What Does Expanding Medicaid Do for Low-Income Adults?
Evidence from Oregon’s health insurance lottery

SUMMARY

Under the Affordable Care Act, adults with incomes up to 138 percent of the federal poverty line are eligible for Medicaid in 2014, in states that agree to expand their program.¹

The Office for Oregon Health Policy and Research and researchers from Harvard University, the Massachusetts Institute of Technology (MIT), the National Bureau of Economic Research, Providence Health & Services, and Portland State University launched the Oregon Health Study (also called the Oregon Health Insurance Experiment), to analyze the impact on low-income adults of expanding the state’s Medicaid program.

The study, which began in 2008, took advantage of a lottery used by the state to draw names from a waiting list to conduct the first randomized, controlled trial to assess how providing Medicaid to such adults affects their health care use and mental, physical, and financial well-being.

Key Findings

To date, the team has published its findings in several peer-reviewed journal articles (see the Bibliography for details). Key findings include:

- Medicaid coverage expanded people’s access to and use of health care.
- Insurance coverage improved adults’ self-reported health and well-being and reduced rates of depression by about 30 percent.
- Insurance substantially increased their financial security, including reducing the probability of bills being sent to collection and virtually eliminating catastrophic out-of-pocket expenses for enrollees.

¹ The website of the American Public Health Association says, “Some sources state that the new minimum Medicaid eligibility threshold is 133 percent FPL [federal poverty line]; other sources state it will be 138 percent. Both are correct. The text of the ACA says 133 percent, but the law also calls for a new methodology of calculating income, which will make the effective minimum threshold 138 percent.”
• Total annual medical expenditures were 35 percent higher—or about $1,200 higher—for covered adults than for uncovered adults.

**Funding**

The Robert Wood Johnson Foundation (RWJF) supported this project with two grants totaling $2,746,840. See the Appendix for a list of other funders.

**CONTEXT**

There is concern that people who lack health insurance have poor access to health care and medications, and face negative health effects and financial strain. However, in previous studies it has been difficult for researchers to account for demographic and health differences among individuals who do and do not have insurance, making it hard to gauge the effect of insurance itself on health care and health outcomes.

In 2008, Oregon’s Medicaid agency used a lottery to expand coverage to uninsured low-income adults. Ultimately about 30,000 such adults—chosen randomly each month from a reservation list of 90,000—could apply, and enroll if they met eligibility requirements. The lottery gave researchers a unique opportunity to use a randomized controlled design—comparing those from the list who did and did not gain coverage—to examine the causal impact of health insurance on low-income adults.

**RWJF’s Interest in This Area**

RWJF supported creation of the Oregon Health Research and Evaluation Collaborative, which initially provided an umbrella for this project, through the Foundation’s *State Coverage Initiatives*. The Foundation has also funded a number of other projects involving the research team’s study of the lottery including:

• Oregon Health Plan Lottery: Using a randomized controlled trial to test the impact of providing public insurance coverage to low-income adults.

• Examining how the interaction of the social environment and access to coverage impacts health outcomes in lower-income populations.

• Testing the impact of improved Medicaid outreach on enrollment rates, utilization, and health outcomes.

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2 Grant ID# 64301 for $247,925 (May 1, 2008, to February 28, 2011), and Grant ID# 64964 for $2,498,915 (November 15, 2008, to November 14, 2011).

3 Design and implementation of a program to reduce the number of uninsured persons in Oregon. Grant ID# 43017: $1,448,161 (December 1, 2001, to October 31, 2003)

4 ID# 64301 ($247,925; May 1, 2008, to February 28, 2011)

5 ID# 68259 ($270,076; November 15, 2010, to February 14, 2013)
THE PROJECT

Researchers from the Office for Oregon Health Policy and Research, Harvard, MIT, the National Bureau of Economic Research, Providence Health & Services, and Portland State University launched the Oregon Health Study to analyze the impact of expanding the state’s Medicaid program on low-income adults.

The team relied on several sources of information to investigate how insurance coverage affects people’s use of health care, their mental and physical health, and their finances:

- **Mail and phone survey.** The researcher targeted 70,519 people—half selected by the lottery, and half not selected—for an initial survey, and then resurveyed them 12 months later. The survey included questions on individuals’ health, use of health care, insurance status, health care expenses, financial strain, and demographic characteristics. Some 45 percent of these adults responded to the baseline survey, and 50 percent to the 12-month follow-up.

- **In-person survey and physical measurement.** About two years after the lottery, researchers targeted some 20,000 adults—again, about half selected by the lottery and half not selected—from the Portland metropolitan area for interviews and screenings. The team asked these adults about their use of health care and medications, out-of-pocket health care spending, and health status; measured their blood pressure, cholesterol, and blood sugar; and evaluated them for depression, in both home and clinic settings. The team reached more than 12,000 of these residents.

  The team subcontracted with the National Center for Health Statistics at the Centers for Disease Control and Prevention to help develop the collection protocols.

- **Other sources.** The researchers obtained hospital inpatient records, emergency department records, mortality records, and credit reports.

