	25,000
Tennessee	179,000
Texas	1,107,000
Utah	68,000
Virginia	179,000
Wisconsin	21,000
Wyoming	14,000
Expanding Medicaid	4,178,000
Arizona	44,000
Arkansas	122,000
California	1,188,000
Colorado	132,000
Connecticut	72,000
Delaware	6,000
District of Columbia	16,000
Hawaii	33,000
Illinois	340,000
Indiana	224,000
Iowa	17,000
Kentucky	151,000
Maryland	115,000
Massachusetts	2,000
Michigan	181,000
Minnesota	36,000
Nevada	90,000
New Hampshire	22,000
New Jersey	194,000
New Mexico	82,000
New York	143,000
North Dakota	18,000
Ohio	381,000
Oregon	159,000
Pennsylvania	261,000
Rhode Island	22,000
Vermont	3,000
Washington	55,000
West Virginia	68,000

Source: Urban Institute; CEA calculations.

* Montana has not yet expanded Medicaid but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

Effects on Access to and Use of Medical Care

Perhaps the most obvious purpose of the Medicaid program is to ensure that enrollees have access to and receive needed medical care. To quantify the improvement in access to medical care that will result from States' decisions to expand Medicaid, this analysis relies upon estimates from the Oregon Health Insurance Experiment (Finkelstein et al. 2012; Baicker et al. 2013a; Baicker et al. 2013b; Taubman et al. 2014). The Oregon Health Insurance Experiment (OHIE) arose from the State of Oregon's decision in early 2008 to reopen enrollment under an earlier Medicaid expansion that had extended coverage to uninsured adults with incomes under 100 percent of the FPL. Because the State could not accommodate all interested applicants, it allocated the opportunity to enroll in Medicaid by lottery.

The State of Oregon's decision to allocate Medicaid coverage by lottery created a unique research opportunity. By comparing individuals who won the lottery to individuals who lost the lottery, it is possible to isolate the causal effect of having or not having Medicaid coverage, without the concern that the comparison is confounded by unobserved differences between those who do and do not have Medicaid coverage. Randomized research designs of this kind are considered the "gold standard" in social science research, and the OHIE is unique in using such a design to study the effects of having health insurance.

An additional important advantage of the OHIE for the current analysis is that the population that gained coverage in the Medicaid expansion studied in the OHIE—low-income, uninsured adults—is quite similar to the group that will gain health insurance coverage if States expand Medicaid under the Affordable Care Act. This increases the confidence that the results of the OHIE can be extrapolated to the Affordable Care Act's Medicaid expansion.

Of course, as noted at the outset, no study based on past policy changes in a specific environment applies perfectly to a future policy change in a different environment. Oregon's health care system differs from other States' health care systems in some ways, including the availability of medical providers (Huang and Finegold 2013), and other States' low-income populations do not look precisely like Oregon's. In addition, the OHIE can only speak to results over a follow-up period of approximately two years, but the effects of insurance coverage could differ over longer periods. Finally, the effects of larger-scale coverage expansions could differ from the effects of the smaller-scale expansion examined in the OHIE. Nevertheless, the OHIE clearly provides the best available estimates for quantifying many potential effects of States' decisions to expand Medicaid under the Affordable Care Act.

The OHIE found that Medicaid coverage significantly improves enrollees' access to medical care. Specifically, based on in-person interviews two years after the coverage lottery, the authors estimate that those enrolled in Medicaid were more likely to:

➤ *Receive all needed care.*

Medicaid coverage increased the probability that individuals reported receiving all needed medical care over the prior 12 months by 11.4 percentage points, relative to a baseline rate of 61.0 percent in the control group.⁴

➤ *Have a usual source of clinic care.*

Medicaid coverage increased the probability that individuals reported having a usual source of clinic care (e.g. a primary care physician) by 23.8 percentage points, relative to a baseline probability of 46.1 percent in the control group.⁵

➤ *Receive recommended preventive care.*

Medicaid coverage dramatically increased receipt of several important types of recommended preventive care that have been clinically demonstrated to improve health outcomes:

- Cholesterol-level screenings: Medicaid coverage increased the probability that an individual received a cholesterol-level screening in the last 12 months by 14.6 percentage points, relative to a baseline probability of 27.2 in the control group.
- Mammograms: Medicaid coverage increased the probability that women ages and 50 and older received a mammogram in the last 12 months by 29.7 percentage points, relative to a baseline probability of 28.9 percent in the control group.
- Papanicolaou tests ("pap smears"): Medicaid coverage increased the probability that a woman had received a pap smear in the last 12 months by 14.4 percentage points,

⁴ Many individuals in the control group reported receiving all needed care because no care was necessary or because they were able to access care through other sources (including, for individuals who ultimately qualified for Medicaid through other eligibility pathways, Medicaid itself). Similarly, individuals with Medicaid coverage may report not receiving all needed care for a variety of reasons, including scheduling or transportation difficulties or challenges in identifying a suitable provider.

⁵ In other work based on the OHIE, the authors find that Medicaid increases emergency room utilization (Taubman et al. 2014). This finding is not inconsistent with the increase in the probability that individuals had a usual source of clinic care; Medicaid may simultaneously increase access to primary care and make individuals more willing to make use of emergency rooms by protecting them from the high out-of-pocket costs that can come with such a visit. In addition, the finding that Medicaid increases emergency room utilization could change when looking over longer time periods (as enrollees build stronger relationships with their primary care physicians) or as a result of efforts to reform the health care delivery system, including efforts set in motion by the Affordable Care Act.

relative to a baseline probability of 44.9 percent in the control group.⁶

➤ *Receive other types of medical care.*

Medicaid coverage also increased receipt of other categories of medical care. Medicaid coverage made possible an additional 2.7 office visits over the course of a year, relative to 5.5 visits in the control group. Similarly, Medicaid increased the number of prescription medications an individual was currently taking by 0.7 prescriptions, relative to 1.8 prescriptions in the control group.

While the OHIE is uniquely well-suited to the current analysis in light of its randomized design and focus on a population that is very similar to the population that will gain coverage if more states elect to expand Medicaid, the finding that having health insurance or more generous health insurance increases access to health care services has been convincingly demonstrated in many health care settings. High-quality studies arriving at similar conclusions include the well-known RAND Health Insurance Experiment (Newhouse 1993), studies of past Medicaid expansions (e.g. Sommers, Baicker, and Epstein 2012), studies of the effect of gaining Medicare eligibility at age 65 (e.g. McWilliams et al. 2007; Card et al. 2009), and a recent study of Massachusetts health reform (Sommers, Long, and Baicker 2014).

To translate the OHIE estimates into the number of additional individuals estimated to have specified type of health care experience in each State, the relevant point estimates were simply multiplied by the HPSM estimates of the number of individuals who would gain coverage in that State if the State expands Medicaid coverage.⁷ Several of the preventive care estimates apply only to particular age and gender subgroups; we estimated the share of new Medicaid

⁶ Approximately half of States' Medicaid programs have undertaken "family planning expansions" under which they offer Medicaid coverage for family planning and related services, including pap smears, to some individuals who are not eligible for full Medicaid benefits (Guttmacher Institute 2014). In almost all such States, women who would gain eligibility for full Medicaid benefits if their State expands Medicaid under the Affordable Care Act could already have obtained coverage for pap smears via the State's family planning expansion.

Oregon had a family planning expansion in place during the OHIE under which eligibility extended up to 185 percent of the FPL (Sonfield, Alrich, and Benson Gold 2008); the State has since extended eligibility through 250 percent of the FPL (Guttmacher Institute 2014). The OHIE nevertheless found that gaining full Medicaid coverage increased pap smear utilization, perhaps because accessing such care is easier in the context of coverage for a comprehensive set of health care services. This suggests that expanding eligibility for full Medicaid benefits will increase pap smear utilization even in States with a family planning expansion in place. Expanding eligibility for full Medicaid benefits might be expected to have a larger effect in States without a family planning expansion, in which case the estimates in this report will understate the increases in those States. Similarly, State and local health departments provide certain screening services funded through federal grant programs or other sources. As with family planning expansions, the existence of such programs should not affect the conclusion that expanding eligibility for Medicaid would increase utilization of these services.

⁷ The results presented by the OHIE reflect the effect of ever being on Medicaid during the study period, so not all individuals were enrolled in Medicaid for the full period over which the change in utilization was measured. The effect of continuous Medicaid enrollment on the outcomes examined in this report would likely be larger, so these estimates are somewhat conservative.

enrollees who fall in the relevant subgroups using the American Community Survey and the methodology described in Appendix A and then scaled down the HIPSM estimates accordingly.

The resulting State-by-State estimates of the increase in receipt of medical care are reported in Table 2 (preventive care) and Table 3 (other utilization measures). Figure 4 maps the State-level estimates of the increase in the annual number of cholesterol-level screenings if each State expands Medicaid.

