MISSED OPPORTUNITIES:

THE CONSEQUENCES OF STATE DECISIONS NOT TO EXPAND MEDICAID

The Council of Economic Advisers

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Summary and Introduction

The Affordable Care Act has expanded high-quality, affordable health insurance coverage to millions of Americans. One important way in which the Affordable Care Act is expanding coverage is by providing generous financial support to States that opt to expand Medicaid eligibility to all non-elderly individuals in families with incomes below 133 percent of the Federal Poverty Level.

To date, 26 States and the District of Columbia have seized this opportunity, and since the beginning of the Affordable Care Act's first open enrollment period, 5.2 million people have gained Medicaid or Children's Health Insurance Program (CHIP) coverage in these States, a tally that will grow in the months and years ahead as Medicaid enrollment continues. In contrast, 24 States have not yet expanded Medicaid—including many of the States that would benefit most and sometimes because State legislatures have defied even their own governors—and denied health insurance coverage to millions of their citizens. Researchers at the Urban Institute estimate that, if these States do not change course, 5.7 million people will be deprived of health insurance coverage in 2016. Meanwhile, these States will forgo billions in Federal dollars that could boost their economies.

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 below. However, this evidence is clear that the consequences of States' decisions are far-reaching, with implications for the health and well-being of their citizens, their economies, and the economy of the Nation as a whole.

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, greater financial security, and better health outcomes 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:

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

  Having health insurance increases the probability that individuals have a usual source of clinic care, like a primary care physician's office. If the 24 States that have not yet expanded Medicaid did so, an additional 1.4 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.

- *651,000 more people would receive all care they feel they need in a typical year.*

  Having health insurance increases the probability that individuals report receiving "all needed care" over the prior year. If the 24 States that have not yet expanded Medicaid did so, an additional 651,000 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 494,000 people.

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

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

  - Cholesterol-level screenings: If the 24 States that have not yet expanded Medicaid did so, then each year an additional 829,000 people would receive cholesterol-level screenings once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 630,000 people.

  - Mammograms: If the 24 States that have not yet expanded Medicaid did so, then each year an additional 214,000 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 161,000 women in this age group.

  - Papanicolaou tests ("pap smears"): If the 24 States that have not yet expanded Medicaid did so, then each year an additional 345,000 women would receive pap smears once expanded coverage was fully in effect. States that have already expanded Medicaid will achieve this outcome for 261,000 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 24 States that have not yet expanded Medicaid did so, they would enable an additional 15.4 million physician office visits each year once expanded coverage was fully in effect. States that have already expanded Medicaid will enable an additional 11.7 million physician office visits each year.

Greater financial security

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

- *255,000 fewer people will face catastrophic out-of-pocket medical costs in a typical year.*

  High-quality health insurance coverage dramatically reduces the risk that individuals face catastrophic out-of-pocket medical costs (defined as costs in excess of 30 percent of income). If the 24 States that have not yet expanded Medicaid did so, 255,000 fewer people would face catastrophic medical costs each year once expanded coverage was fully in effect. States that have already expanded Medicaid will eliminate catastrophic medical costs for 194,000 people each year.

- *810,000 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 24 states that have not yet expanded Medicaid did so, 810,000 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 614,000 people each year.

Better mental health

Having insurance improves mental health. This analysis estimates that if the 24 States that have not yet expanded Medicaid did so, there would be 458,000 fewer people experiencing depression once expanded coverage was fully in effect. States that have already expanded Medicaid will reduce the number of people experiencing depression by 348,000.

Better overall health

Having insurance coverage improves overall health. This analysis estimates that if the 24 States that have not yet expanded Medicaid did so, 757,000 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 575,000 people.

Benefits of Expanding Medicaid for State Economies

Healthier workers who are less financially stressed and in better mental health may be more likely to participate in the workforce or have higher productivity on the job, economic benefits that could be important over the long run. More immediately, States that fail to expand Medicaid are also passing up billions of Federal dollars that could boost their economies today. By increasing low-income individuals' ability to access care, relieving cash-strapped families of high out-of-pocket costs, and reducing uncompensated care, the expansion in insurance coverage enabled by those Federal dollars would boost demand for medical and non-medical goods and services. Over the next few years, while the recovery from the 2007-2009 recession remains incomplete and slack remains in the economy, this increase in demand would boost overall employment and economic activity.

This analysis estimates that expanding Medicaid would generate the following benefits for States' economies today:

Additional Federal funds

By expanding Medicaid, States can pull billions in additional Federal funding into their economies every year, with no State contribution over the next three years and only a modest one thereafter for coverage for newly eligible people. If the 24 States that have not yet expanded Medicaid had done so as of January 1, those States and their citizens would have received an additional $88 billion in Federal support through calendar year 2016. States that have already expanded Medicaid will receive $84 billion over that period.

More jobs

By pumping more Federal dollars into their economies, States' decisions to expand Medicaid create jobs. If the 24 States that have not yet expanded Medicaid had done so as of January 1, they would have boosted employment by 85,000 jobs in 2014, 184,000 jobs in 2015, and a total of 379,000 job-years through 2017. States that have already expanded Medicaid will boost employment by 79,000 jobs in 2014, 172,000 jobs in 2015, and a total of 356,000 job-years through 2017.

Greater overall economic activity

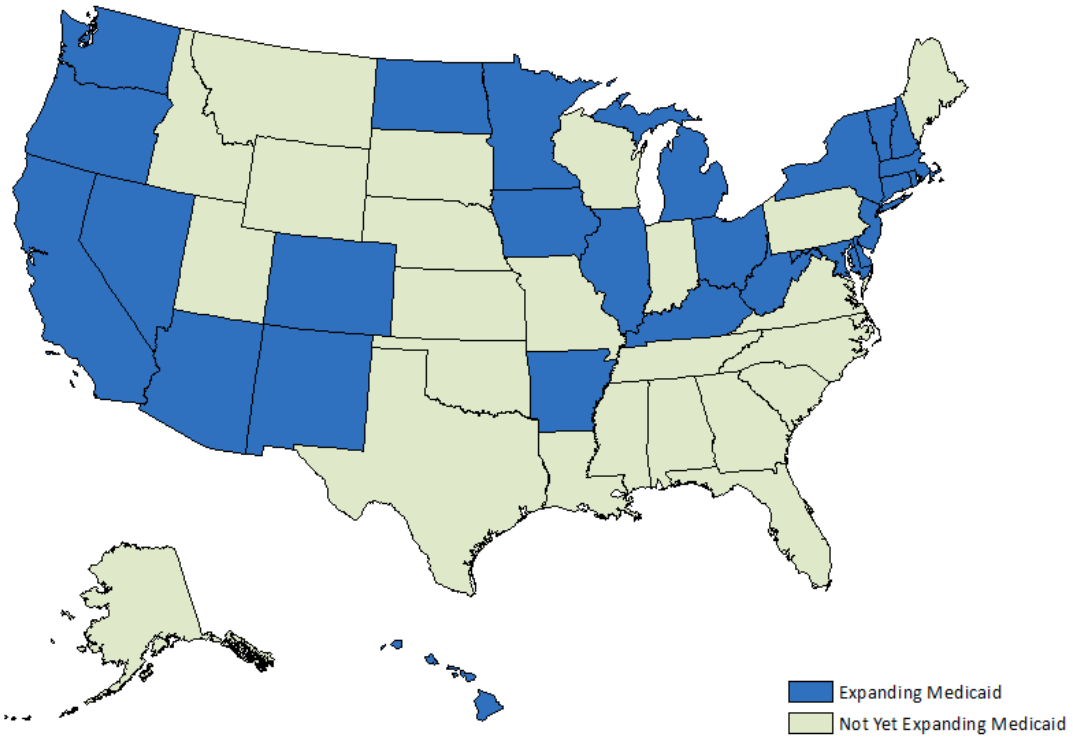
By pumping more Federal dollars into their economies, States' decisions to expand Medicaid increase the overall level of economic activity. If the 24 States that have not yet expanded Medicaid had done so as of January 1, they would have created an additional $66 billion in total economic activity through 2017. States that have already expanded Medicaid will create $62 billion in total economic activity through 2017.

