

# How Medicaid Expansion Affected Out-of-Pocket Health Care Spending for Low-Income Families

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## ABSTRACT

**ISSUE:** Prior research shows that low-income residents of states that expanded Medicaid under the Affordable Care Act are less likely to experience financial barriers to health care access, but the impact on out-of-pocket spending has not yet been measured.

**GOAL:** Assess how the Medicaid expansion affected out-of-pocket health care spending for low-income families compared to those in states that did not expand and consider whether effects differed in states that expanded under conventional Medicaid rules vs. waiver programs.

**METHODS:** Analysis of the Consumer Expenditure Survey 2010–2015.

**KEY FINDINGS AND CONCLUSIONS:** Compared to families in nonexpansion states, low-income families in states that did expand Medicaid saved an average of \$382 in annual spending on health care. In these states, low-income families were less likely to report any out-of-pocket spending on insurance premiums or medical care than were similar families in nonexpansion states. For families that did have some out-of-pocket spending, spending levels were lower in states that expanded Medicaid. Low-income families in Medicaid expansion states were also much less likely to have catastrophically high spending levels. The form of coverage expansion — conventional Medicaid or waiver rules — did not have a statistically significant effect on these outcomes.

## KEY TAKEAWAYS

- ▶ Low-income families in states that expanded Medicaid are less likely to have any out-of-pocket health care costs than are low-income families in nonexpansion states.
- ▶ Among low-income families that have out-of-pocket premium or cost-sharing expenses, those in expansion states spend much less than those in nonexpansion states.
- ▶ There is little difference in spending between states that expanded Medicaid by conventional means and states that expanded under waiver rules.

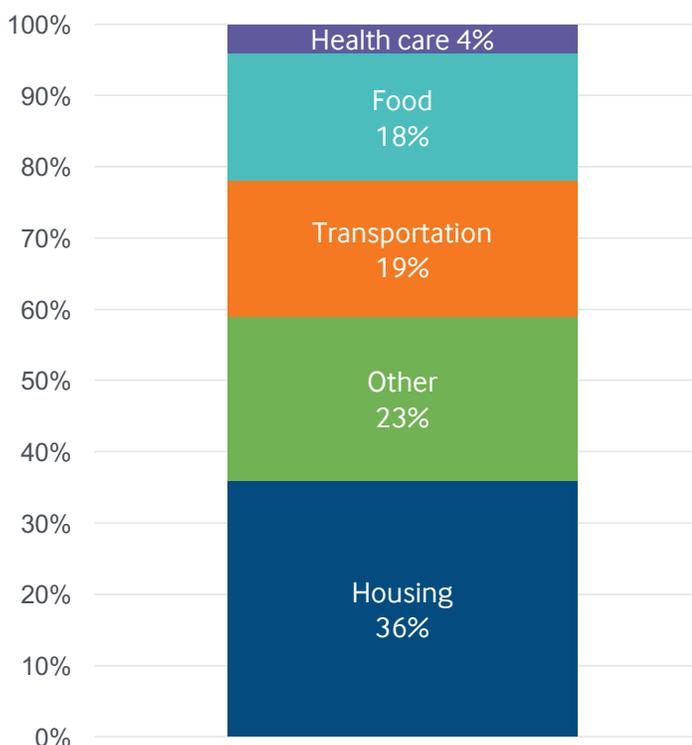


## BACKGROUND

Providing people with health insurance improves access to care by reducing financial barriers, which are most evident at the point of care — that is, when people try to get health care services.<sup>1</sup> In addition, expanding insurance coverage reduces the cost of care; previous research has shown that expanding eligibility for Medicaid reduces bankruptcy and debt.<sup>2</sup> This is particularly important for low-income families with little flexibility in their budgets to accommodate unexpected medical spending. For families with incomes under 138 percent of the federal poverty level (i.e., less than \$33,600 for a family of four), housing, food, and transportation spending make up 73 percent of their total monthly budget (Exhibit 1).