Figure 4. Projected Annual Number of Additional Cholesterol-Level Screenings if Each State Decides to Expand Medicaid

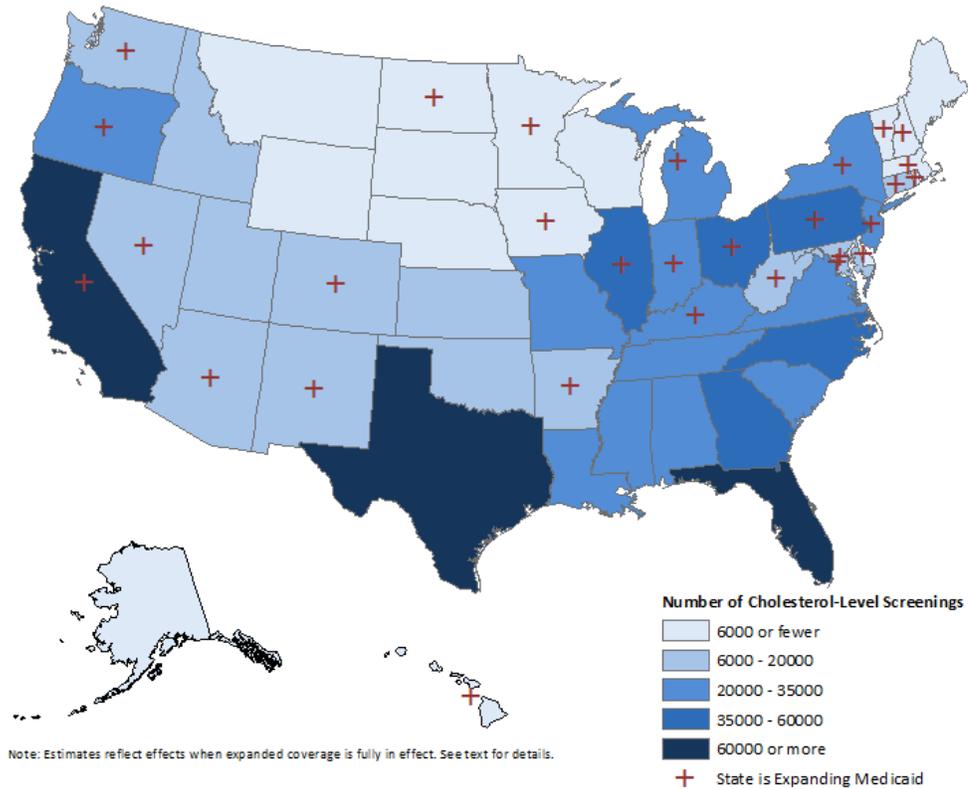


Table 2. Projected Increase in People Receiving Preventive Care if State Expands Medicaid

	Cholesterol-Level Screening in Past 12 Months	Mammogram in Past 12 Months	Papanicolaou Smear in Past 12 Months
Not Yet Expanding Medicaid	626,400	163,400	262,400
Alabama	25,800	7,000	10,700
Alaska	2,500	600	1,000
Florida	109,300	31,200	46,100
Georgia	56,700	13,900	23,500
Idaho	8,600	2,500	3,600
Kansas	11,200	2,400	4,400
Louisiana	28,100	7,600	11,600
Maine	5,800	1,900	2,500
Mississippi	20,300	5,200	8,200
Missouri	27,800	7,100	11,300
Montana*	4,700	1,300	2,000
Nebraska	6,100	1,400	2,600
North Carolina	45,600	11,500	19,100
Oklahoma	18,500	5,000	7,500
South Carolina	23,300	6,500	9,700
South Dakota	3,600	900	1,500
Tennessee	26,100	7,300	10,700
Texas	161,300	40,400	68,900
Utah	9,900	1,800	4,100
Virginia	26,100	6,800	11,100
Wisconsin	3,100	700	1,200
Wyoming	2,000	600	1,000
Expanding Medicaid	608,800	154,500	251,500
Arizona	6,400	2,200	2,700
Arkansas	17,800	4,800	7,300
California	173,100	42,100	74,200
Colorado	19,200	4,400	7,700
Connecticut	10,500	2,700	4,300
Delaware	900	300	400
District of Columbia	2,400	300	1,100
Hawaii	4,900	1,400	1,900
Illinois	49,600	12,600	20,300
Indiana	32,600	7,700	13,000
Iowa	2,500	600	1,000
Kentucky	22,000	5,600	8,800
Maryland	16,800	4,000	7,000
Massachusetts	200	100	100
Michigan	26,400	6,000	10,200
Minnesota	5,200	1,100	2,200
Nevada	13,100	3,700	5,500
New Hampshire	3,200	1,000	1,400
New Jersey	28,300	7,300	12,000
New Mexico	12,000	3,100	4,700
New York	20,800	7,100	8,800
North Dakota	2,600	600	1,100
Ohio	55,500	14,900	22,300
Oregon	23,200	6,000	9,700
Pennsylvania	38,000	9,500	15,100
Rhode Island	3,200	700	1,400
Vermont	500	<100	<100
Washington	8,000	1,900	3,300
West Virginia	10,000	2,800	4,000

Sources: Urban Institute; American Community Survey, 2010-2012; CEA calculations.

Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details on the methodology. Numbers may not sum due to rounding. Mammogram estimates reflect mammograms received by women 50 and older only.

* Montana has not yet expanded Medicaid but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

Table 3. Projected Effects on Access to Care if State Expands Medicaid

	Additional People with a Usual Source of Clinic Care	Additional People Receiving All Needed Care in Past 12 Months	Number of Additional Physician Visits Each Year
Not Yet Expanding Medicaid	1,021,000	491,000	11,609,000
Alabama	42,000	20,000	478,000
Alaska	4,000	2,000	46,000
Florida	178,000	86,000	2,025,000
Georgia	92,000	44,000	1,050,000
Idaho	14,000	7,000	159,000
Kansas	18,000	9,000	208,000
Louisiana	46,000	22,000	521,000
Maine	10,000	5,000	108,000
Mississippi	33,000	16,000	375,000
Missouri	45,000	22,000	516,000
Montana*	8,000	4,000	88,000
Nebraska	10,000	5,000	113,000
North Carolina	74,000	36,000	845,000
Oklahoma	30,000	15,000	343,000
South Carolina	38,000	18,000	432,000
South Dakota	6,000	3,000	68,000
Tennessee	43,000	20,000	483,000
Texas	263,000	127,000	2,989,000
Utah	16,000	8,000	184,000
Virginia	43,000	20,000	483,000
Wisconsin	5,000	2,000	57,000
Wyoming	3,000	2,000	38,000
Expanding Medicaid	992,000	478,000	11,282,000
Arizona	10,000	5,000	118,000
Arkansas	29,000	14,000	330,000
California	282,000	136,000	3,208,000
Colorado	31,000	15,000	355,000
Connecticut	17,000	8,000	194,000
Delaware	1,000	1,000	16,000
District of Columbia	4,000	2,000	44,000
Hawaii	8,000	4,000	90,000
Illinois	81,000	39,000	919,000
Indiana	53,000	26,000	605,000
Iowa	4,000	2,000	46,000
Kentucky	36,000	17,000	409,000
Maryland	27,000	13,000	312,000
Massachusetts	<1000	<1000	5,000
Michigan	43,000	21,000	489,000
Minnesota	9,000	4,000	97,000
Nevada	21,000	10,000	242,000
New Hampshire	5,000	3,000	60,000
New Jersey	46,000	22,000	524,000
New Mexico	19,000	9,000	222,000
New York	34,000	16,000	385,000
North Dakota	4,000	2,000	48,000
Ohio	91,000	44,000	1,029,000
Oregon	38,000	18,000	429,000
Pennsylvania	62,000	30,000	704,000
Rhode Island	5,000	3,000	60,000
Vermont	1,000	<1000	9,000
Washington	13,000	6,000	148,000
West Virginia	16,000	8,000	185,000

Sources: Urban Institute; CEA calculations.

Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details on the methodology. Numbers may not sum due to rounding.

* Montana has not yet expanded Medicaid but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

Effects on Health Outcomes

Medicaid also seeks to improve enrollees' health. The findings above showing that Medicaid increases receipt of recommended medical care—care for which there is a strong clinical evidence base demonstrating its effectiveness in improving health—justifies a strong presumption that Medicaid does indeed improve enrollees' health. Nevertheless, direct evidence that health insurance improves health is desirable.

To quantify effects on mental health, this analysis turns once more to the OHIE. The OHIE asked respondents to complete a standard eight-question questionnaire regarding the presence and intensity of several symptoms of depression. The authors categorized individuals as having “screened positive” for depression if the summary score generated from the questionnaire fell above a specified threshold that had been shown in prior research to be highly predictive of depression (as measured by a clinical evaluation). They found that Medicaid coverage reduced the probability that an individual screened positive for depression by 9.2 percentage points, relative to a 30.0 percent baseline probability in the control group.⁸ Medicaid coverage also generated improvements in self-reported mental health, as measured using a standard three-question battery on the effect of mental health on quality of life.

The OHIE's estimate that Medicaid reduced the probability of screening positive for depression was translated into a reduction in the number of people experiencing symptoms of depression by multiplying the OHIE point estimate by the HIPSM estimates of the number of individuals who will gain coverage in each State if that state expands its Medicaid program. The resulting State-by-State estimates of are reported in Table 4.

Turning to physical health, the OHIE provides clear evidence that individuals receiving Medicaid perceived themselves to be in better health. In results through approximately two years of follow-up, Medicaid coverage increased the share of individuals reporting that their health had remained the same or improved over the prior year by 7.8 percentage points, relative to a baseline probability of 80.4 percent in the control group. In earlier results through slightly more than one year of follow-up, Medicaid also increased the probability that an individual reported that his or her health was good, very good, or excellent by 13.3 percentage points, relative to a baseline probability of 54.8 percent in the control group.

⁸ As discussed below, this analysis does not use the OHIE to quantify the effects of Medicaid on physical health, as the relevant estimates are imprecise and not statistically different from zero. One concern with using only the results from the OHIE that happen to be statistically significant is that, as the number of health outcomes under consideration rises, the probability that one will be statistically significant purely by chance rises as well, even if, in truth, Medicaid has no effect on any of these outcomes. In this case, focusing on the statistically significant estimates and disregarding the others can be misleading, a problem statisticians and econometricians refer to as the problem of “multiple comparisons.”

One way of addressing this problem is to set a higher threshold for statistical significance when evaluating the results of multiple statistical tests. Using a standard method for computing that higher threshold (known as the “Bonferroni method”) while taking into account that the study also examined effects on high blood pressure, cholesterol levels, and blood sugar control, the p-value for the estimated effect of Medicaid coverage on depression remains below 10 percent. This indicates that the OHIE's depression results are still unlikely to have arisen by chance, even after accounting for multiple comparisons.