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: $16,105 for a single adult or $32,913 for a family of four in 2014. Because children at these income levels are generally already eligible for Medicaid or the Children's Health Insurance Program, this expansion primarily affects 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). As depicted in Figure 1, as of July 2, 2014, 26 States and the District of Columbia had taken advantage of this option to expand their Medicaid programs.

Figure 1. States Expanding and Not Yet Expanding Medicaid



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 averaging around 57 percent and ranging from 50 percent to just under 74 percent in fiscal year 2014.[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 by some of these same authors has concluded that these other savings may be substantial (Buettgens et al. 2011).

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.

[1] Children (and, in some States, pregnant women) are eligible for public insurance coverage through a related program, the Children's Health Insurance Program. Under the matching formula used for CHIP, the Federal government pays a higher share of the costs, averaging about 70 percent and ranging across States between 65 to 81 percent in fiscal year 2014.

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, CEA 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, CEA 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 Nation's economic performance.

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 sampling errors, as well as other imperfections that can cause estimates to systematically overstate or understate the effects of the policy changes studied. 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 CEA's methodology in greater detail.

Effects on Insurance Coverage

The most direct consequence of State decisions 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. In this report, CEA relies upon published results 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 insurance coverage in that State (Holahan et al. 2012; Holahan, Buettgens, and Dorn 2013). 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).

Table 1. Increase in Number of People with Insurance Coverage if State Expands Medicaid	
	People with Insurance Coverage in 2016
Not Yet Expanding Medicaid	**5,692,000**
Alabama	235,000
Alaska	26,000
Florida	848,000
Georgia	478,000
Idaho	55,000
Indiana	262,000
Kansas	100,000
Louisiana	265,000
Maine	28,000
Mississippi	165,000
Missouri	253,000
Montana	38,000
Nebraska	48,000
North Carolina	377,000
Oklahoma	123,000
Pennsylvania	305,000
South Carolina	198,000
South Dakota	26,000
Tennessee	234,000
Texas	1,208,000
Utah	74,000
Virginia	210,000
Wisconsin	120,000
Wyoming	16,000
Expanding Medicaid	**4,321,000**
Arizona	51,000
Arkansas	143,000
California	1,390,000
Colorado	154,000
Connecticut	84,000
Delaware	7,000
District of Columbia	19,000
Hawaii	39,000
Illinois	398,000
Iowa	20,000
Kentucky	177,000
Maryland	135,000
Massachusetts	2,000
Michigan	212,000
Minnesota	42,000
Nevada	105,000
New Hampshire	26,000
New Jersey	227,000
New Mexico	96,000
New York	167,000
North Dakota	21,000
Ohio	446,000
Oregon	186,000
Rhode Island	26,000
Vermont	4,000
Washington	64,000
West Virginia	80,000

Source: Urban Institute.

The HIPSM estimates show that, if all States expanded Medicaid, the number of people in the United States with insurance coverage would increase by 10 million by 2016, reflecting an increase of 4.3 million in the 26 States and the District of Columbia that have already expanded the program and an increase of 5.7 million in the 24 States that have yet do to so.[2] This report focuses 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 since the beginning of the Affordable Care Act's first open enrollment period has borne out model-based predictions that States' decisions about whether to expand Medicaid will have significant implications for insurance coverage. In the States (and the District of Columbia) that have expanded Medicaid, the number of people with health insurance coverage through Medicaid (or CHIP) has increased by 5.2 million (15.3 percent) from the third quarter of 2013 through April 2014 (CMS 2014).[3] By contrast, Medicaid enrollment in States that have not yet expanded Medicaid has risen by 0.8 million (3.3 percent) over that period. (The modest increase in Medicaid enrollment in states that have not yet expanded Medicaid is likely attributable to simplifications in Medicaid eligibility rules required of all States and outreach, public awareness, and new enrollment options associated with the opening of the Marketplaces.)

Similarly, surveys have shown much larger increases in insurance coverage in States that have expanded Medicaid relative to states that have not. Comparing the third quarter of 2013 with early March 2014, the Urban Institute's Health Reform Monitoring Survey found a 4.0 percentage point increase in the percentage of non-elderly adults with insurance coverage in States that had expanded the program, compared to a 1.5 percentage point increase in States that had not done so (Long et al. 2014). Similarly, a survey by Gallup has found that States that expanded Medicaid and operated their own Marketplaces (alone or in partnership with the Federal government) experienced a 2.5 percentage point increase in the share of adults with insurance coverage from 2013 through the first quarter of 2014, compared with a 0.8 percentage point increase in States that have not taken these actions (Witters 2014).

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[2] HIPSM finds that if all States expanded Medicaid, the increase in Medicaid enrollment would be 13 million, somewhat larger than the 10 million increase in the number of people with health insurance coverage. The increase in Medicaid enrollment is larger than the increase in insurance coverage primarily because some individuals with incomes between 100 percent of FPL and 138 percent of FPL would switch from receiving subsidized coverage through the Marketplaces to receiving coverage through Medicaid. The difference between the two estimates may also reflect some offsetting reduction in employer coverage.

[3] Connecticut, Maine, and North Dakota have not reported suitable enrollment data to CMS and are therefore not included in these totals. For details, see CMS' April 2014 Medicaid enrollment report (CMS 2014).

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 results 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, relative to a baseline probability of 44.9 percent in the control group.[6]

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[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.

[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

- *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. Currie and Gruber 1996; 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 prominent 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 HIPSM 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; CEA estimated the share of new Medicaid 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 2 summarizes the increases in utilization of preventive care that States that have not yet expanded Medicaid could achieve once expanded coverage is fully in effect, as well as the gains accruing to States that have already expanded the program. Figure 3 maps the State-level estimates of the increase in the annual number of cholesterol-level screenings if each State expands Medicaid.

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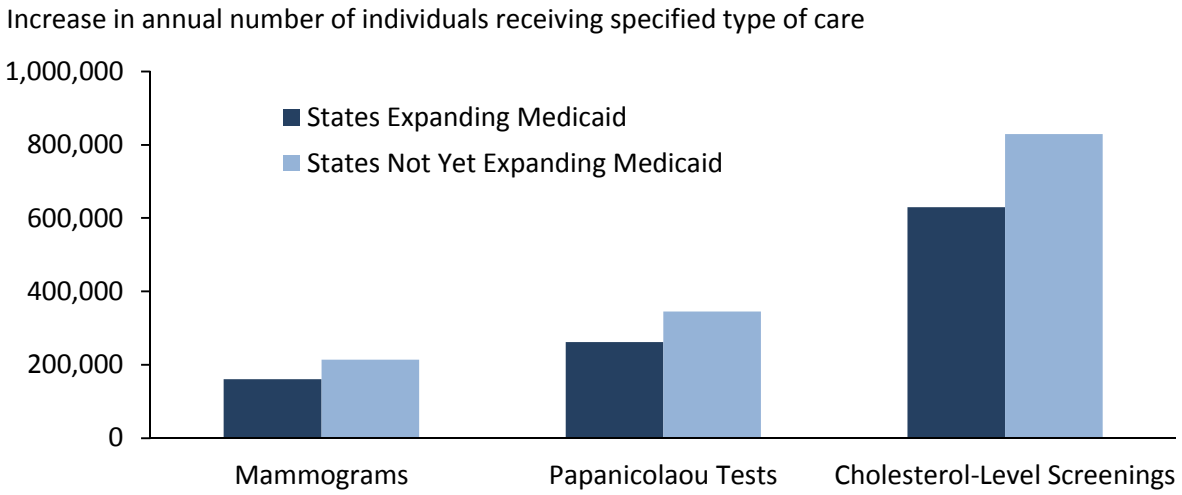
percent of the FPL (Guttmacher Institute 2014). The OHIE nevertheless found that gaining full Medicaid coverage increased pap smear utilization, perhaps because accessing such care is easier in the context of coverage for a comprehensive set of health care services. This suggests that expanding eligibility 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.