To ease this economic burden and enhance access to care for low-income families, the Affordable Care Act

**Exhibit 1. Health Care and Other Basic Needs as a Share of Total Expenditures for Low-Income Families**



Data: Consumer Expenditure Survey 2010–2015, Families Under 138% of Federal Poverty Guideline.

expanded Medicaid coverage to adults with incomes up to 138 percent of the poverty level, although a later Supreme Court decision made this optional for states. In 2014, 30 states and the District of Columbia participated in the Medicaid expansion, 20 states did not. (Louisiana has since chosen to participate.) This variation offers a natural experiment to study the effects of the expansion. Recent studies have examined the effect of the expansion on the uninsured rate, access to care, and satisfaction.<sup>3</sup> One found that after the first two years, the expansion was associated with a 12.1 percentage-point increase in the likelihood of having a personal doctor, a 11.6 percentage-point decrease in skipping medications because of cost, and a 16.1 percentage-point increase in the likelihood of having a checkup in the past year.<sup>4</sup>

In this study, we use data from the federal Consumer Expenditure Survey to examine how states' participation in the Medicaid expansion affected families' health care spending. Prior estimates suggest that the rate of Medicaid coverage increased by between 8 percent and 13.1 percent more in expansion states compared to nonexpansion states.<sup>5</sup> Our data show similar effects. Based on the estimate that enrollment in Medicaid increased by 13 percent more in expansion states, we use our estimates of average savings across the entire eligible population (whether or not newly enrolled) to provide estimates for those who were newly enrolled.

Seven states that participated in the expansion — Arizona, Arkansas, Indiana, Iowa, Michigan, Montana, and New Hampshire — did so under federally approved Section 1115 waivers.<sup>6</sup> Waiver requirements vary from state to state: Arkansas uses Medicaid funds to subsidize private insurance options, others include personal responsibility requirements,<sup>7</sup> such as premiums and cost-sharing, incentives for healthy behavior, and health savings account (HSA) contributions.<sup>8</sup>

Previous analyses comparing the experience of beneficiaries in waiver and nonwaiver states found few significant differences in coverage, access, or utilization. For instance, both Kentucky, a nonwaiver state, and Arkansas, a waiver state, after one year, had significant declines in the uninsured rate and significant

improvements in affordability, access to prescriptions, and care for chronic conditions. However, Arkansas did not see a significant reduction in the number of people with trouble paying medical bills.<sup>9</sup> Another analysis found similar results, including notably higher annual out-of-pocket medical spending in Arkansas than in Kentucky.<sup>10</sup> We repeat our analyses separately for waiver and nonwaiver states to assess these differences.

Medicaid coverage in most states requires low or no premiums, deductibles, or copayments. In expansion states that have adopted traditional Medicaid, as well as in most waiver states, premiums and cost-sharing may total to no more than 5 percent of income.<sup>11</sup> Consequently, enrollment in Medicaid might be expected to reduce beneficiaries' out-of-pocket spending to nearly zero. We evaluate how Medicaid affected the probability that a family had no out-of-pocket spending on premiums or cost-sharing. Some families may have incurred health care expenditures prior to enrolling in Medicaid. Indeed, poor health may be the factor that reduces incomes and makes families eligible for the program. We therefore separately examine the effects of Medicaid on reducing spending for people who had any level of expenditures. Finally, we look at how the Medicaid expansion affected catastrophic spending — that is, people whose spending placed them in the 90th percentile.

## FINDINGS

### Overall Effects of the Medicaid Expansion on Out-of-Pocket Spending

Low-income families living in states that expanded Medicaid had odds of having any out-of-pocket total health care spending that were 79 percent as high as those families living in nonexpansion states; this implies that they were about 11 percent less likely to have any spending. They were also less likely to have spent any money out-of-pocket on each major category of spending (total health care spending includes insurance premiums; medical services, which includes hospital services, physician services, and other medical costs; and prescription drugs).