To translate the OHIE estimate of the effect of Medicaid on the number of individuals reporting that they are in good, very good, or excellent health into an estimate of the number of additional people who would assess their health in this way if each State expanded Medicaid, we multiplied the OHIE point estimate by the number of people who will gain coverage if each State expands its Medicaid program. The resulting State-by-State estimates are reported in Table 4.

The limited sample size of the OHIE makes it more difficult to reach firm conclusions about the effect of Medicaid on objective measures of physical health since the OHIE estimates were generally imprecise. The OHIE did attempt to measure the effect of Medicaid coverage on several physical health outcomes, including the incidence of high blood pressure, high cholesterol, and poor control of blood sugar. The study's *point estimates* (roughly speaking, a point estimate is the most likely single value in light of a study's data) showed some improvement in each of these domains. For example, the study's point estimate was that Medicaid reduced the incidence of elevated blood pressure by 1.3 percentage points, relative to a baseline incidence of 16.3 percent in the control group; the point estimates for the other measured dimensions of physical health were, in proportional terms, similar or larger. In early results, the OHIE also reported a point estimate suggesting that Medicaid reduced mortality over a follow-up period of slightly more than one year. These point estimates would generally be clinically meaningful if they exactly reflected reality (Frakt 2013a; Frakt 2013b).

However, the OHIE's sample size was (by necessity) limited, so the precision with which these changes in health outcomes could be measured was also limited. As a result, these estimated improvements in physical health fell far short of statistical significance, and it is impossible to determine with any confidence whether the point estimates described above arose because Medicaid actually generated improvements in physical health or if Medicaid actually has negligible effects on physical health, and these estimates were simply obtained by chance. For example, while the study's point estimate was that Medicaid reduced the incidence of high blood pressure by 1.3 percentage points, a 95 percent confidence interval around that estimate stretches from a 7.2 percentage point reduction in incidence to a 4.5 percentage point increase in incidence. Closely related, it may not have been reasonable to expect the OHIE to find statistically significant improvements in physical health stemming from Medicaid coverage. To be reliably detected by the OHIE, the effects of Medicaid on physical health would have had to be quite large, often larger than what seems medically plausible (Frakt 2013a; Frakt 2013b; Richardson, Carroll, and Frakt 2013; Mulligan 2013).

In light of the limitations of the OHIE for learning about the effects of Medicaid on objective physical health outcomes, CEA has instead drawn upon a parallel literature that uses "quasi-experiments" created by past policy changes to study how Medicaid coverage affects a health outcome of particular interest: the risk of death. The disadvantage of relying on quasi-experimental research is that it is more vulnerable to unobserved confounding factors than research using a randomized research design. However, these quasi-experimental studies have the important advantage that they can often draw on much larger samples and, thus, deliver much more precise estimates.

Two recent quasi-experimental studies are particularly relevant since they examine insurance expansions that primarily affect low- or moderate-income adults, like State Medicaid expansions under the Affordable Care Act. Sommers, Long, and Baicker (2014) study the mortality effects of Massachusetts health reform, which primarily affected adults with incomes similar to or modestly higher than those affected by the Affordable Care Act's Medicaid expansion. They compare mortality trends in Massachusetts counties to mortality trends in demographically similar counties in the rest of the country. They find that the mortality rate for Massachusetts adults fell by 2.9 percent from the years before to the years after reform relative to the comparison group. The authors document that mortality followed similar trends in Massachusetts counties and comparison counties before reform, that the mortality gains were concentrated in counties with lower incomes and lower insurance coverage rates prior to reform, and that the improvements were primarily in causes of death believed to be avoidable with better health care; all of these findings are consistent with the interpretation that the observed decline in mortality in Massachusetts was caused by the expansion of insurance coverage. On the basis of their estimates, the authors conclude that one death was avoided annually for every 830 adults who gained health insurance under Massachusetts health reform. Notably, this estimate falls well within the wide 95 percent confidence interval for the corresponding OHIE estimate.

Sommers, Baicker, and Epstein (2012) examine pre-ACA expansions of Medicaid coverage to low-income adults in Arizona, New York, and Maine. Much like Sommers, Long, and Baicker, the authors estimate how these Medicaid expansions affected the risk of death by comparing mortality trends in the three expansion states to mortality trends in neighboring states. They find that the mortality rate for adults fell by 6.1 percent in the expansion states relative to non-expanding States in the years around the reform. They document that mortality trends were similar in expansion and non-expansion states before reform and that the mortality gains were concentrated in lower-income counties, consistent with the interpretation that the fall in mortality in the expansion states was caused by expanded insurance coverage. On the basis of their estimates, the authors calculate that one death was avoided annually for every 176 adults who gained health insurance under these Medicaid expansions. This estimate is also not statistically different from the imprecise corresponding OHIE estimate.

These are not the only quasi-experimental studies examining the link between health insurance status and the risk of death, although they are the two that are most relevant to evaluating the consequences of States' Medicaid expansion decisions. Levy and Meltzer (2008) undertake a careful review of the quasi-experimental literature and conclude that the balance of the evidence demonstrates that expanding access to health insurance coverage improves health for specific well-studied populations. Other recent research has bolstered the case that health insurance reduces mortality. Meyer and Wherry (2012) examine past Medicaid expansions affecting children and find that those coverage expansions substantially reduced mortality later in life for the affected socioeconomic groups. Brown et al. (2015) also study Medicaid expansions affecting children and find evidence of reduced mortality later in life. Card, Dobkin, and Maestas (2009) document a discrete reduction in mortality for patients arriving at the

hospital with “non-deferrable” conditions at age 65, coinciding with the beginning of eligibility for Medicare.

This evidence base justifies confidence that State Medicaid expansions under the Affordable Care Act will reduce mortality. Of course, as with the other outcomes investigated in this analysis, meaningful uncertainty remains about the magnitude of these effects. The Sommers, Long, and Baicker and Sommers, Baicker, and Epstein studies, like all studies, are subject to a variety of sampling and non-sampling errors. Furthermore, effects could differ across areas due to subtle differences in the affected populations or differences in the health care systems of the affected areas, in which case these estimates could be an imperfect guide to effects nationwide.⁹ Thus, the mortality effects of State Medicaid expansions could be larger or smaller than the Sommers, Long, and Baicker and Sommers, Baicker, and Epstein estimates imply.

In light of this uncertainty and in the interest of being conservative, this analysis relies upon the smaller estimate reported by Sommers, Long, and Baicker to estimate the number of deaths that could be avoided if States elect to expand Medicaid. To translate this point estimate into a number of avoided deaths at the State level, the point estimate is applied directly to the HIPSM estimates of the number of individuals who will gain coverage if each State expands its Medicaid program. The resulting State-by-State estimates of the reduction in the annual number of deaths are reported in Table 4. Figure 5 maps the State-by-State estimates.

⁹ These studies found relatively constant effects on mortality rates over the first few years following the expansion of coverage, but these effects could change over longer periods of time. For example, certain types of care could have larger effects on mortality if provided on a sustained basis over many years. On the other hand, effects on mortality could be smaller over the longer run if individuals whose lives are saved during the initial years of expanded coverage are more likely to die from other causes in subsequent years.

Figure 5. Reduction in Annual Number of Deaths if Each State Decides to Expand Medicaid