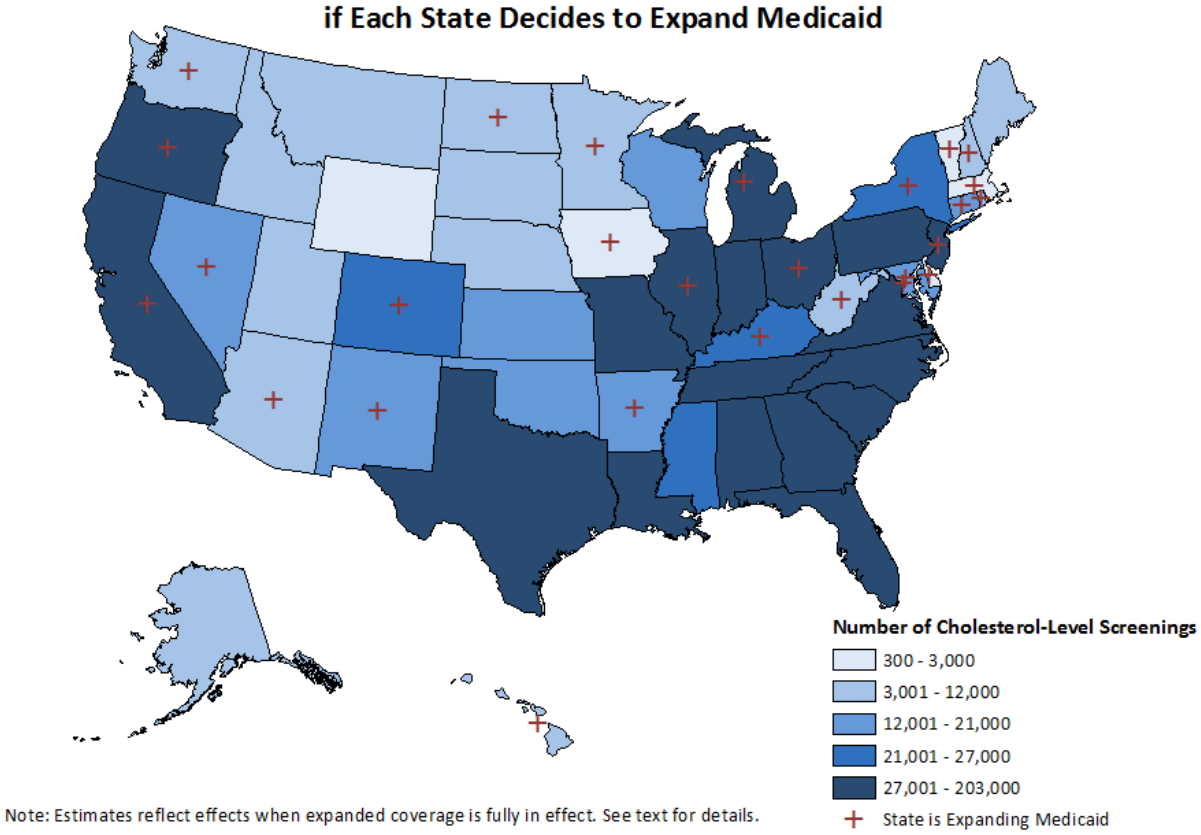
[7] The results presented by the OHIE reflect the effect of ever being on Medicaid during the study period, so not all individuals were enrolled in Medicaid for the full period over which the change in utilization was measured. The effect of continuous Medicaid enrollment on the outcomes examined in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

Figure 2: Projected Increase in Utilization of Preventive Care if States Expand Medicaid, by Current Expansion Status



Sources: Urban Institute; Baicker et al. (2013); CEA calculations.
Note: Estimates reflect effects when expanded coverage is fully in effect. See text for methodological details. Increases in receipt of mammograms reflect only women 50 and older.

Figure 3. Projected Annual Number of Additional Cholesterol-Level Screenings if Each State Decides to Expand Medicaid



Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details.

Table 2. Number of Additional 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	**829,300**	**214,100**	**344,900**
Alabama	34,200	9,300	14,200
Alaska	3,800	900	1,500
Florida	123,600	35,300	52,200
Georgia	69,600	17,000	28,900
Idaho	8,000	2,300	3,300
Indiana	38,200	9,000	15,200
Kansas	14,600	3,100	5,800
Louisiana	38,600	10,400	16,000
Maine	4,100	1,300	1,700
Mississippi	24,000	6,200	9,700
Missouri	36,900	9,400	14,900
Montana	5,500	1,600	2,400
Nebraska	7,000	1,600	2,900
North Carolina	54,900	13,900	23,000
Oklahoma	17,900	4,800	7,300
Pennsylvania	44,400	11,100	17,600
South Carolina	28,800	8,000	12,000
South Dakota	3,800	900	1,500
Tennessee	34,100	9,500	14,000
Texas	176,000	44,100	75,200
Utah	10,800	1,900	4,500
Virginia	30,600	8,000	13,000
Wisconsin	17,500	3,800	6,700
Wyoming	2,300	700	1,100
Expanding Medicaid	**629,600**	**160,600**	**261,300**
Arizona	7,400	2,600	3,200
Arkansas	20,800	5,600	8,500
California	202,500	49,300	86,800
Colorado	22,400	5,200	9,000
Connecticut	12,200	3,100	5,100
Delaware	1,000	300	500
District of Columbia	2,800	400	1,200
Hawaii	5,700	1,600	2,300
Illinois	58,000	14,700	23,800
Iowa	2,900	600	1,200
Kentucky	25,800	6,600	10,300
Maryland	19,700	4,600	8,100
Massachusetts	300	100	100
Michigan	30,900	7,000	12,000
Minnesota	6,100	1,300	2,500
Nevada	15,300	4,300	6,500
New Hampshire	3,800	1,100	1,600
New Jersey	33,100	8,600	14,000
New Mexico	14,000	3,700	5,500
New York	24,300	8,400	10,300
North Dakota	3,100	700	1,300
Ohio	65,000	17,400	26,000
Oregon	27,100	7,100	11,300
Rhode Island	3,800	900	1,600
Vermont	600	<100	<100
Washington	9,300	2,200	3,900
West Virginia	11,700	3,300	4,700

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.

Table 3. Effects on Access to Care and Health Outcomes 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	Reduction in Number of People Experiencing Depression	Additional People Reporting Good, Very Good, or Excellent Health
Not Yet Expanding Medicaid	**1,352,000**	**651,000**	**15,368,000**	**458,000**	**757,000**
Alabama	56,000	27,000	635,000	19,000	31,000
Alaska	6,000	3,000	70,000	2,000	3,000
Florida	201,000	97,000	2,290,000	68,000	113,000
Georgia	114,000	55,000	1,291,000	38,000	64,000
Idaho	13,000	6,000	149,000	4,000	7,000
Indiana	62,000	30,000	707,000	21,000	35,000
Kansas	24,000	11,000	270,000	8,000	13,000
Louisiana	63,000	30,000	716,000	21,000	35,000
Maine	7,000	3,000	76,000	2,000	4,000
Mississippi	39,000	19,000	446,000	13,000	22,000
Missouri	60,000	29,000	683,000	20,000	34,000
Montana	9,000	4,000	103,000	3,000	5,000
Nebraska	11,000	5,000	130,000	4,000	6,000
North Carolina	90,000	43,000	1,018,000	30,000	50,000
Oklahoma	29,000	14,000	332,000	10,000	16,000
Pennsylvania	72,000	35,000	824,000	25,000	41,000
South Carolina	47,000	23,000	535,000	16,000	26,000
South Dakota	6,000	3,000	70,000	2,000	3,000
Tennessee	56,000	27,000	632,000	19,000	31,000
Texas	287,000	138,000	3,262,000	97,000	161,000
Utah	18,000	8,000	200,000	6,000	10,000
Virginia	50,000	24,000	567,000	17,000	28,000
Wisconsin	29,000	14,000	324,000	10,000	16,000
Wyoming	4,000	2,000	43,000	1,000	2,000
Expanding Medicaid	**1,026,000**	**494,000**	**11,667,000**	**348,000**	**575,000**
Arizona	12,000	6,000	138,000	4,000	7,000
Arkansas	34,000	16,000	386,000	12,000	19,000
California	330,000	159,000	3,753,000	112,000	185,000
Colorado	37,000	18,000	416,000	12,000	20,000
Connecticut	20,000	10,000	227,000	7,000	11,000
Delaware	2,000	1,000	19,000	1,000	1,000
District of Columbia	5,000	2,000	51,000	2,000	3,000
Hawaii	9,000	4,000	105,000	3,000	5,000
Illinois	95,000	45,000	1,075,000	32,000	53,000
Iowa	5,000	2,000	54,000	2,000	3,000
Kentucky	42,000	20,000	478,000	14,000	24,000
Maryland	32,000	15,000	365,000	11,000	18,000
Massachusetts	<1000	<1000	5,000	<1000	<1000
Michigan	50,000	24,000	572,000	17,000	28,000
Minnesota	10,000	5,000	113,000	3,000	6,000
Nevada	25,000	12,000	284,000	8,000	14,000
New Hampshire	6,000	3,000	70,000	2,000	3,000
New Jersey	54,000	26,000	613,000	18,000	30,000
New Mexico	23,000	11,000	259,000	8,000	13,000
New York	40,000	19,000	451,000	13,000	22,000
North Dakota	5,000	2,000	57,000	2,000	3,000
Ohio	106,000	51,000	1,204,000	36,000	59,000
Oregon	44,000	21,000	502,000	15,000	25,000
Rhode Island	6,000	3,000	70,000	2,000	3,000
Vermont	1,000	<1000	11,000	<1000	1,000
Washington	15,000	7,000	173,000	5,000	9,000
West Virginia	19,000	9,000	216,000	6,000	11,000