Among families that did have expenditures, those who lived in expansion states spent much less. Families in expansion states who had any amount of out-of-pocket spending spent, on average, \$754 less on total health care spending annually than did similar families in nonexpansion states. Those with any spending on health insurance premiums (about two-thirds of those with any spending had premium expenditures) spent about \$379 less on premiums in expansion states compared to those in nonexpansion states. Those with any out-of-pocket expenses for medical services spent about \$972 less in expansion states compared to those in nonexpansion states (Exhibit 2). Lower hospital spending among the very small number with any spending accounted for the largest share of savings in this category.

Medicaid reduces the likelihood of having any spending, and it reduces the level of spending among those who do have out-of-pocket expenses. When we combine those effects — the likelihood of having any spending with the amount spent among those who do have health care expenses — the average low-income family in an expansion state saved about \$382 annually relative to a comparable family in a nonexpansion state. This lower spending is attributable to statistically significantly lower spending on insurance premiums, medical services, hospital services, prescription drugs, and lab tests (not shown).

If we assume that the overall reduction in medical spending observed in Medicaid expansion states was driven by families newly enrolled in Medicaid, and then conservatively assume that Medicaid enrollment increased by 13 percentage points more in expansion than nonexpansion states, the average newly enrolled Medicaid family saved at least \$3,000 annually compared to what they would have spent without Medicaid.

### Effects of the Medicaid Expansion on Those with Higher and Lower Out-of-Pocket Spending Levels

We next focus only on those with any spending and assess the effects of Medicaid expansion on people with higher and lower levels of spending (Exhibit 3). We find that the expansion had modest effects on out-of-pocket spending among those with low expenditure levels. At the median,

Exhibit 2. Spending on Premiums and Services Among Low-Income Families in States That Expanded Medicaid Compared to States That Did Not Expand Medicaid

| Category of spending              | Any spending in this category, 2010 | Odds ratio: effect of expansion on probability of any spending | Effect of expansion on level of out-of-pocket spending among those with any spending | Combined effect of expansion (i.e., the likelihood of having any spending and reduced amount spent among those with health care expenses) |
|-----------------------------------|-------------------------------------|--|--|---|
| <b>Total health care spending</b> | 50%                                 | 0.79***  | -\$754**   | -\$382***   |
| <b>Insurance premiums</b>         | 34%                                 | 0.87   | -\$379***  | -\$133*   |
| <b>Prescription drugs</b>         | 22%                                 | 0.85   | -\$111   | \$33*   |
| <b>Medical services</b>           | 21%                                 | 0.68***  | -\$972**   | -\$249***   |
| <b>Hospital services</b>          | 3%                                  | 0.72   | -\$5,862   | -\$297*   |
| <b>Physician services</b>         | 11%                                 | 0.85   | \$201  | -\$5  |