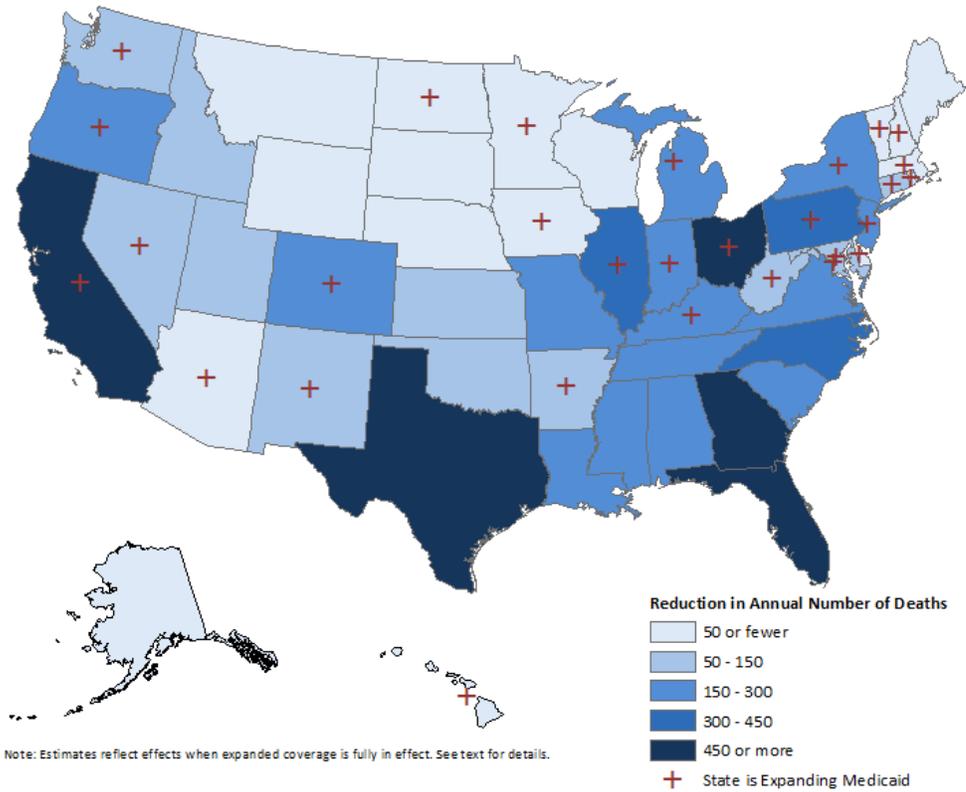


Table 4. Projected Effects on Health Outcomes if State Expands Medicaid

	Reduction in Number of People Experiencing Symptoms of Depression	Additional People Reporting Good, Very Good, or Excellent Health	Reduction in Annual Number of Deaths
Not Yet Expanding Medicaid	393,000	572,000	5,180
Alabama	16,000	24,000	210
Alaska	2,000	2,000	20
Florida	69,000	100,000	900
Georgia	36,000	52,000	470
Idaho	5,000	8,000	70
Kansas	7,000	10,000	90
Louisiana	18,000	26,000	230
Maine	4,000	5,000	50
Mississippi	13,000	18,000	170
Missouri	17,000	25,000	230
Montana*	3,000	4,000	40
Nebraska	4,000	6,000	50
North Carolina	29,000	42,000	380
Oklahoma	12,000	17,000	150
South Carolina	15,000	21,000	190
South Dakota	2,000	3,000	30
Tennessee	16,000	24,000	220
Texas	101,000	147,000	1,330
Utah	6,000	9,000	80
Virginia	16,000	24,000	220
Wisconsin	2,000	3,000	30
Wyoming	1,000	2,000	20
Expanding Medicaid	382,000	556,000	5,030
Arizona	4,000	6,000	50
Arkansas	11,000	16,000	150
California	109,000	158,000	1,430
Colorado	12,000	18,000	160
Connecticut	7,000	10,000	90
Delaware	1,000	1,000	10
District of Columbia	1,000	2,000	20
Hawaii	3,000	4,000	40
Illinois	31,000	45,000	410
Indiana	20,000	30,000	270
Iowa	2,000	2,000	20
Kentucky	14,000	20,000	180
Maryland	11,000	15,000	140
Massachusetts	<1000	<1000	<10
Michigan	17,000	24,000	220
Minnesota	3,000	5,000	40
Nevada	8,000	12,000	110
New Hampshire	2,000	3,000	30
New Jersey	18,000	26,000	230
New Mexico	8,000	11,000	100
New York	13,000	19,000	170
North Dakota	2,000	2,000	20
Ohio	35,000	51,000	460
Oregon	15,000	21,000	190
Pennsylvania	24,000	35,000	310
Rhode Island	2,000	3,000	30
Vermont	<1000	<1000	<10
Washington	5,000	7,000	70
West Virginia	6,000	9,000	80

Sources: Urban Institute; CEA calculations.

Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details on the methodology. Numbers may not sum due to rounding.

* Montana has not yet expanded Medicaid but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

Effects on Financial Security

While one important goal of the Medicaid program is to ensure that enrollees have access to medical care and thereby improve health outcomes, an equally important goal is to protect families from large out-of-pocket medical costs and ensure that illness does not threaten families' ability to meet other important needs. To quantify the improvements in financial security resulting from State decisions to expand Medicaid under the Affordable Care Act, this analysis turns once again to the OHIE, which found that Medicaid coverage significantly improved financial security.

This analysis focuses on two specific outcomes measured in the OHIE, which were measured using in-person interviews two years after the coverage lottery:

➤ *Catastrophic out-of-pocket costs.*

Medicaid coverage nearly eliminated the risk of facing catastrophic out-of-pocket medical costs (defined in the study as out-of-pocket spending in excess of 30 percent of household income) during the prior year. Specifically, being enrolled in Medicaid reduced the probability of experiencing such an outcome by 4.5 percentage points, relative to a baseline risk of 5.5 percent in the control group.

➤ *Trouble paying bills due to medical expenses.*

Medicaid coverage dramatically reduced the risk that an individual reported having borrowed money or skipped paying other bills due to medical expenses during the prior year. Specifically, being enrolled in Medicaid reduced the probability of experiencing such an outcome by 14.2 percentage points, relative to a baseline risk of 24.4 percent in the control group.

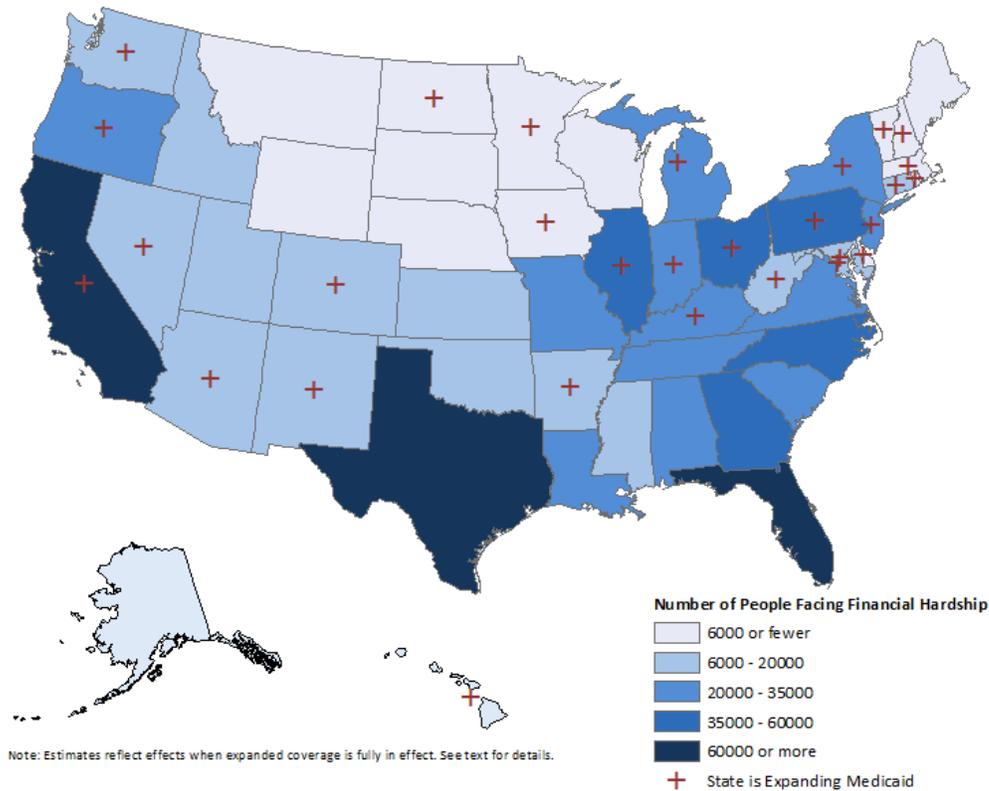
The OHIE also found that Medicaid coverage reduced the average amount of out-of-pocket spending and the probability of having any medical debt. In addition, in earlier work using credit report data, the OHIE investigators documented a large reduction in the probability of having had a medical bill sent to a collection agency over slightly more than one year of follow-up.

As with the health care utilization results discussed in the last subsection, the finding that health insurance improves financial security is not unique to the OHIE. Finkelstein and McKnight (2008) demonstrate that the introduction of Medicare in 1965 led to sharp reductions in seniors' exposure to large out-of-pocket medical costs. Gross and Notowidigdo (2011) examine Medicaid expansions during the 1990s and early 2000s and find that those expansions significantly reduced the risk of consumer bankruptcy.¹⁰

¹⁰ Using credit report data, the OHIE found no evidence of a reduction in the risk of bankruptcy over a follow-up period extending slightly more than one year from the date that lottery winners gained coverage, despite finding large improvements on other measures of financial strain. This difference in results could reflect the much longer follow-up period available to Gross and Notowidigdo. Alternatively, it could reflect differences in the types of Medicaid expansions under study; the expansions studied by Gross and Notowidigdo primarily affected children,

To translate the OHIE estimates into the number of individuals estimated to avoid these negative financial outcomes in each State, the OHIE point estimate was multiplied by the HIPSM estimates of the number of individuals estimated to gain coverage in that State if the State expands Medicaid coverage. The resulting State-by-State estimates of the reduction in the number of individuals facing adverse financial outcomes due to high out-of-pocket medical costs are reported in Table 5. Figure 6 maps the State-level estimates of the reduction in the number of individuals borrowing money or skipping payments on other bills due to medical expenses if each State expands Medicaid.

Figure 6. Projected Annual Reduction in the Number of Individuals Borrowing Money or Skipping Payments Due to Medical Expenses if Each State Decides to Expand Medicaid



while the expansion studied in the OHIE affected adults. The limited sample size available in the OHIE does not appear to explain the difference in results, as the difference between the estimate reported by the OHIE and the estimate reported by Gross and Notowidigdo approaches standard thresholds for statistical significance.

Table 5. Projected Reduction in Number of People Facing Financial Hardship if State Expands Medicaid

	People with Catastrophic Out-of-Pocket Costs in a Typical Year	People Borrowing to Pay Bills or Skipping Payments Due to Medical Bills
Not Yet Expanding Medicaid	192,600	611,400
Alabama	7,900	25,200
Alaska	800	2,400
Florida	33,600	106,700
Georgia	17,400	55,300
Idaho	2,600	8,400
Kansas	3,400	10,900
Louisiana	8,600	27,400
Maine	1,800	5,700
Mississippi	6,200	19,800
Missouri	8,600	27,200
Montana	1,500	4,600
Nebraska	1,900	6,000
North Carolina	14,000	44,500
Oklahoma	5,700	18,100
South Carolina	7,200	22,800
South Dakota	1,100	3,600
Tennessee	8,000	25,500
Texas	49,600	157,400
Utah	3,000	9,700
Virginia	8,000	25,500
Wisconsin	900	3,000
Wyoming	600	2,000
Expanding Medicaid	187,200	594,200
Arizona	2,000	6,200
Arkansas	5,500	17,400
California	53,200	169,000
Colorado	5,900	18,700
Connecticut	3,200	10,200
Delaware	300	900
District of Columbia	700	2,300
Hawaii	1,500	4,700
Illinois	15,200	48,400
Indiana	10,000	31,800
Iowa	800	2,400
Kentucky	6,800	21,500
Maryland	5,200	16,400
Massachusetts	100	200
Michigan	8,100	25,800
Minnesota	1,600	5,100
Nevada	4,000	12,800
New Hampshire	1,000	3,200
New Jersey	8,700	27,600
New Mexico	3,700	11,700
New York	6,400	20,300
North Dakota	800	2,600
Ohio	17,100	54,200
Oregon	7,100	22,600
Pennsylvania	11,700	37,100
Rhode Island	1,000	3,200
Vermont	200	500
Washington	2,500	7,800
West Virginia	3,100	9,700

Sources: Urban Institute; CEA calculations.

Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details on the methodology. Numbers may not sum due to rounding. Catastrophic medical costs defined as medical costs exceeding 30 percent of income.

* Montana has not yet expanded Medicaid but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

Effects on State Economies

States' decisions will also have important benefits for the performance of their economies. States that expand Medicaid will receive substantial additional Federal funding, boosting their citizens' overall standard of living through the improvements in access to care and financial security described above and through reductions in uncompensated care costs. These additional Federal funds are also boosting demand for goods and services throughout States' economies today, which is likely increasing employment and economic activity today in States that have expanded the program; State decisions to expand Medicaid will similarly improve States' ability to weather economic shocks in the future. Finally, recent research suggests that access to health insurance coverage can have substantial benefits for workers' health, with potentially significant effects on their productivity over the long term. Each of these benefits for States' economies is discussed in greater detail below.

Higher Standard of Living

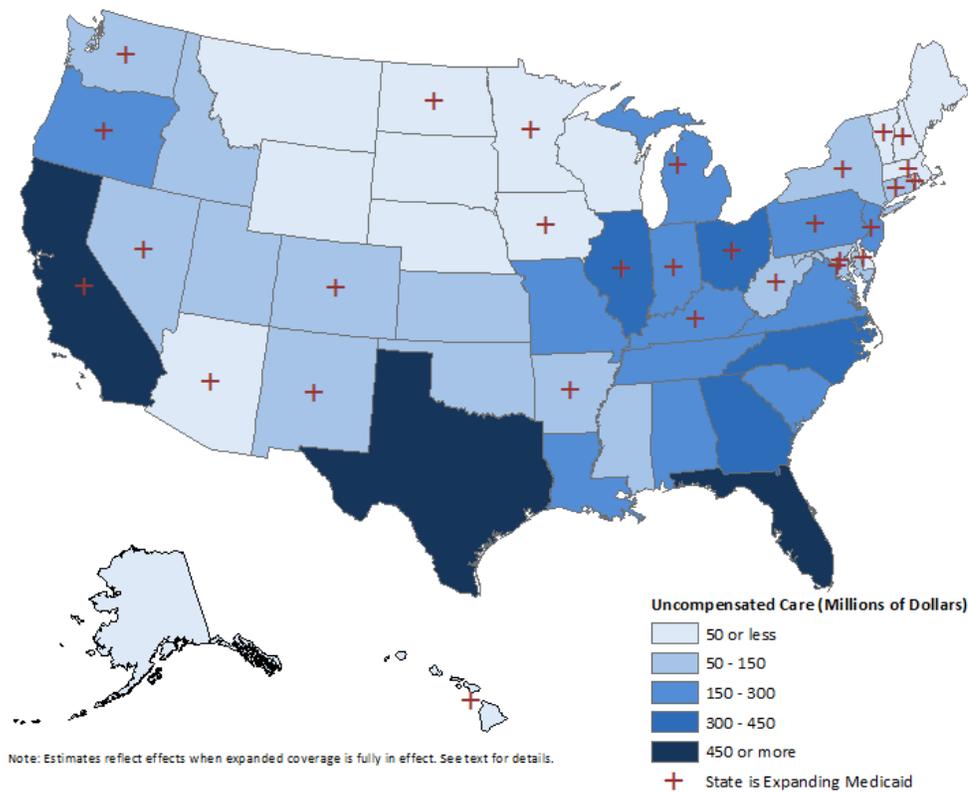
State decisions to expand Medicaid will draw substantial additional Federal funding into their economies, which will boost the overall standard of living of their citizens. In detail, when a State elects to expand its Medicaid program, the Federal government finances additional payments to medical providers in the State in exchange for providing medical services to the new Medicaid enrollees. These additional Medicaid outlays are only partially offset by reduced Federal spending on premium tax credits and cost-sharing assistance for individuals with incomes between 100 and 138 percent of the FPL who switch from receiving coverage through the Marketplaces to receiving coverage through Medicaid.

CEA has used projections by the Congressional Budget Office and Urban Institute to estimate the additional Federal outlays each State would have triggered if it had expanded Medicaid by January 1, 2014; the detailed methodology is presented in Appendix B. On the basis of this methodology, CEA estimates that if the 22 States that have not yet expanded Medicaid did so, they would receive an additional \$29 billion in Federal outlays during 2016 if expansion were fully in effect in that year and similar amounts in subsequent years. States that have already expanded Medicaid will generate additional Federal outlays of \$37 billion during 2016. State-by-State estimates of the additional Federal outlays resulting from each State's decision to expand Medicaid are reported in Table 6.

The additional Federal dollars States capture by expanding Medicaid will boost their citizens' standards of living in two ways. First, the bulk of these dollars will directly boost the standard of living of the newly insured by enabling them to receive additional health care and by reducing their out-of-pocket costs, making it easier to meet other pressing needs. Second, the rest of these dollars will compensate providers for care that was previously provided without payment, typically referred to as "uncompensated care." In turn, those funds will be available to the entities that were previously bearing the cost of that uncompensated care: some combination of State and local governments, privately-insured individuals, and medical providers, increasing those entities' ability to purchase other valued goods and services.

To estimate the magnitude of the reductions in uncompensated care, CEA built on estimates by Coughlin et al. (2014). Coughlin et al. use the Medical Expenditure Panel Survey to estimate uncompensated care costs per uninsured individual. Coughlin et al. estimate that, in 2013, each non-elderly person who was uninsured for the full year received \$1,005 in care for which the provider received no payment.¹¹ To translate this estimate from Coughlin et al. into an estimate of the effect of a State’s decision to expand Medicaid on the amount of uncompensated care in the state, this \$1,005 figure (updated to 2016 dollars using Congressional Budget Office projections of the Consumer Price Index; CBO 2014b) was multiplied by the number of people who will gain coverage if each State expands its Medicaid program. The resulting State-by-State estimates are reported in Table 6 and are mapped in Figure 7.

Figure 7. Projected Annual Reduction in Uncompensated Care in 2016 if Each State Decides to Expand Medicaid



¹¹ This \$1,005 figure corresponds to what Coughlin et al. call the amount of “implicitly subsidized” care. The authors estimate that total uncompensated care for each full-year-uninsured individual was \$1,702 in 2013. This larger amount includes care that was paid for through non-health insurance sources linked to an individual patient’s care, including worker’s compensation, automobile and homeowners’ insurance, and care provided directly by Federal, State, and local governments. Those additional amounts are not relevant to the current analysis. In addition, neither amount nets out funding (e.g., Disproportionate Share Hospital payments) that are intended to offset uncompensated care costs but are not linked to any particular uninsured patient’s care.

Table 6. Projected Effects on Federal Spending and Uncompensated Care if State Expands Medicaid

	Net Increase in Federal Spending in 2016 (Millions of Dollars; Calendar Year)	Reduction in Uncompensated Care in 2016 (Millions of Dollars; Calendar Year)
Not Yet Expanding Medicaid	28,990	4,540
Alabama	1,240	190
Alaska	90	20
Florida	5,900	790
Georgia	2,850	410
Idaho	300	60
Kansas	300	80
Louisiana	1,070	200
Maine	430	40
Mississippi	1,380	150
Missouri	1,370	200
Montana*	140	30
Nebraska	200	40
North Carolina	3,670	330
Oklahoma	770	130
South Carolina	1,250	170
South Dakota	190	30
Tennessee	1,770	190
Texas	5,440	1,170
Utah	240	70
Virginia	1,240	190
Wisconsin	280	20
Wyoming	110	10
Expanding Medicaid	37,050	4,410
Arizona	570	50
Arkansas	1,060	130
California	5,790	1,250
Colorado	870	140
Connecticut	710	80
Delaware	170	10
District of Columbia	60	20
Hawaii	280	40
Illinois	1,760	360
Indiana	1,170	240
Iowa	270	20
Kentucky	1,640	160
Maryland	1,330	120
Massachusetts	670	<10
Michigan	1,460	190
Minnesota	400	40
Nevada	500	90
New Hampshire	210	20
New Jersey	1,490	200
New Mexico	190	90
New York	5,210	150
North Dakota	220	20
Ohio	5,030	400
Oregon	740	170
Pennsylvania	3,350	280
Rhode Island	270	20
Vermont	110	<10
Washington	680	60
West Virginia	840	70

Sources: Urban Institute; CEA calculations.

Note: See text for details on the methodology. Numbers may not sum due to rounding.

* Montana has not yet expanded Medicaid but has indicated its intention to do so and is working with the Centers for Medicare and Medicaid Services to determine the structure of its expansion.

Greater Macroeconomic Resilience

The Federal dollars that flow into a State as a result of its decision to expand Medicaid also increase demand for goods and services throughout its economy. In particular, the increase in access to medical care for the newly insured boosts demand for medical goods and services, while the increased financial security for the newly insured and the reduction in the burden of uncompensated care for other members of the State's economy increases demand for a wide variety of other types of goods and services.

Over the period since January 2014, the higher demand generated by State Medicaid expansions has likely translated into higher employment and overall economic activity for States that have elected to expand their Medicaid programs since the U.S. economy has been operating well below full employment due to the aftereffects of the Great Recession. In an earlier version of this report, CEA used a standard "multiplier" analysis to estimate the potential increases in employment and overall economic activity if States had expanded their Medicaid programs as of January 2014 and found that these gains were likely to be quite substantial (CEA 2014b).