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

Effects on Financial Security

While one important goal of the Medicaid program is to ensure that enrollees have access to medical care, 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.

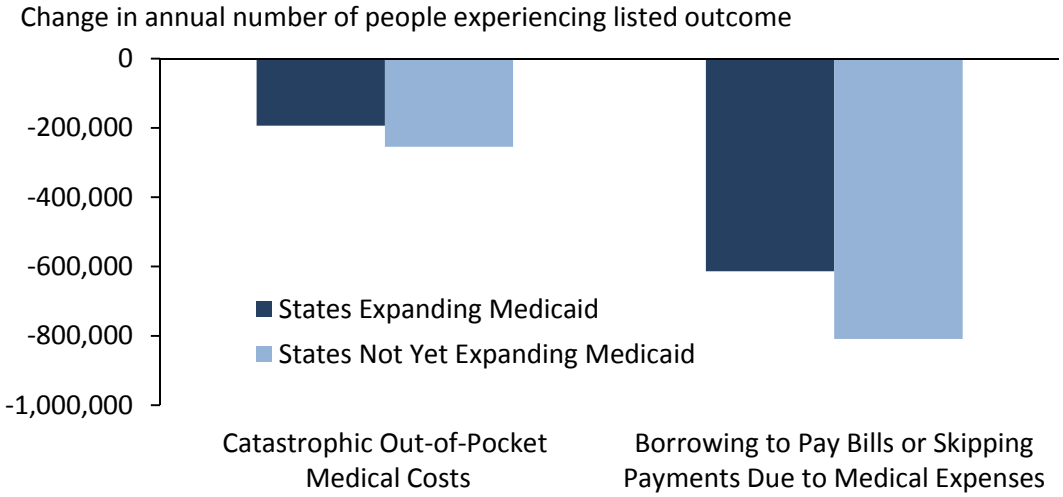
The OHIE also found that Medicaid coverage reduced the average amount of out-of-pocket spending and the probability of having any medical debt. In addition, in earlier work using credit report data, the OHIE investigators documented a large reduction in the probability of having had a medical bill sent 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.[8]

[8] 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, 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.

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 4. Figure 4 summarizes the reduction in the incidence of adverse financial outcomes that States that have not yet expanded Medicaid could achieve once expanded coverage is fully in effect, as well as the gains for States that have already expanded the program. Figure 5 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 4: Projected Reduction in the Incidence of Financial Hardship if States Expand Medicaid, by Current Expansion Status



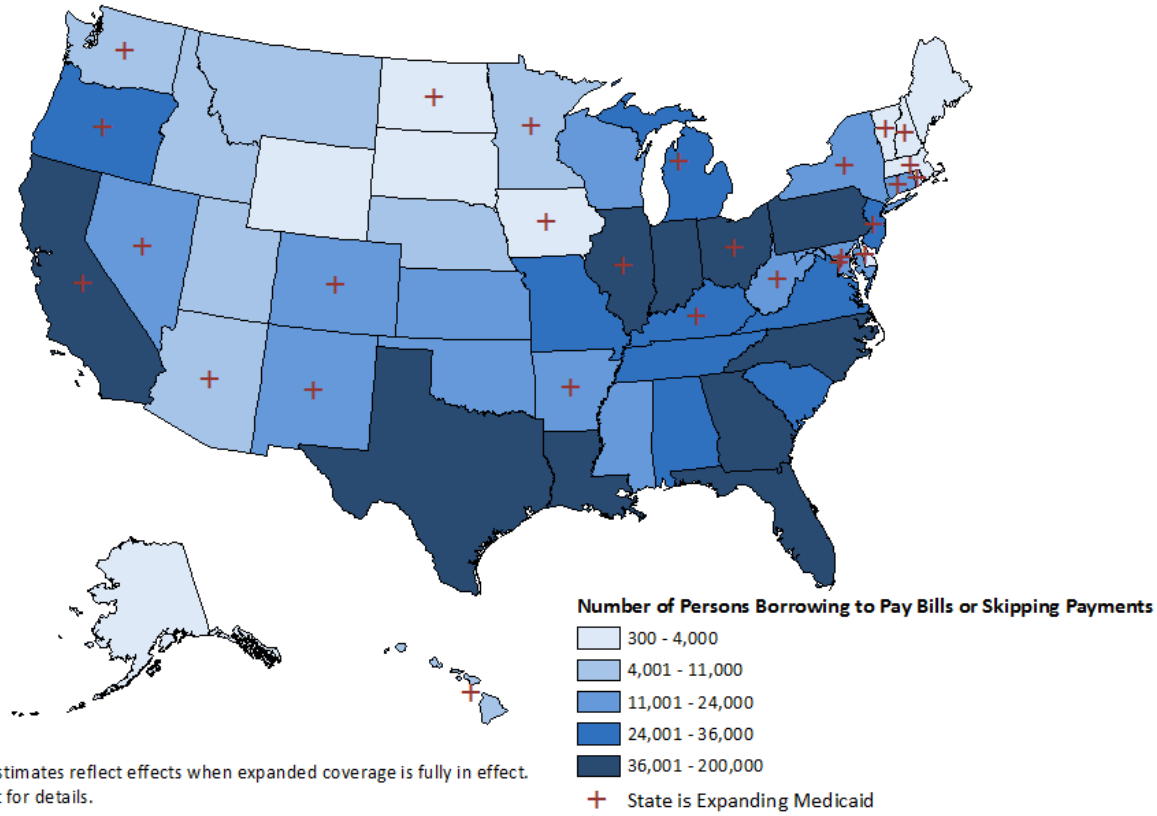
Source: Urban Institute; Baicker et al. (2013); CEA calculations.
Note: Estimates reflect effects when expanded coverage is fully in effect. See text for methodological details.

Table 4. 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	**255,000**	**809,400**
Alabama	10,500	33,400
Alaska	1,200	3,700
Florida	38,000	120,600
Georgia	21,400	68,000
Idaho	2,500	7,800
Indiana	11,700	37,300
Kansas	4,500	14,200
Louisiana	11,900	37,700
Maine	1,300	4,000
Mississippi	7,400	23,500
Missouri	11,300	36,000
Montana	1,700	5,400
Nebraska	2,200	6,800
North Carolina	16,900	53,600
Oklahoma	5,500	17,500
Pennsylvania	13,700	43,400
South Carolina	8,900	28,200
South Dakota	1,200	3,700
Tennessee	10,500	33,300
Texas	54,100	171,800
Utah	3,300	10,500
Virginia	9,400	29,900
Wisconsin	5,400	17,100
Wyoming	700	2,300
Expanding Medicaid	**193,600**	**614,400**
Arizona	2,300	7,300
Arkansas	6,400	20,300
California	62,300	197,700
Colorado	6,900	21,900
Connecticut	3,800	11,900
Delaware	300	1,000
District of Columbia	900	2,700
Hawaii	1,700	5,500
Illinois	17,800	56,600
Iowa	900	2,800
Kentucky	7,900	25,200
Maryland	6,000	19,200
Massachusetts	100	300
Michigan	9,500	30,100
Minnesota	1,900	6,000
Nevada	4,700	14,900
New Hampshire	1,200	3,700
New Jersey	10,200	32,300
New Mexico	4,300	13,700
New York	7,500	23,700
North Dakota	900	3,000
Ohio	20,000	63,400
Oregon	8,300	26,400
Rhode Island	1,200	3,700
Vermont	200	600
Washington	2,900	9,100
West Virginia	3,600	11,400

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. Catastrophic medical costs defined as medical costs exceeding 30 percent of income.