Significance: \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

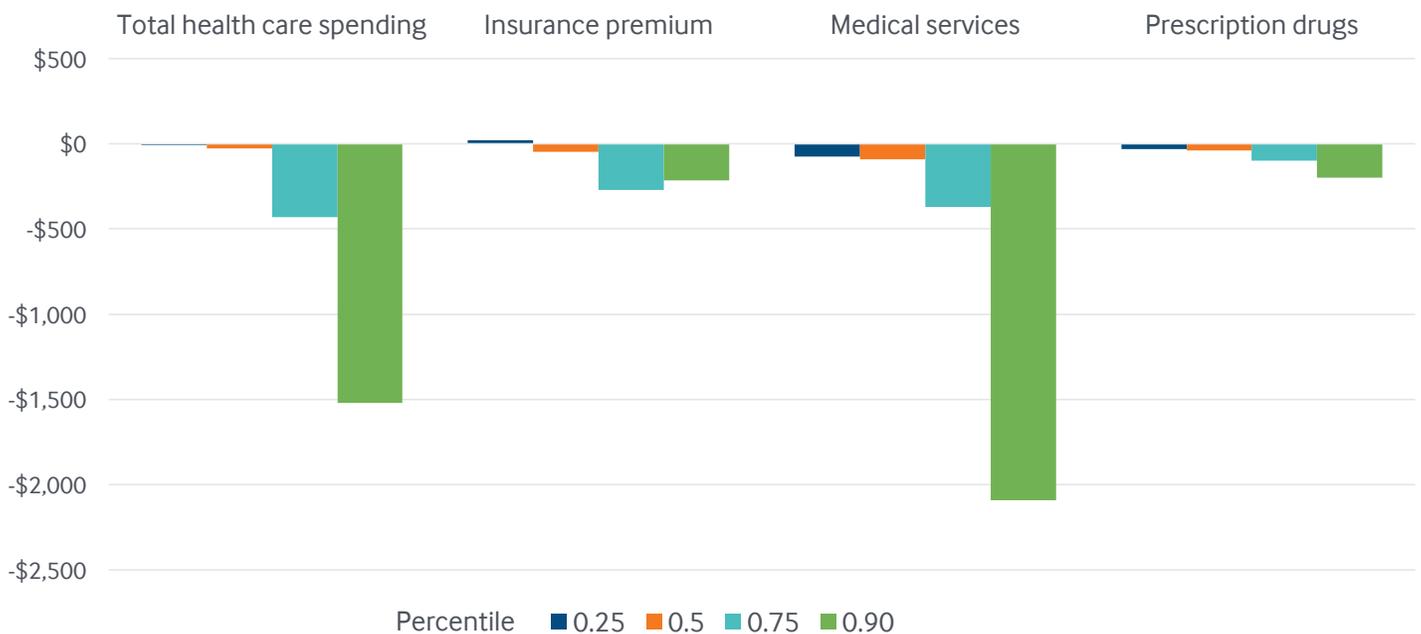
Regressions control for year, state as well as education, age, gender, race, family size, family type, and salary income. Combined effect incorporates both odds of any spending and level of spending among spenders using a two-part model. The two-part model uses a GLM-Log-Link specification.

\* Total health care spending includes insurance premiums, prescription drugs, medical services, and medical supplies (not shown).

\*\* Medical services include hospital services and physician services, as well as (not shown) dental care, eye care, lab tests, service by professionals other than physician, medical care in retirement community, care in convalescent or nursing home, repair of medical equipment, and other medical care services.

Data: Consumer Expenditure Survey 2010–2015, Families Under 138% of Federal Poverty Guideline.

Exhibit 3. Effects of Medicaid Expansion on Out-of-Pocket Spending Among Low-Income Families, by Spending Level



Bars represent changes in spending at the 25th percentile, 50th percentile, 75th percentile, and 90th percentile of the expenditure distribution.

Data: Consumer Expenditure Survey 2010–2015, Families Under 138% of Federal Poverty Guideline.

low-income families in Medicaid expansion states saw total health care spending fall by just \$27. But the effects were much larger among those with very high levels of spending. Families in expansion states were much less likely to incur extremely high levels of spending. The highest level of spending among low-income families — those at in the top 10 percent of all spenders — fell very substantially; on average, by more than \$1,500. This implies that in addition to providing access to preventive and routine care, as prior research has shown, expanding Medicaid substantially reduced the risk that low-income families incurred catastrophic expenses.

### Differences Between Waiver and Nonwaiver States

The overall effects were comparable in states that expanded using traditional Medicaid or waivers, but the patterns were slightly different (Exhibit 4). Because waiver states have higher use of premiums, copayments, and other cost-sharing, families in these states were less likely to report they had zero out-of-pocket health spending. But overall changes in spending (including the effects of Medicaid on the level of spending among those who did incur expenses), were comparable across the two groups of states.