However, the current window for State Medicaid expansion decisions to boost overall employment and output is likely closing. Since December 2013, the U.S. economy has added 3.9 million jobs and the unemployment rate has fallen by 1.3 percentage points. The unemployment rate now stands at 5.4 percent, only modestly above many analysts' estimate of the level that corresponds to "full employment." While other labor market measures suggest more "slack" remains and make clear that the U.S. economy is still not fully healed from the Great Recession, it is equally clear that the economy is far closer to fully employing its productive resources than was the case in December 2013. When the amount of slack in the economy is limited, the effect of the increase in demand created by State Medicaid expansions will become smaller and eventually disappear entirely since increases in demand in one sector will mostly tend to reallocate resources away from other sectors, rather than increase total production.

While the current window for State Medicaid expansions to provide a needed boost to aggregate demand may be closing, this is unlikely to be the last time that State Medicaid expansions (and the Affordable Care Act as a whole) help stabilize States' economies—and the economy of the Nation as a whole—in the face of economic headwinds. Recent discussions of macroeconomic policy have suggested that changes in the United States economy have increased the likelihood that monetary policy will be constrained by the zero lower bound in future recessions, raising the likelihood that fiscal policy will have to play an important role in combatting recessions in the future (Summers 2014; Teulings and Baldwin 2014). That makes improvements in the United States' system of automatic stabilizers—programs that automatically expand during hard times and contract during good ones—particularly valuable.

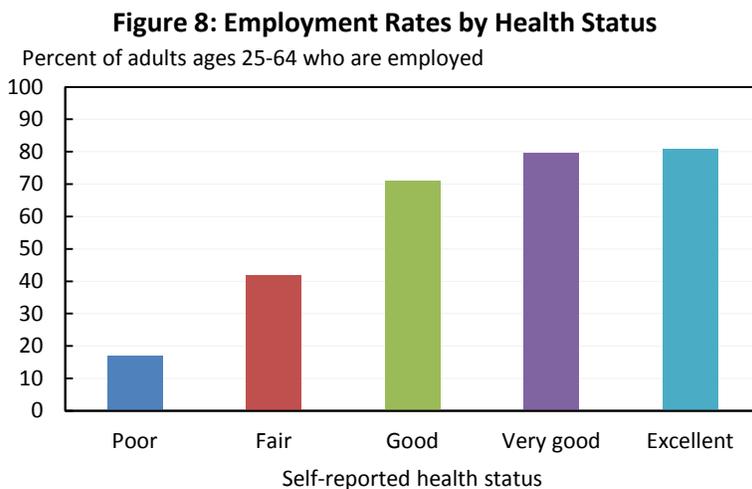
While expanding Medicaid under the Affordable Care Act is not normally thought of as a way of improving the Nation's system of automatic stabilizers, it is just that. Expanded availability of

coverage through Medicaid will help safeguard access to health care and cushion household budgets in the face of the job and income losses that occur during a recession. Expanding Medicaid will thus help households smooth consumption and will expand aggregate demand when it would otherwise be impaired, reducing the severity of future recessions while better protecting families from their consequences.¹² Furthermore, because the expansion is almost entirely Federally funded, States can achieve these benefits without substantially reducing other spending or increasing taxes in the face of a downturn. Thus, States that elect to expand their Medicaid programs are likely to be better protected from the economic consequences of the next downturn, whenever it arrives.

Healthier, More Productive Workers

In addition to helping ensure that State economies make full use of their productive resources at times of weak aggregate demand, States’ Medicaid expansion decisions may also change the productive capacity of their workforces over the longer-run by affecting workers’ productivity and labor supply decisions.

Medicaid expansion could affect workers’ productivity and labor supply decisions through at least two channels. First, by improving workers’ access to care and their physical and—possibly particularly important—mental health, Medicaid expansions will help people live longer, healthier lives. In light of the strong cross-sectional correlation between better health and employment documented in Figure 8, it is intuitively plausible that these workers will miss fewer days of work, be less likely to become disabled, spend more years in the workforce, and be more productive while on the job.



Source: Current Population Survey, Annual Social and Economic Supplement, 2014; CEA calculations.

On the other hand, access to coverage through Medicaid would likely cause some workers to reduce their labor supply, either because having Medicaid coverage eliminate the need to work

¹² The Affordable Care Act’s tax credits and cost-sharing assistance for eligible individuals purchasing through the Marketplaces will play a similar role for higher-income families, with similar macroeconomic benefits.

in order to obtain health insurance or because Medicaid causes individuals to choose to work less in order to avoid losing access to Medicaid coverage.¹³ Reductions in labor supply driven by the desire to retain access to Medicaid coverage generally reduce economic efficiency. By contrast, reductions in labor supply driven by the availability of health insurance outside the workplace can improve economic efficiency if they permit workers to choose to pursue a higher-value alternative activity like caring for children or other family members, pursuing additional education, or starting a business. Some reductions in this category are commonly described as reflecting reductions in “job lock” or “employment lock.”

The best available evidence suggests that the net effects of Medicaid expansion on the labor supply of workers like those affected by Medicaid expansion under the Affordable Care Act are small in the short-run. The highest-quality evidence once again comes from the OHIE, which concluded that Medicaid enrollment had small and statistically insignificant effects on labor supply over a period of slightly more than one year after coverage began (Baicker et al. 2014).¹⁴

However, recent research suggests that effects on workers’ productivity may become important over the long run. These papers have examined the consequences of prior expansions of insurance coverage to children through Medicaid or the Children’s Health Insurance Program (CHIP). Because many of these program expansions are now decades old, it is increasingly feasible to study how expanding access to health insurance through these programs has affected beneficiaries’ outcomes as adults. While these studies do not apply directly to the population affected by State Medicaid expansions under the Affordable Care Act (which primarily target adults), this research compellingly establishes that access to insurance coverage at a point in time can have important benefits for labor market outcomes much later in life, benefits that appear to be mediated at least in part through durable improvements in health.

In particular, two recent studies have used variation in Medicaid/CHIP eligibility rules across states and over time to examine how Medicaid eligibility in childhood affects education and

¹³ Other portions of the Affordable Care Act’s coverage expansion could drive increases in labor supply. For example, for individuals who were eligible for Medicaid before the Affordable Care Act, expanded Medicaid eligibility and the availability of Marketplace coverage means that they can now increase their labor supply without worrying that they will lose their health insurance coverage.

¹⁴ Some recent non-randomized quasi-experimental studies have found different results. Dague, DeLeire, and Leininger (2014) study an episode in which a portion of Wisconsin’s Medicaid program was closed to new enrollment and conclude that Medicaid enrollment drove modest reductions in labor supply. Garthwaite, Gross, and Notowidigdo (2014) study a large-scale disenrollment from Tennessee’s TennCare program in the mid-2000s and estimate much larger effects on labor supply. The reasons for these differing results are not well understood. They could arise because the effects of Medicaid actually differed in the settings studied by the various authors; notably, the population studied by Garthwaite, Gross, and Notowidigdo is somewhat higher income than the population affected by the Affordable Care Act’s Medicaid expansion. On the other hand, the differences could reflect purely statistical factors. The quasi-experimental estimates could be contaminated by unobserved differences between those who do and do not enroll in Medicaid that the authors are unable to fully control for, which provides a good reason to place more weight on the OHIE estimates. The Garthwaite, Gross, and Notowidigdo estimate is also considerably less precise than the other two estimates, suggesting that their very large estimate may be, to some extent, a statistical fluke.

labor-market outcomes in adulthood. The first of these studies concludes that eligibility for Medicaid/CHIP coverage in childhood substantially increases children's probability of completing high school and college (Cohodes et al. 2014). The second study finds similar evidence of improvements in educational attainment plus direct evidence of increased earnings in early adulthood, at least for women. It also finds evidence that both men and women pay more in income and payroll taxes in their young adult years, potentially offsetting a substantial fraction of the cost of providing Medicaid/CHIP coverage to children (Brown et al. 2015).

The mechanism behind these long-run benefits is unclear, but a pair of complementary studies suggest that long-lasting improvements in health status may be playing an important role. These studies use a feature of Federal Medicaid eligibility rules that caused children born in October 1983 or later to be more likely to qualify for Medicaid coverage during their pre-teen and early-teen years than children born before October 1983 (Meyer and Wherry 2012; Wherry et al. 2015). The authors find that, in the socioeconomic groups most affected by the discontinuity in coverage eligibility, children born on the October 1983 side of the eligibility threshold experience lower mortality in their late teen years and are substantially less likely to be hospitalized as adults. These findings imply that access to Medicaid coverage in childhood generated durable improvements in health.

Conclusion

This report documents the far-reaching benefits that States that have already expanded Medicaid under the Affordable Care Act are receiving, and the benefits that States that have not yet expanded the program could achieve if they elected to do so. In particular, this analysis shows that by expanding their Medicaid programs, States can improve access to essential medical care, reduce financial hardship, improve their citizens' physical and mental health, and claim billions of dollars in Federal funding that could raise their citizens' standard of living and make their economies more resilient in the future. The Administration hopes that more States will decide to take advantage of these opportunities in the months and years ahead and stands ready to work with States to make these opportunities a reality.