Figure 5. Projected Annual Reduction in the Number of Individuals Borrowing Money or Skipping Payments Due to Medical Expenses if Each State Decides to Expand Medicaid



Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details.

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 found that Medicaid coverage reduced the probability that an individual screened positive for depression on the basis of a standard eight-question questionnaire by 9.2 percentage points, relative to a 30.0 percent baseline probability in the control group.[9] Medicaid coverage also

[9] 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 the 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."

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.

Two steps were used to translate OHIE's estimate that Medicaid reduced the probability of screening positive for depression into the reduction in the number of people actually experiencing depression if each State expanded Medicaid. First, the reduction in the number of people who would *screen* positive for depression was obtained 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. Prior research has estimated that 88 percent of those who screen positive for depression using this screening tool are found to be experiencing major depression on the basis of a clinical interview (Kroenke et al. 2001). Thus, to obtain the final estimates of the reduction in the incidence of depression, the reduction in the number of positive screening results was multiplied by 0.88.[10] The resulting State-by-State estimates of the reduction in the number of individuals experiencing depression are reported in Table 3.

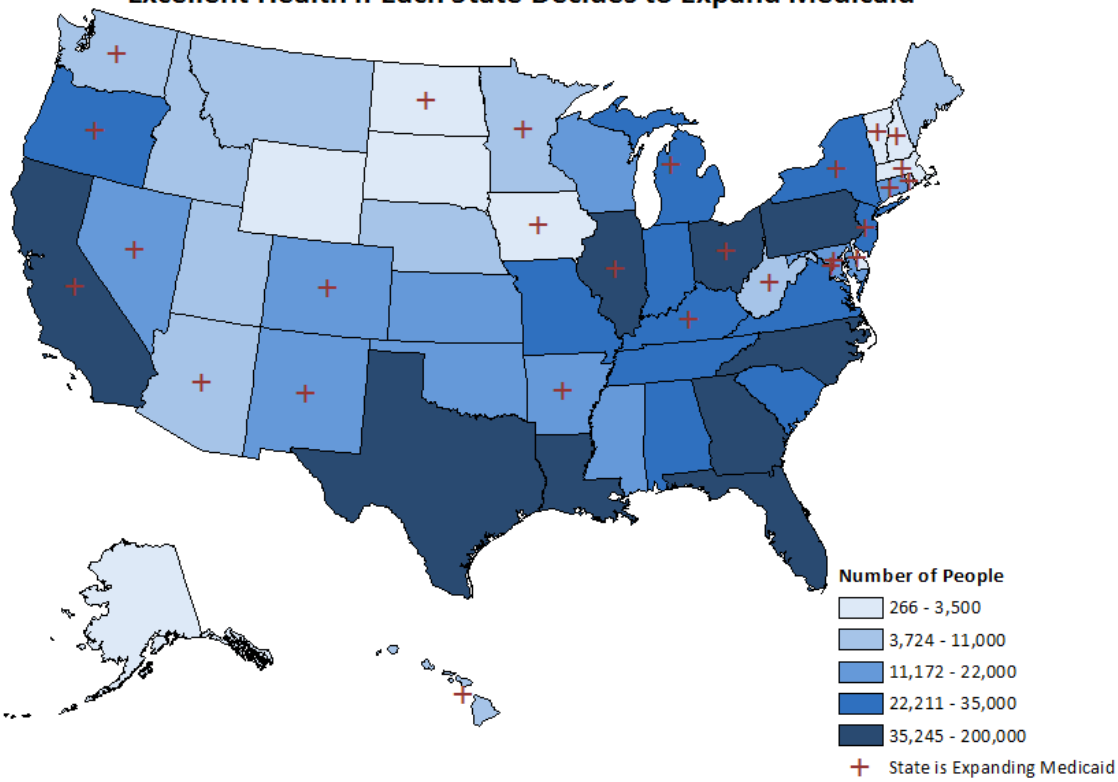
Turning to physical health, the OHIE provides clear evidence that individuals receiving Medicaid perceived themselves to be in better health. In results through approximately two years of follow-up, Medicaid coverage increased the share of individuals reporting that their health had remained the same 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.

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, the OHIE point estimate is simply 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 3 and are mapped in Figure 6. Figure 7 summarizes the improvements in this measure of health that States that have not yet expanded Medicaid could achieve once expanded coverage is fully in effect, as well as the gains for States that have already expanded the program.

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.

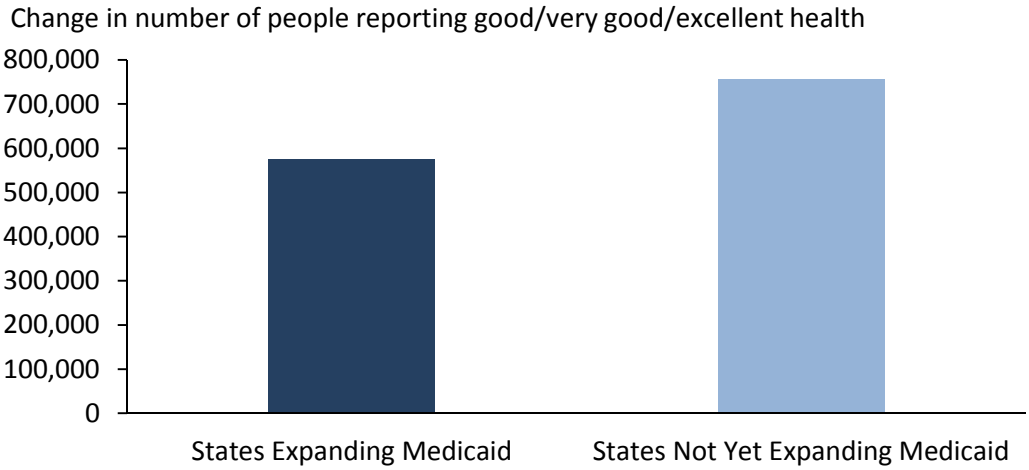
[10] This approach likely slightly understates the actual reduction in depression as a result of expanding Medicaid. Kroenke et al. demonstrate that the screening tool used by the OHIE researchers also occasionally misses individuals who appear depressed in a clinical interview. To the extent that Medicaid also reduces depression in these individuals, the effects on the overall incidence of depression would be correspondingly larger.

Figure 6. Projected Increase in the Number of People Reporting Good, Very Good, or Excellent Health if Each State Decides to Expand Medicaid



Note: Estimates reflect effects when expanded coverage is fully in effect. See text for details.

Figure 7: Projected Increase in Number of People Reporting Good, Very Good, or Excellent Health if States Expand Medicaid, by Current Expansion Status



Source: Urban Institute; Finkelstein et al. (2012); CEA calculations.
Note: Estimates reflect effects when expanded coverage is fully in effect. See text for methodological details.

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) quite 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, it is useful to examine a parallel literature that uses "quasi-experiments" created by past policy changes to study how Medicaid coverage affects health outcomes. 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 in this context since they examine insurance expansions that, like State Medicaid expansions under the Affordable Care Act, primarily affect low- or moderate-income adults. 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, by comparing 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 reform to the years after reform, relative to the comparison counties. 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 fall in mortality in Massachusetts was caused by the expansion of insurance coverage. Notably, the authors' estimate falls well within the very wide 95 percent confidence interval associated with the imprecise 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. 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 health outcomes, although they are the two that are most relevant to evaluating the consequences of States' Medicaid expansion decisions. Currie and Gruber (1994), Currie and Gruber (1996), Meyer and Wherry (2012) examine past Medicaid expansions affecting pregnant women, children, and teens, respectively, and find that those coverage expansions reduced mortality. 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. Levy and Meltzer (2008) undertake a careful review of the quasi-experimental literature and conclude that, while that literature is not unanimous on this question, the balance of the evidence demonstrates that expanding access to health insurance coverage improves health for specific well-studied populations. The results from Sommers, Long, and Baicker (2014) and Sommers, Baicker, and Epstein (2012) provide strong evidence that this general conclusion that expanded coverage improves health applies to coverage expansions that affect low- and moderate-income adults, like Medicaid expansions under the Affordable Care Act.