Challenges

Fewer low-income adults from the lottery than might have been expected ended up with Medicaid coverage, as some individuals selected by the lottery did not apply, while others who did apply did not meet eligibility guidelines. The state subsequently (in 2010) had the opportunity to draw additional names from the lottery list, which could have threatened randomization. The team worked with state officials to design fielding protocols that preserved that critical aspect of the study while supporting the state’s efforts to enroll as many people as possible.

The researchers encountered challenges in finding and tracking a highly mobile low-income population. The team subcontracted with a specialized tracking firm that used intensive tracking procedures drawing on consumer bureaus, court records, Internet

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6 ID# 70592 ($249,055; January 15, 2013 to January 14, 2016)
searches, social media, and outreach to friends and family to reach people for whom there were no valid addresses. The team also relied on culturally specific efforts to reach Hispanics.

**FINDINGS**

The researchers have reported their findings to date in four journal articles and a working paper. The findings include these:

**Findings After One Year**

In “The Oregon Health Insurance Experiment: Evidence from the First Year,” in the *Quarterly Journal of Economics*, and “The Effects of Medical Coverage: Learning from the Oregon Experiment,” in the *New England Journal of Medicine*, the team reported that:

- **Insurance coverage expanded people’s access to and use of health care.** The coverage:
  - Increased the likelihood that these low-income adults would use outpatient care by 35 percent and prescription drugs by 15 percent, and that they would be admitted to the hospital by 30 percent.
  - Increased the use of recommended preventive care such as mammograms by 60 percent, and blood sugar and cholesterol monitoring by 15 and 20 percent, respectively.
  - Increased the probability that adults would report having a regular place for care by 70 percent, and having a regular physician by 55 percent.

- **Medicaid coverage improved enrollees’ financial security.** The coverage:
  - Decreased by 25 percent the probability that these adults faced unpaid medical bills sent to a collection agency, and decreased by 40 percent that they reported having to borrow money or skip paying other bills because of medical expenses.
  - Decreased by 35 percent the probability that these adults reported any out-of-pocket medical expenses.

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• Medicaid enrollees reported improved health and well-being:
  — Insurance increased by 25 percent the probability that these adults reported being in good to excellent health, and decreased by 40 percent the probability that they reported a decline in their health over the last six months.
  — Medicaid enrollees were 10 percent less likely than non-enrollees to screen positive for depression, and 30 percent more likely to report that they were pretty happy or very happy (versus not too happy).

• Expanded Medicaid coverage did not “crowd out” private insurance. People selected in the lottery were 25 percent more likely to be enrolled in Medicaid than those not selected, but no less likely to be covered by private insurance.

Findings After Two Years

In “The Oregon Experiment: Effects of Medicaid on Clinical Outcomes” in the *New England Journal of Medicine*, the researchers reported these effects after two years:

• Although people who were now covered by Medicaid reported improved health and wellbeing, Medicaid coverage produced no significant improvements in participants’ measured physical health after two years. The team found no statistically significant effects of Medicaid on blood pressure and cholesterol levels, nor on the diagnosis of or use of medications for these conditions. They also found no effect on blood sugar levels. There was similarly no impact observed among higher-risk subgroups, such as older adults and those with pre-existing diagnoses.

• Medicaid coverage increased the probability that these adults would be diagnosed with diabetes, and that they would use diabetes medication. Relative to the control group. Medicaid enrollees had a 3.8 percentage-point increase in diagnosis of diabetes, and a 5.4 percentage-point increase in the use of diabetes medication.

• Medicaid coverage lowered rates of depression by 30 percent. Enrollees were also more likely to have their depression diagnosed. Coverage also improved self-reported quality of life related to mental health.

• Medicaid coverage nearly eliminated out-of-pocket catastrophic medical spending. The chances of having out-of-pocket expenses that exceeded 30 percent of income fell by more than 80 percent among enrollees.

• Medicaid coverage reduced other measures of financial strain, such as having to borrow money or to skip paying other bills because of medical expenses.

• **Greater use of health care services, including preventive care, persisted.** For example, the probability that enrollees had had a cholesterol check was more than 50 percent higher than among adults not selected for coverage. Coverage doubled the probability that women over 50 had had a mammogram compared to unselected adults.

• **Total annual medical expenditures were 35 percent higher—or about $1,200 higher—for covered adults than for the control group.**

**Limitations**

There are several reasons to be cautious in generalizing the results of this study. First, the costs and benefits of Medicaid coverage for low-income adults may well change over the longer run.

Second, the low-income, uninsured population in Oregon differs from that in other states in many respects. For example, the state has a relatively low share of racial and ethnic minorities. Enrolling people with different characteristics—or in a different type of insurance plan—could yield different outcomes.

Third, the lottery expanded coverage to only about 10,000 adults. Expanding Medicaid to millions of adults under the Affordable Care Act could result in different system-level changes, such as straining provider capacity or generating differences in infrastructure or delivery organization.

**Conclusions**

Overall, the study revealed “a nuanced story that is not in line with some people’s black-or-white views of Medicaid,” noted Katherine Baicker, PhD, of the Harvard School of Public Health, a leader of the research team.