References

- (ASPE) Assistant Secretary for Planning and Evaluation, Department of Health and Human Services. 2015. "Health Insurance Coverage and the Affordable Care Act." http://www.aspe.hhs.gov/health/reports/2015/uninsured_change/ib_uninsured_change.pdf.
- Baicker, Katherine, et al. 2013. "The Oregon Experiment – Medicaid's Effects on Clinical Outcomes." *New England Journal of Medicine* 368, no. 18: 1713-1722.
- _____. 2014. "The Impact of Medicaid on Labor Force Activity and Program Participation: Evidence from the Oregon Health Insurance Experiment." *American Economic Review*, 104(5): 322-28.
- Black, Lindsey I. and Robin A. Cohen. 2015. "Insurance Status by State Medicaid Expansion Status: Early Release of Estimates From the National Health Interview Survey, 2013–September 2014." http://www.cdc.gov/nchs/data/nhis/health_insurance/MedExAUER.pdf.
- Brown, David, Amanda Kowalski, and Ithai Lurie. 2015. "Medicaid as an Investment in Children: What is the Long-Term Impact on Tax Receipts?" Working Paper 20835. Cambridge, MA: National Bureau of Economic Research.
- Buettgens, Matthew, John Holahan, and Hannah Recht. 2015. "Medicaid Expansion, Health Coverage, and Spending: An Update for the 21 States That Have Not Expanded Eligibility." <http://kff.org/medicaid/issue-brief/medicaid-expansion-health-coverage-and-spending-an-update-for-the-21-states-that-have-not-expanded-eligibility/>.
- Card, David, Carlos Dobkin, Nicole Maestas. 2009. "Does Medicare Save Lives?" *The Quarterly Journal of Economics* 124, no 2: 597-636.
- (CBO) Congressional Budget Office. 2012a. "Estimates for the Insurance Coverage Provisions of the Affordable Care Act Updated for the Recent Supreme Court Decision." <http://www.cbo.gov/publication/43472>.
- _____. 2012b. "Updated Budget Projections: Fiscal Years 2012 to 2022." <http://www.cbo.gov/publication/43119>.
- _____. 2014a. "The Budget and Economic Outlook: 2014 to 2024." <http://www.cbo.gov/publication/45010>.
- _____. 2014b. "Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act, April 2014." <http://www.cbo.gov/publication/45231>.
- _____. 2015. "Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act, March 2015." <https://www.cbo.gov/publication/43900>.
- (CEA) Council of Economic Advisers. 2014. "Methodological Appendix: Methods Used to Construct a Consistent Historical Time Series of Health Insurance Coverage." _____ . 2014. "Missed Opportunities: The Consequences of State Decisions Not To Expand Medicaid."
- (CMS) Centers for Medicare & Medicaid Services. 2009. "Medicare Enrollment: National Trends 1966-2008." <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareEnrpts/downloads/HI08.pdf>.

- _____. 2014. "Medicaid & CHIP: April 2014 Monthly Applications, Eligibility Determinations, and Enrollment Report." <http://www.medicaid.gov/AffordableCareAct/Medicaid-Moving-Forward-2014/Downloads/April-2014-Enrollment-Report.pdf>.
- Cohen, Robin A., Diane M. Makuc, Amy B. Bernstein, Linda T. Bilheimer, and Eve Powell-Griner. 2009. "Health Insurance Coverage Trends, 1959-2007: Estimates from the National Health Interview Survey." National Health Statistics Reports, 17. National Center for Health Statistics. <http://www.cdc.gov/nchs/data/nhsr/nhsr017.pdf>.
- Cohen Ross, Donna, et al. 2009. "A Foundation for Health Reform: Findings of a 50 State Survey of Eligibility Rules, Enrollment and Renewal Procedures, and Cost-Sharing Practices in Medicaid and CHIP for Children and Parents During 2009, Data Tables." http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8028_t.pdf.
- Cohodes, Sarah, Daniel Grossman, Samuel Kleiner, and Michael F. Lovenheim. 2014. "The Effect of Child Health Insurance Access on Schooling: Evidence from Public Health Insurance Expansions." Working Paper 20178. Cambridge, MA: National Bureau of Economic Research.
- Coughlin, Teresa A., et al. 2014. "An Estimated \$84.9 Billion in Uncompensated Care Was Provided in 2013; ACA Payment Cuts Could Challenge Providers." *Health Affairs* 33, no 5: 807-814.
- Dague, Laura, and Thomas DeLeire, and Lindsey Leininger. 2014. "The Effect of Public Insurance Coverage for Childless Adults on Labor Supply." Working Paper 20111. Cambridge, MA: National Bureau of Economic Research.
- Eibner, Christine, et al. 2010. "Establishing State Health Insurance Exchanges: Implications for Health Insurance Enrollment, Spending, and Small Businesses." http://www.rand.org/content/dam/rand/pubs/technical_reports/2010/RAND_TR825.pdf.
- Finkelstein, Amy and Robin McKnight. 2008. "What did Medicare Do? The Initial Impact of Medicare on Mortality and Out of Pocket Medical Spending." *Journal of Public Economics* 92, no. 7: 1644-1668.
- Finkelstein, Amy, et al. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year." *The Quarterly Journal of Economics* 127, no 3: 1057-1106.
- Frakt, Austin. 2013a. "My Reply to Jim Manzi." <http://theincidentaleconomist.com/wordpress/my-reply-to-jim-manzi/>.
- _____. 2013b. "The Oregon Medicaid Study and Cholesterol." <http://theincidentaleconomist.com/wordpress/the-oregon-medicaid-study-and-cholesterol/>.
- Garthwaite, Craig, Tal Gross, and Matthew Notowidigdo. 2014. "Public Health Insurance, Labor Supply, and Employment Lock." *Quarterly Journal of Economics* 129, no. 2: 653-696.
- Guttmacher Institute. 2014. "Medicaid Family Planning Eligibility Expansions." http://www.guttmacher.org/statecenter/spibs/spib_SMFPE.pdf.
- Gross, Tal and Matthew J. Notowidigdo. 2011. "Health insurance and the consumer bankruptcy decision: Evidence from expansions of Medicaid." *Journal of Public Economics* 95, no 7-8: 767-778.

- Heberlein, Martha et al. 2013. "Getting into Gear for 2014: Findings from a 50-State Survey of Eligibility, Enrollment, Renewal, and Cost-sharing Policies in Medicaid and CHIP, 2012-2013." <http://kaiserfamilyfoundation.files.wordpress.com/2013/05/8401.pdf>.
- Holahan, John, Matthew Buettgens, Stan Dorn. 2013. "The Cost of Not Expanding Medicaid." <http://kaiserfamilyfoundation.files.wordpress.com/2013/07/8457-the-cost-of-not-expanding-medicaid4.pdf>.
- Holahan, John, et al. 2012. "The Cost and Coverage Implications of the ACA Medicaid Expansion: National and State-by-State Analysis." <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8384.pdf>.
- Huang, Elbert S. and Kenneth Finegold. 2013. "Seven Million Americans Live in Areas Where Demand for Primary Care May Exceed Supply by More than 10 Percent." *Health Affairs* 32, no. 3: 614-621.
- (KFF) Kaiser Family Foundation. 2009. "Expanding Health Coverage for Low-Income Adults: Filling the Gaps in Medicaid Eligibility." <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/7900.pdf>.
- _____. 2010. "Expanding Medicaid to Low-Income Childless Adults Under Health Reform: Key Lessons from State Experiences." <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8087.pdf>.
- Kenney, Genevieve M., et al. 2012. "Opting in to the Medicaid Expansion under the ACA: Who Are the Uninsured Adults Who Could Gain Coverage?" <http://www.urban.org/UploadedPDF/412630-opting-in-medicaid.pdf>.
- Klemm, John D. 2000. "Medicaid Spending: A Brief History." *Health Care Financing Review* 22(1): 105-112.
- Levy, Helen and David Meltzer. 2008. "The Impact of Health Insurance on Health." *Annual Review of Public Health* 29, 399-409.
- Long, Sharon K., et al. 2015. "Taking Stock: Gains in Health Insurance Coverage under the ACA as of March 2015." <http://hrms.urban.org/briefs/Gains-in-Health-Insurance-Coverage-under-the-ACA-as-of-March-2015.html>.
- McWilliams, Michael J. et al. 2007. "Use of Health Services by Previously Uninsured Medicare Beneficiaries." *New England Journal of Medicine* 357, no. 2: 143-153.
- Meyer, Bruce D. and Wherry, Laura R. 2012. "Saving Teens: Using a Policy Discontinuity to Estimate the Effects of Medicaid Eligibility." Working Paper 18309. Cambridge, MA: National Bureau of Economic Research.
- Mulligan, Casey B. 2013. "The Perils of Significant Misunderstandings in Evaluating Medicaid." *The New York Times*. <http://mobile.nytimes.com/blogs/economix/2013/06/26/the-perils-of-significant-misunderstandings-in-evaluating-medicaid/>.
- Newhouse, Joseph P. 1993. *Free for All? Lessons from the RAND Health Insurance Experiment*. Harvard University Press.
- Richardson, Sam, Aaron Carroll, Austin Frakt. 2013. "More Medicaid Study Power Calculations." <http://theincidentaleconomist.com/wordpress/more-medicaid-study-power-calculations-our-rejected-nejm-letter/>.
- Ruggles, Steven, et al. 2010. "Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]." Minneapolis: University of Minnesota.

- Sommers, Benjamin D., Katherine Baicker, and Arnold M. Epstein. 2012. "Mortality and Access to Care among Adults after State Medicaid Expansions." *The New England Journal of Medicine* 367, no. 11: 1025-1034.
- Sommers, Benjamin D., Sharon K. Long, and Katherine Baicker. 2014. "Changes in Mortality after Massachusetts Health Care Reform: A Quasi-Experimental Study." *Annals of Internal Medicine* 160, no. 9: 585-593.
- Sonfield, Adam, Casey Alrich, and Rachel Benson Gold. 2008. "State Government Innovation in the Design and Implementation of Medicaid Family Planning Expansions." <http://www.guttmacher.org/pubs/2008/03/28/StateMFPEpractices.pdf>.
- Summers, Lawrence. 2014. "U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound." *Business Economics*, vol. 49, no. 2, pp. 65-73. February.
- Taubman, Sarah L., et al. 2014. "Medicaid Increases Emergency-Department Use: Evidence from Oregon's Health Insurance Experiment." *Science* 343: 263-268.
- Teulings, Coen, and Richard Baldwin, eds. 2014. *Secular Stagnation: Facts, Causes and Cures*. London: Centre for Economic Policy Research.
- Wherry, Laura, Sarah Miller, Robert Kaestner, and Bruce Meyer. 2015. "Childhood Medicaid Coverage and Later Life Health Care Utilization." Working Paper 20929. Cambridge, MA: National Bureau of Economic Research.