Effects on State Economies and the National Economy

In addition to their effects on insurance coverage, access to health care, and health and well-being, States decisions to expand Medicaid will also have immediate macroeconomic benefits by drawing additional Federal funding into State economies. As described in greater detail below, this additional Federal funding will increase demand for both medical and non-medical goods and services. Over the next few years, while the recovery from the 2007-2009 recession remains

incomplete and slack remains in the economy, this increase in demand will boost overall employment and economic activity.

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 in that State 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 data from the Congressional Budget Office and Urban Institute data 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 24 States that have not yet expanded Medicaid had done so as of January 1, 2014, that would have triggered an increase in Federal outlays in those States totaling $88 billion during calendar years 2014 through 2016. States that have already expanded Medicaid will generate additional Federal outlays of $84 billion during this period. State-by-State estimates of the additional Federal outlays resulting from each State's decision to expand Medicaid are reported in Table 5.[11]

In order to quantify the effects of these additional Federal outlays on States' economies and the economy of the Nation as a whole, CEA has undertaken a standard "fiscal multiplier" analysis. In brief, when the government purchases additional goods and services, that spurs hiring and purchases of investment goods and raw materials to produce those goods and services. As those newly-hired workers and producers spend the income they have earned, they spur additional hiring and purchases, which in turn sets off yet another round of increases in spending, and so on. Economists summarize this sequence of macroeconomic effects via a "fiscal multiplier," which measures the total number of dollars of additional economic activity arising from a one-dollar fiscal change. The 2014 *Economic Report of the President* provides a detailed discussion of the theoretical basis for this type of analysis and the empirical literature underlying CEA's estimates of the multiplier for different types of fiscal changes (CEA 2014). As described therein, CEA's multiplier estimates fall well within the range of estimates used by other analysts, including the Congressional Budget Office.

The appropriate multiplier to use for evaluating the macroeconomic consequences of States' Medicaid expansion decisions depends on how the additional Federal outlays triggered by States' decisions enter State economies. In practice, these outlays will take three main paths:

- *Additional utilization of medical care.*

[11] Note that, while this analysis focuses on calendar years through 2016 because these are most relevant for quantifying the short-run macroeconomic impacts, generous Federal support for States that elect to expand Medicaid would continue in subsequent years. Expanding Medicaid would thus remain an attractive proposition for States since they could continue to realize the direct benefits of expanded coverage at limited cost, even though States' decisions would no longer boost overall economic output.

Consistent with the evidence described earlier in this report, much of the additional Federal funding will fund additional medical care for newly enrolled Medicaid enrollees, increasing overall demand for medical goods and services. For dollars entering the economy this way, CEA uses a GDP multiplier of 1.5, consistent with CEA's estimate of the multiplier for direct government spending.

- *Lower out-of-pocket medical costs.*

  Also consistent with the evidence presented earlier in this report, some of the additional Federal funding will protect enrollees from high out-of-pocket medical costs, permitting families to redirect dollars to other pressing needs and boosting demand for a wide variety of goods and services.[12] For dollars entering the economy this way, CEA uses a GDP multiplier of 1.5, consistent with CEA's estimate of the multiplier for payments to low-income households.

- *Reductions in uncompensated care.*

  The remainder of the additional Federal funding will compensate providers for the cost of providing care that previously went unreimbursed. In turn, those funds will flow through 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.[13] Those additional funds will permit those entities to increase their demand for goods and services (or, in the case of governments, reduce taxes on households, increasing households' demand for goods and services).

  For reductions in uncompensated care costs borne by State and local governments, CEA uses a multiplier of 1.1, consistent with CEA's estimate of the multiplier for payments to State and local governments. For other reductions in uncompensated care costs, CEA uses a GDP multiplier of 0.8, consistent with CEA's estimate of the multiplier applicable to individual tax cuts.

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[12] Reductions in families' exposure to out-of-pocket medical costs could boost current demand for goods and services through another channel by causing families to draw down "precautionary savings" that they have previously used to "self insure" against medical risk. In the simplest models, reductions in precautionary saving improve economic efficiency even in the long run since precautionary saving represents a high-cost way of protecting against risk, although more complicated models can lead to different conclusions. Gruber and Yelowitz (1999) provide some evidence that past Medicaid expansions have indeed reduced precautionary saving. Because the macroeconomic estimates presented in this report do not account for effects of Medicaid expansions on precautionary saving, they are somewhat conservative.

[13] The Federal government is sharing in reductions in uncompensated care costs under the Affordable Care Act through statutory reductions in disproportionate share hospital (DSH) payments made via the Medicaid and Medicare programs. The reductions occur regardless of State decisions to expand Medicaid, so they are not relevant to the macroeconomic analysis undertaken here.

Based on recent estimates of per capita uncompensated care costs among the uninsured (Coughlin et al., 2013), a reasonable estimate is that around 30 percent of the additional Medicaid spending will defray uncompensated care costs.[14] While, in practice, State and local governments are likely to realize a significant fraction of these savings, in the interest of being conservative, CEA has assumed that these savings accrue entirely to providers and other payers, which leads to a composite multiplier of 1.29 for each additional dollar of Federal outlays resulting from a State's decision to expand Medicaid. The magnitude of this composite multiplier is not particularly sensitive to alternative assumptions about the extent to which expanding Medicaid defrays uncompensated care costs versus entering the economy through other channels.

To generate estimates of the macroeconomic effect of State Medicaid expansion decisions, the estimated fiscal effects of State decisions to expand Medicaid and the multiplier estimates described above were used as inputs into the CEA multiplier model, which has been described in previous CEA publications (CEA 2014). The CEA model then produces quarterly estimates of the effect of States' decisions about whether to expand Medicaid on employment and overall economic activity.[15]

The estimates generated by the CEA multiplier model assume that, as is the case now, there is slack in the economy and productive resources are not fully employed.[16] When the economy returns to full employment, these demand-side effects will become much smaller and eventually disappear entirely because an increase in labor demand in one sector will mostly tend to reallocate workers away from other sectors. Looking forward, the Federal Reserve and many private forecasters expect the economy to remain short of full employment until late 2016. For the purposes of this analysis, the CEA assumes that Federal outlays spurred by States' Medicaid expansion decisions will have their full macroeconomic effects through the middle of 2015 and that these effects phase down gradually thereafter, reaching zero by the beginning of 2017. While this approach is somewhat ad hoc, it likely provides a reasonable approximation of the actual effects.

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[14] This estimate is broadly consistent with uncompensated care estimates produced by HIPSM, the source for the coverage estimates used elsewhere in this report. The HIPSM estimates imply that State decisions to expand Medicaid will reduce overall uncompensated care costs by $183 billion over ten years, which is 28 percent of the $645 billion increase in net Federal outlays if all States expand the program that was estimated by HIPSM (Holahan et al. 2012). To the extent that reductions in uncompensated care represent a smaller share of the additional outlays, the macroeconomic effects of State decisions to expand Medicaid would be commensurately larger.

[15] The estimates produced by this model reflect the National effects on employment and economic activity resulting from each State's decision to expand Medicaid. While the benefits of each State's decision are likely to fall disproportionately in that State, because States are economically interconnected, some of those benefits will accrue to other States. For example, California has likely realized some economic benefits from Arizona's decision to expand the program and vice versa. States' decisions to expand Medicaid are, thus, important for the Nation as a whole, not just the States making those decisions.

[16] Because all of the State-by-State estimates use the same national multiplier model, these estimates do not account for difference in the extent to which there is slack in particular State labor markets. In general, this means that the job creation effects of States' Medicaid expansion decisions may be larger (and longer-lasting) in States with weaker labor markets and smaller (and shorter-lived) in States with stronger labor markets.

State-by-State estimates of the effect on employment and total output if each State decides to expand Medicaid are reported in Tables 5 and 6. Figure 8 summarizes the number of jobs that States that have not yet expanded Medicaid could have created if they had expanded the program as of January 1, 2014, as well as the gains that will be achieved by States that have already expanded the program. Figure 9 maps the cumulative job-years from 2014 through 2017 that would have been created if each State had expanded Medicaid as of January 1, 2014.