“On the one hand, some thought the Medicaid expansion would not prove very helpful because it did not pay providers enough, the uninsured were already getting some care, and coverage would cost a lot of money and not improve health at all,” she said. “Our study should dispel that unduly pessimistic view, because enrollees did indeed benefit from the program. Coverage eliminated catastrophic out-of-pocket expenses, dramatically reduced rates of depression, and substantially improved people’s self-reported health and well-being.

“On the other hand, the unduly optimistic view held that the Medicaid program was so effective that it would get enrollees into the doctor’s office and keep them out of the hospital, and improve chronic care management by so much that they would be healthier within two years. People would consume less health care overall, and total spending would drop. Our study should also dispel this view: people clearly consumed more health care, and insuring them costs money,” Baicker said.
“There are still many unanswered questions for future research. For example, we did not detect any improvements in blood pressure or cholesterol, despite the availability of treatments that could have improved those outcomes in much less than the two years we observed. We do not know whether people were not appropriately diagnosed, whether they were not prescribed the right medications, or whether they didn’t take their medications as directed.

“There is much more data from this study to be analyzed. The team is continuing to explore topics such as the treatment of depression and emergency department utilization,” she said.

COMMUNICATION RESULTS

The team’s four journal articles, and a version of the first article published as a working paper in 2011 by the National Bureau of Economic Research in Cambridge, Mass., sparked considerable interest among researchers and the media. Media coverage included articles and editorials in the New York Times, the Washington Post, the Wall Street Journal, and the Atlantic, Associated Press stories, National Public Radio broadcasts, and TV commentary. The team has made numerous presentations on its findings to policy-makers, other researchers, and the public.

SIGNIFICANCE OF THE PROJECT

Despite its limitations, the Oregon Health Study sheds light on the medical needs of low-income adults, how those newly insured may use medical services, and the impact of coverage on their well-being. The study won the 2012 Health Services Research Impact Award from AcademyHealth in Washington and the 2013 Arrow Award from the International Health Economics Association.

“Commentators have called this a landmark study of health insurance in the United States, and we believe it will continue to affect the policy landscape as we publish more results,” according to the research team.

LESSONS LEARNED

1. Engage public officials in designing and implementing research on policy experiments. This close cooperation is essential both to designing studies (and policies) that take advantage of opportunities to gain scientific knowledge as well as to fielding those studies successfully. The lottery was created to meet a public policy need (allocating limited slots when there was a long waiting list), but generated an unprecedented opportunity to learn about the program. Active partnership between public officials and researchers was necessary at every step of design and fielding the study. For example, when state officials expanded the lottery draws, the research
team met regularly with them to accommodate changes while ensuring that state policy-makers were able to meet their goals. Researchers were also able to provide key data to the state in a useful format and time frame. (Report to RWJF)

2. **To pursue studies of vulnerable populations, partner with community groups.** The team worked with clinics and local service organizations to ensure that vulnerable individuals—those who were homeless or highly mobile, or who had limited English proficiency—could respond to the survey. These organizations helped the team track down their clients or delivered surveys directly to them. (Report to RWJF)

3. **Take steps to validate a study in the eyes of participants.** Low-income individuals are often wary when researchers ask personal questions. Some potential participants in this study feared that their responses would affect their ability to enroll in Medicaid. The team created a website “home” to enable participants to find out more about the study, ask questions, update their addresses, and even fill out their surveys. The team also maintained a toll-free, multi-language hotline where participants could ask questions and get help in completing the survey. (Report to RWJF)

4. **Use multiple approaches, including social media, to boost responses.** Adults aged 18 to 30 proved particularly mobile and hard to reach using traditional survey methods, according to the researchers. The team used social media sites to track down these younger participants and provided links to online surveys, securing several hundred more completed surveys. (Report to RWJF)

**AFTERWARD**

The research team is continuing to analyze the data collected and disseminate results through peer-reviewed journals and at conferences, and plans to write a series of policy briefs.

Additional research includes the interaction among health insurance, a neighborhood’s built environment, and residents’ health, funded by RWJF;\(^\text{10}\) the impact of improved Medicaid outreach on enrollment rates, utilization, and health outcomes, also funded by RWJF;\(^\text{11}\) and the impact of public health insurance on:

- Cancer-related prevention, screening, and health behavior.
- The use of hospital emergency departments.
- The use of medication and therapies for depression, and the implications for treatment.

\(^{10}\) Grant ID# 68259.

\(^{11}\) Grant ID# 70592.
To encourage other researchers to take advantage of the unique data collected, the team plans to release a public use dataset, after removing information identifying individuals, and to publish manuals and other resources for researchers. The team also plans to disseminate strategies for using large-scale mail surveys, tracking, and in-person interviews to reach low-income adults and improve take-up and retention in public insurance programs.
## APPENDIX

### Other Funders

*(Current as of the end date of the program; provided by the program’s management; not verified by RWJF.)*

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BIBLIOGRAPHY

(Current as of date of the report; as provided by the grantee organization; not verified by RWJF; items not available from RWJF.)

Articles


Communications

http://oregonhealthstudy.org. Project website geared to study participants. Oregon Health Study, Portland, OR.

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