Appendix A: Estimating the Age and Gender Mix of Individuals Who Would Gain Coverage if Their State Expands Medicaid

Several of the OHIE estimates of the effect of Medicaid on receipt of preventive care apply only to particular age or gender subgroups. Unfortunately, the published HPSM estimates of the increase in insurance coverage arising from States' decisions to expand Medicaid do not detail the ages and genders of the individuals who would gain coverage. To address this issue, CEA estimated the share of new Medicaid enrollees who fall in the relevant subgroups using the Census Bureau's American Community Survey (ACS), a large household survey that collects information on income, insurance status, state of residence, and other relevant family characteristics.¹⁵

In detail, this was done in two steps. First, CEA identified individuals likely to gain coverage through Medicaid if their State expanded the program using the following criteria; namely, individuals who: (1) are adults age 19 to 64 with family income under 138 percent of the FPL; (2) were not eligible for Medicaid under pre-ACA State Medicaid income eligibility criteria;¹⁶ (3) do not report being enrolled in Medicaid;¹⁷ and (4) do not report being enrolled in employer-sponsored coverage. Among that group, it is straightforward to estimate the share of potential new enrollees falling in each age-gender subgroup of interest. These shares can then be applied to the State-level HPSM estimates to obtain the increase in insurance in each relevant age-gender subgroup as a result of each State's decision to expand Medicaid.

In implementing this approach, income is defined as total cash income minus Supplemental Security Income and means-tested cash assistance (e.g. Temporary Assistance for Needy Families), a definition that closely matches modified adjusted gross income (MAGI), the income definition used to assess eligibility for Medicaid under the Affordable Care Act. Due to data limitations, certain other types of income that are not included in MAGI (e.g. child support) could not be excluded from the income measure used, but any resulting biases are likely to be small. Families units were defined using an algorithm for defining "health insurance units" (HIUs) developed by State Health Access Data Assistance Center (SHADAC). A description of this algorithm and programs for implementing it are available from the SHADAC website.¹⁸

It is important to note that this approach has certain limitations. First, Medicaid coverage is only available to citizens and certain legal residents, and this approach makes no attempt to account for the fact that the ACS includes ineligible non-citizens. Second, the method used to

¹⁵ This analysis uses the IPUMS-USA pre-processed extracts of the ACS for years 2010-2012 (Ruggles et al. 2010).

¹⁶ Information on pre-ACA eligibility criteria are obtained from various reports produced by the Kaiser Family Foundation (Cohen Ross, et al. 2009; KFF 2009; KFF 2010). Pre-ACA eligibility criteria as those in effect in 2009; this approach is consistent with HPSM, which also uses treats pre-ACA eligibility criteria as those in effect in 2009 (Holahan et al. 2012).

¹⁷ This provides a crude way of excluding individuals who were eligible for Medicaid before the Affordable Care Act as a result via more expansive eligibility criteria that are applicable only to specific groups, like those with disabilities. These more detailed eligibility criteria are challenging to model in survey data.

¹⁸ See <http://www.shadac.org/publications/defining-family-studies-health-insurance-coverage>.

model pre-ACA Medicaid eligibility rules is somewhat crude, and more sophisticated methods might give better results. Notably, however, Kenney et al. (2012) handle both of these issues in more sophisticated ways and arrive at broadly similar estimates of the share of potential new enrollees falling in specified age and gender groups. Finally, individuals' propensity to actually enroll in Medicaid coverage may differ across age and gender groups; failing to account for these differing enrollment propensities could cause this approach to overstate or understate the number of individuals gaining coverage in each of these groups.

Appendix B: Estimating Effects on Federal Outlays if States Expand Medicaid

The most important input into analyzing how State decisions to expand Medicaid affect total employment and overall economic activity is how each State's decision affects Federal outlays. CEA estimated these amounts in two steps. First, estimates from the Congressional Budget Office (CBO) were used to estimate the total change in Federal outlays if all states expanded Medicaid relative to if no states expanded the program. Second, CEA distributed that national total across States using HPSM estimates. This appendix describes each step in greater detail.

Focusing first on the national totals, the net change in Federal outlays if all states elect to expand Medicaid consists of two components: (1) an increase in Federal outlays reflecting additional spending on Medicaid coverage; and (2) a reduction in Federal costs to provide premium tax credits and cost-sharing assistance. The second, offsetting, component reflects the fact that some individuals in families with incomes between 100 and 138 percent of the FPL will receive coverage through Medicaid if their State does expand the program and would instead obtain coverage through the Marketplace if their states does not expand Medicaid. CEA used CBO estimates to estimate the size of each of these two components in a scenario in which all States expanded Medicaid, relative to a scenario in which no States expanded Medicaid.

To estimate the direct effect on Federal Medicaid outlays, the starting point was CBO's March 2012 estimates of the effect of the Affordable Care Act's coverage expansion on Federal Medicaid spending (CBO 2012a). Because these estimates pre-date the Supreme Court's decision in *NFIB v. Sebelius*, they implicitly reflect the increase in Federal Medicaid outlays if all States expand the program.¹⁹ CEA then adjusted these amounts to reflect changes in CBO's assumptions regarding per-enrollee Medicaid costs since CBO's March 2012 baseline.²⁰

To estimate the offsetting savings on premium tax credits and cost-sharing assistance, CEA used CBO's estimate of how the Supreme Court's decision in *NFIB v. Sebelius* affected the costs of these programs (CBO 2012b). CBO estimated that the Supreme Court decision caused a \$28 billion increase in Marketplace subsidy costs in fiscal year 2022. CBO also indicated that they assumed that two-thirds of the overall expansion population would live in States that declined

¹⁹ In principle, these estimates also include Federal spending associated with previously eligible individuals who would newly enroll in Medicaid even if their State failed to expand the program, perhaps due to enhanced outreach associated with the Marketplaces. In practice, the number of such individuals is likely to be relatively small, so including them is unlikely to significantly affect the results of this analysis.

²⁰ Specifically, CEA used the percent change in CBO's projection of per-enrollee costs for children from CBO's March 2012 baseline to its April 2014 baseline (CBO 2014b). While cost trends for children may differ slightly from those for adults, the changes in CBO's reported per-enrollee costs for adults incorporate changes in the composition of the Medicaid population caused by changes in States' decisions about whether or not to expand Medicaid. As such, they cannot be used to adjust for changes in underlying per-enrollee costs across different vintages of CBO's projections. We did not adjust for changes in these costs from CBO's April 2014 to its March 2015 baseline since CBO changed the basis on which it reports per-enrollee costs between these reports, but CBO's narrative discussion of changes in its cost projections over this period suggests that adjusting for any such changes would have only a small effect on the results.

to expand the Medicaid program for individuals between 100 and 138 percent of the FPL. This estimate implies that, if all States declined to expand the program, the reduction in premium tax credit and cost-sharing assistance costs would be 50 percent larger than the \$28 billion referenced above, so CEA scaled up the \$28 billion estimate accordingly. CEA then projected this fiscal year 2022 estimate back to the present by assuming it would grow in proportion to total Marketplace subsidy costs reported in CBO's March 2012 baseline. Finally, similar to the Medicaid estimates, the resulting stream of costs was adjusted for changes in CBO's projections of per-enrollee subsidy costs since CBO's March 2012 baseline.^{21,22}

To distribute these national amounts across states, CEA relied upon estimates from the Urban Institute's HIPSM (described in the main text). Specifically, incremental Medicaid outlays were distributed across States using HIPSM's State-by-State estimates of the incremental Medicaid outlays in 2016 if each State elects to expand coverage. The offsetting savings on premium tax credits and cost-sharing assistance were distributed using the State-specific difference between the increase in Medicaid enrollment and the increase in overall insurance coverage that occurs if that State expends Medicaid (once again, using estimates for 2016); this difference approximates the number of individuals who would switch from receiving coverage through the Marketplace to receiving coverage through Medicaid if the State expanded Medicaid.²³

²¹ CBO's per-enrollee subsidy estimates are for calendar years, while the outlay estimates are for fiscal years. In making this adjustment, CEA used an appropriate blend of the calendar year per-enrollee estimates to adjust each fiscal year estimate.

²² Specifically, CEA used the percent change in CBO's projection of per-enrollee costs for children from CBO's March 2012 baseline to its March 2015 baseline (CBO 2015). The overall change in per-enrollee subsidy costs from CBO's March 2012 baseline to its March 2015 baseline may differ from the change in per-enrollee costs for a given enrollee with income between 100 and 138 percent of FPL, for several reasons. First, premium tax credit covers a larger share of the total premium for this group than for the average enrollee, and these individuals receive cost-sharing assistance, unlike some higher-income enrollees. In addition, some of the change in per-enrollee costs from CBO's March 2012 baseline to its April 2014 baseline may reflect compositional changes if individuals who were switched from Medicaid to the Marketplaces by the Supreme Court Decision differ from the typical Marketplace enrollee. The effect of these imperfections on the overall results of this analysis are small.

²³ This difference may also reflect some offsetting reduction in the number of individuals enrolled in employer coverage, but it appears that the reduction in Marketplace coverage is the primary component. In any case, the State-level outlay estimates are relatively insensitive to the precise method used to distribute the offsetting tax credit and cost-sharing assistance costs.