While this subsection focuses on the short-run macroeconomic benefits of expanded insurance coverage, States' decisions to expand Medicaid could affect employment and economic activity over the longer run as well. Healthier workers who are less financially stressed and in better mental health may be more able to effectively participate in the labor force and have higher productivity on the job. 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 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.[17] Reductions in labor supply of the latter kind generally reduce economic efficiency. In contrast, reductions in labor supply of the former kind 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" or "employment lock."

The evidence on the net effects of Medicaid on labor supply for populations like those affected the Affordable Care Act's Medicaid expansion is mixed. The highest-quality evidence comes from the OHIE, which concluded that Medicaid enrollment had small and statistically insignificant effects on labor supply (Baicker et al. 2013b). Some non-randomized quasi-experimental studies have, however, found that Medicaid causes statistically significant reductions in labor supply. 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. It is generally not clear what portions of these labor supply responses occur through channels that increase, reduce, or do not affect economic efficiency.

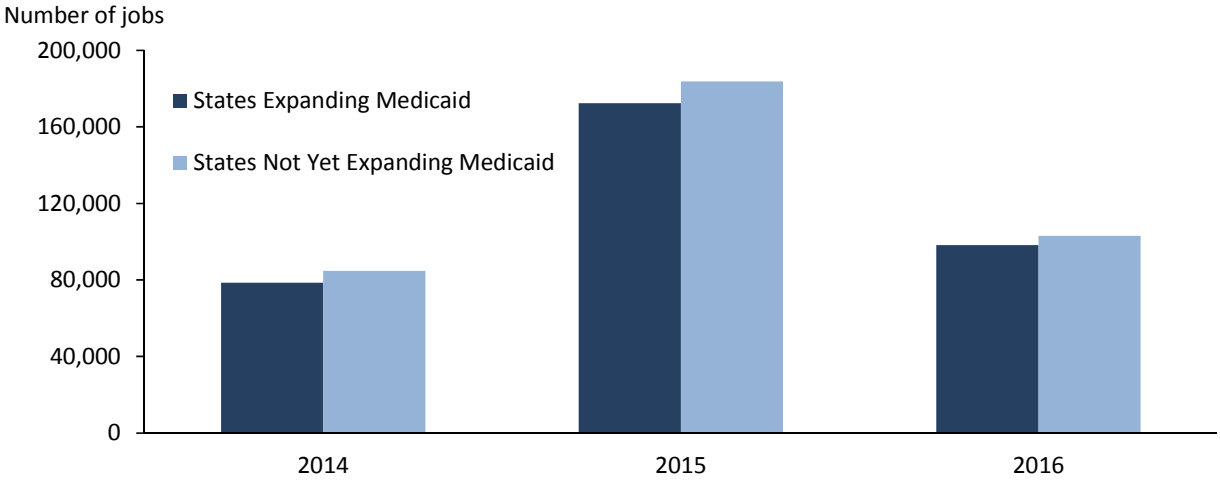
The reasons why different studies have reached widely differing conclusions about the effect of Medicaid on labor supply is not well understood. The differences could reflect differences in the populations affected by these different policy changes or the time period during which those changes occurred. 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. Another possibility is that the differences reflect statistical sampling errors; because

[17] 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.

none of the studies are able to measure effects on labor supply with absolute precision (with the Garthwaite, Gross, and Notowidigdo study being particularly imprecise), it would not be surprising to see some dispersion in these estimates even if all the studies are measuring the same underlying response. Finally, the differences could arise because the quasi-experimental estimates are contaminated by unobserved differences between those who do and do not enroll in Medicaid that the authors are unable to fully control for, in which case the experimental result from the OHIE would provide the only reliable estimate.

In any case, labor supply responses are not likely to be particularly relevant to macroeconomic outcomes during the period examined in this report. As long as slack remains in the labor market and there are more workers seeking work than there are available job openings, a worker who reduces his labor supply due to the availability of Medicaid coverage will often simply be replaced by another job-seeker (CBO 2014a). Thus, any labor supply effects that do exist are likely to be substantially attenuated for the next few years.

Figure 8: Projected Increase in Employment if States Expand Medicaid, by Current Expansion Status



Source: Congressional Budget Office; Urban Institute; CEA calculations.

Figure 9. Projected Number of Additional Job-Years From 2014-2017 if Each State Had Decided to Expand Medicaid as of January 1, 2014