Exhibit 4. Spending on Premiums and Services Among Low-Income Families in States That Expanded Medicaid Compared to States That Did Not Expand Medicaid, by Waiver Status

| Category of spending              | Any spending in this category, 2010 | Odds ratio: effect of expansion on probability of any spending |                       | Effect of expansion on level of spending among those with any spending |                       | Combined effect of expansion (i.e., the likelihood of having any spending and reduced amount spent among those with health care expenses) |                       |
|-----------------------------------|-------------------------------------|--|-----------------------|--|-----------------------|---|-----------------------|
|                                   |                                     | Expansion without waiver                                       | Expansion with waiver | Expansion without waiver   | Expansion with waiver | Expansion without waiver  | Expansion with waiver |
| <b>Total health care spending</b> | 50%                                 | 0.799*   | 0.72                  | -\$757***  | -\$729                | -\$382*   | -\$387                |
| <b>Insurance premiums</b>         | 34%                                 | 0.863  | 0.99                  | -\$389   | -\$300                | -\$142  | -\$64                 |
| <b>Prescription drugs</b>         | 22%                                 | 0.85   | 0.9                   | -\$116   | -\$78                 | -\$34   | -\$19                 |
| <b>Medical services</b>           | 21%                                 | 0.67***  | 0.89                  | -\$906**   | -\$1,719              | -\$241***   | -\$382**              |
| <b>Hospital services</b>          | 3%                                  | 0.67   | 1.38                  | -\$6,391   | -\$2,145              | -\$336*   | -\$3                  |
| <b>Physician services</b>         | 11%                                 | 0.81   | 1.28                  | \$171  | \$407                 | -\$10   | \$33                  |

Significance: \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

\* Total health care spending includes insurance premiums, prescription drugs, medical services, and medical supplies (not shown).

\*\* Medical services include hospital services and physician services, as well as (not shown) dental care, eye care, lab tests, service by professionals other than physician, medical care in retirement community, care in convalescent or nursing home, repair of medical equipment, and other medical care services.

Data: Consumer Expenditure Survey 2010–2015, Families Under 138% of Federal Poverty Guideline.

## DISCUSSION

Prior research has shown that after 2014, insurance coverage increased much more for people in states that expanded their Medicaid programs compared to those living in states that did not expand. These expansions led to improved access to services and less financial hardship. Consistent with these prior findings, our analyses suggest that the expansion reduced average out-of-pocket health spending among low-income families.

The effects of the expansion occur in two ways. First, expanding Medicaid reduces the probability that enrolled state residents will have any out-of-pocket spending on health insurance premiums or cost-sharing. Second, for people who are eligible but not enrolled, Medicaid provides a safety net if someone becomes unexpectedly ill or injured. These people do not have to wait for an open enrollment period and can instead sign up immediately, which will effectively cap their out-of-pocket spending and prevent them from incurring substantial out-of-pocket costs. These aspects of Medicaid coverage are especially important for low-income families, since they have so little room in their budgets to pay for insurance or health care.

## HOW THIS STUDY WAS CONDUCTED

Our analysis uses data from the annual Consumer Expenditure Survey. We examined total health care spending, spending on health insurance, spending on health care services, and several categories of services. We also compare effects in states that expanded Medicaid with a Section 1115 waiver to those that expanded without a waiver. The waiver analyses should be viewed as preliminary, because the sample is quite small and the number of observations in the relevant income groups in waiver states is limited.

We drew our sample from the Consumer Expenditure Survey 2010–2015. Our sample was restricted to low-income families (i.e., those with incomes under 138 percent of the federal poverty level), between the ages of 18 and 64. These restrictions left us with 7,161 observations over the span of six years.

We fit two-part models (the standard approach to health insurance expenditure estimation) for each expenditure category where the first part estimates the probability of using any services in that category and the second part examines the level of spending among those with spending. We use a standard method for combining these estimates, called a generalized linear model with a log-link function. In both sets of regressions, we control for year and state, along with education, age, sex, race, family size, family type, and gross salary income.

The explanatory variable that measures the effect of Medicaid expansion is a comparison between the change in outcomes over time (before and after 2014, or the year an expansion was implemented) in states that did expand Medicaid and those that did not.

We repeated the same analysis for states that expanded with and without waivers.

Finally, we examined spending at different points among high and low spenders using a method called quantile regression.

**NOTES**

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