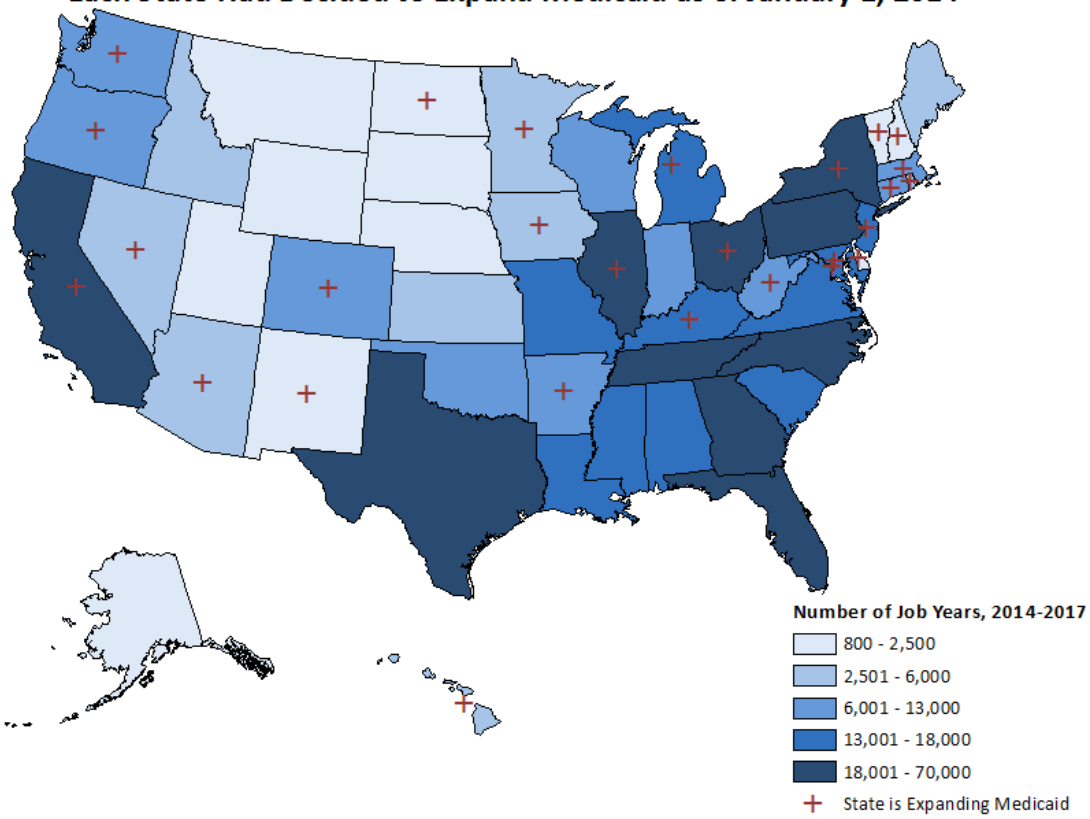


Table 5. Increase in Federal Spending and Employment if State Expands Medicaid								
	Net Increase in Federal Spending (Millions of Dollars; Calendar Years)				Increase in Employment (Number of Workers; Calendar Years)			
	2014	2015	2016	Cumulative, 2014-2016	2014	2015	2016	Cumulative Job Years, 2014-2017
Not Yet Expanding Medicaid	**26,480**	**29,760**	**31,870**	**88,110**	**84,800**	**183,800**	**103,100**	**378,700**
Alabama	1,020	1,220	1,390	3,630	3,200	7,300	4,300	15,100
Alaska	100	110	120	330	300	700	400	1,400
Florida	4,410	5,060	5,530	15,010	14,100	30,900	17,600	63,800
Georgia	2,270	2,620	2,880	7,770	7,200	15,900	9,100	32,900
Idaho	200	210	210	620	600	1,300	700	2,700
Indiana	950	940	860	2,760	3,100	6,300	3,100	12,800
Kansas	290	280	250	820	1,000	1,900	900	3,800
Louisiana	1,010	1,120	1,200	3,330	3,200	7,000	3,900	14,400
Maine	210	240	260	710	700	1,500	800	3,000
Mississippi	1,020	1,210	1,370	3,600	3,200	7,200	4,300	15,000
Missouri	1,170	1,330	1,440	3,950	3,700	8,200	4,600	16,900
Montana	120	120	110	350	400	800	400	1,600
Nebraska	160	160	140	460	500	1,100	500	2,200
North Carolina	2,740	3,220	3,600	9,560	8,700	19,400	11,300	40,200
Oklahoma	520	560	570	1,650	1,700	3,500	1,900	7,300
Pennsylvania	2,460	2,770	2,970	8,200	7,900	17,100	9,600	35,200
South Carolina	1,030	1,160	1,250	3,450	3,300	7,200	4,000	14,800
South Dakota	130	140	150	420	400	900	500	1,900
Tennessee	1,500	1,730	1,900	5,130	4,800	10,500	6,000	21,700
Texas	4,180	4,640	4,910	13,730	13,400	28,800	16,000	59,400
Utah	200	120	<10	310	700	1,100	300	2,100
Virginia	940	1,050	1,110	3,090	3,000	6,500	3,600	13,300
Wisconsin	790	870	920	2,580	2,500	5,500	3,000	11,200
Wyoming	80	90	100	270	300	600	300	1,200
Expanding Medicaid	**24,680**	**28,200**	**30,740**	**83,620**	**78,600**	**172,400**	**98,200**	**356,100**
Arizona	430	280	60	760	1,500	2,400	700	4,700
Arkansas	810	910	980	2,690	2,600	5,600	3,200	11,500
California	4,740	5,530	6,160	16,430	15,000	33,400	19,400	69,100
Colorado	680	780	850	2,310	2,200	4,800	2,700	9,900
Connecticut	530	590	630	1,760	1,700	3,700	2,100	7,600
Delaware	120	130	150	400	400	800	500	1,700
District of Columbia	50	60	60	180	200	400	200	800
Hawaii	210	240	260	710	700	1,500	800	3,000
Illinois	1,430	1,610	1,730	4,770	4,600	9,900	5,600	20,500
Iowa	200	180	150	530	700	1,300	600	2,600
Kentucky	1,220	1,430	1,590	4,240	3,900	8,600	5,000	17,800
Maryland	980	1,230	1,470	3,680	3,000	7,100	4,400	14,900
Massachusetts	460	550	630	1,640	1,400	3,300	1,900	6,800
Michigan	1,120	1,250	1,340	3,710	3,600	7,800	4,300	16,000
Minnesota	300	290	250	840	1,000	2,000	900	4,000
Nevada	400	480	540	1,420	1,300	2,800	1,700	5,900
New Hampshire	160	180	190	530	500	1,100	600	2,300
New Jersey	1,140	1,380	1,590	4,110	3,600	8,200	4,900	17,000
New Mexico	190	110	<10	290	700	1,000	300	2,000
New York	3,650	4,340	4,920	12,910	11,500	25,900	15,300	53,800
North Dakota	160	190	220	580	500	1,200	700	2,400
Ohio	3,690	4,330	4,860	12,870	11,700	26,100	15,200	54,000
Oregon	620	540	390	1,550	2,100	3,900	1,700	7,800
Rhode Island	200	240	260	700	600	1,400	800	2,900
Vermont	70	90	110	280	200	500	300	1,100
Washington	510	530	530	1,570	1,600	3,400	1,800	7,000
West Virginia	620	730	830	2,180	1,900	4,400	2,600	9,100

Sources: Urban Institute; Congressional Budget Office; CEA calculations.

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

Table 6. Increase in Gross Domestic Product if State Expands Medicaid				
	Additional GDP (Millions of Dollars; Calendar Years)			
	2014	2015	2016	Cumulative, 2014-2017
Not Yet Expanding Medicaid	**19,610**	**32,150**	**14,670**	**66,440**
Alabama	740	1,280	620	2,650
Alaska	70	120	60	250
Florida	3,250	5,420	2,520	11,190
Georgia	1,670	2,790	1,310	5,770
Idaho	150	230	100	480
Indiana	730	1,080	430	2,240
Kansas	220	320	130	670
Louisiana	750	1,220	550	2,520
Maine	150	260	120	530
Mississippi	740	1,280	620	2,640
Missouri	870	1,430	660	2,960
Montana	90	140	60	280
Nebraska	130	180	70	380
North Carolina	2,010	3,410	1,630	7,040
Oklahoma	390	620	270	1,280
Pennsylvania	1,820	2,990	1,370	6,180
South Carolina	760	1,250	580	2,590
South Dakota	100	160	70	330
Tennessee	1,100	1,850	870	3,810
Texas	3,100	5,040	2,270	10,420
Utah	170	180	30	370
Virginia	690	1,130	510	2,340
Wisconsin	590	950	430	1,970
Wyoming	60	100	40	210
Expanding Medicaid	**18,200**	**30,240**	**14,040**	**62,470**
Arizona	350	400	80	830
Arkansas	600	980	450	2,020
California	3,470	5,870	2,790	12,130
Colorado	500	840	390	1,730
Connecticut	390	640	290	1,330
Delaware	90	140	70	300
District of Columbia	40	70	30	140
Hawaii	160	260	120	530
Illinois	1,060	1,740	800	3,590
Iowa	160	220	80	450
Kentucky	890	1,510	720	3,120
Maryland	700	1,270	650	2,610
Massachusetts	340	580	280	1,190
Michigan	830	1,360	620	2,800
Minnesota	230	340	130	690
Nevada	290	500	240	1,040
New Hampshire	120	190	90	400
New Jersey	830	1,440	710	2,980
New Mexico	150	170	20	340
New York	2,660	4,570	2,210	9,440
North Dakota	120	200	100	420
Ohio	2,700	4,590	2,190	9,470
Oregon	490	660	220	1,360
Rhode Island	150	250	120	520
Vermont	50	100	50	200
Washington	380	590	250	1,230
West Virginia	450	770	370	1,590

Sources: Urban Institute; Congressional Budget Office; CEA calculations.

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

III. Conclusion

This report documents the far-reaching benefits that States that have already expanded Medicaid under the Affordable Care Act will receive, 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' mental health and longevity, and claim billions of dollars in Federal funding that could boost their economies today. 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.

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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 HIPSM 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.[18]

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;[19] (3) do not report being enrolled in Medicaid;[20] 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 HIPSM 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.[21]

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 many ineligible non-citizens. Second, the method used to model

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

[19] 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 HIPSM, which also uses treats pre-ACA eligibility criteria as those in effect in 2009 (Holahan et al. 2012).

[20] 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.

[21] See http://www.shadac.org/publications/defining-family-studies-health-insurance-coverage.

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 HIPSM 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.[22] CEA then adjusted these amounts to reflect changes in CBO's assumptions regarding per-enrollee Medicaid costs from CBO's March 2012 baseline to its April 2014 baseline (CBO 2014b).[23]

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 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

[22] 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.

[23] Specifically, CEA used the percent change in CBO's projection of per-enrollee costs for children. 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.

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 per-enrollee subsidy costs from CBO's March 2012 baseline to its April 2014 baseline.[24,25]

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.[26]

As a final note, for the purposes of using these estimates with the CEA multiplier model, it is necessary to convert the fiscal year estimates that result from the methodology described above to quarterly estimates. In doing so, CEA assumed that Medicaid and Marketplace outlays occurring during fiscal year 2014 will occur smoothly over the final three quarters of the fiscal year (consistent with the fact that the main coverage expansions under the Affordable Care Act took effect on January 1, 2014). In subsequent fiscal years, CEA assumed that outlays occurred smoothly over the fiscal year. While the actual time path of these outlays likely differs slightly from this assumed path, any error in he assumed path is likely to have very small effects on the overall conclusion of this analysis.

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[24] 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.

[25] The overall change in per-enrollee subsidy costs from CBO's March 2012 baseline to its April 2014 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 likely to be quite small.

[26] 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.