

The Oregon Medicaid Experiment: Just The Facts

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In 2008 Oregon's Medicaid program opened to new enrollment using a lottery system. Approximately thirty-five thousand people were randomly selected from a waitlist of ninety thousand and invited to apply for coverage.¹ After two years, researchers compared data on health and other outcomes from lottery winners and losers.² The results of this study, reported in the *New England Journal of Medicine* in May, have been widely but wrongly interpreted as showing that Medicaid was largely ineffective at improving health outcomes in Oregon. In fact, the study design was unable to answer most questions regarding health outcomes, but showed that winning the lottery was associated with significant improvements in several of the areas examined, including depression rates and financial insecurity. These results are explained below.

Fact #1: The study did not compare the health outcomes of Medicaid beneficiaries with uninsured individuals.

This study compared the health outcomes of lottery winners, who were given a chance to apply for Medicaid, with lottery losers, who were not given that opportunity. However, only 30% of the lottery winners successfully enrolled in Medicaid.³ Moreover, both categories included individuals who had private insurance as well as people who obtained Medicaid through other means.⁴ Ultimately, the winning group had only an 11 percentage point increase in insurance coverage compared to the losing group.⁵ In sum, the study measured the impact of that modest increase in health coverage—not a simple sorting between all-Medicaid, on the one hand, and all-uninsured, on the other.

Fact #2: The study found a statistically significant relationship between Medicaid coverage and improvements in depression, access to care, financial security, and self-reported health status.

For an outcome to be statistically significant, scientific convention holds that there must be at least a 95% likelihood that it resulted from the identified cause rather than chance. The larger the sample size and the more prevalent the studied condition within the sample, the easier it is for the study to detect a statistically significant effect. The study found that increased coverage due to the lottery resulted in statistically significant improvements in depression, access to care, financial security, and self-reported health status—in other words, improvements that almost certainly were caused by the receipt of health coverage, rather than chance.

Compared to the group that wasn't selected, winners were 30% (around nine percentage points) less likely to have depression at the end of the study.⁶ They also accessed care, especially preventive and screening services, much more frequently and reported better access to care, including receiving care from a usual source and filling prescriptions recommended by physicians.⁷ In addition, lottery winners reported a decrease in financial strain due to medical costs and virtual elimination of catastrophic out-of-pocket health care costs.⁸ Winners were also more likely (by nearly 8 percentage points) to report that their health was the same or better than during the previous year.⁹ A large body of literature indicates that such self-reported health status is an excellent predictor of later health and survival rates.¹⁰

Fact #3: The study sample size was too small and the study population was too healthy to show anything at all about the impact of Medicaid coverage on diabetes, blood pressure, or cholesterol.

Press accounts of this study were highly misleading about results that involved diabetes, blood pressure, and cholesterol. Winners were 18% less likely to have diabetes, 17% less likely to have high cholesterol, and 8% less likely to have high blood pressure.¹¹ In layperson's terms, these effects were surely "significant." But in scientific parlance, the effects were not "statistically significant" because of the relatively small size of the study and the relatively small number of people suffering from those conditions. In the losing group, for example, only 5% of participants had diabetes, 14% had high cholesterol, and 16% had high blood pressure.¹² Therefore, the study would have needed 23 times as many people to be able to detect whether the observed improvement in diabetes was caused by Medicaid coverage.¹³ In contrast, the study was able to detect a statistically significant effect on depression because depression was relatively prevalent in the studied population, with 30% of participants in the losing group screening positive for the condition.¹⁴ *Put simply, this study was not capable of showing whether two years or less of Medicaid coverage led to observable changes in clinical measures of diabetes, high blood pressure, or high cholesterol.*

Fact #4: Other studies that were capable of evaluating the relationship between Medicaid and physical health found dramatic and positive effects.

Several studies that *were* able to analyze Medicaid's impact on physical health found it to be significant and positive. For example:

- A recent study comparing states that expanded Medicaid coverage to nearby states that did not expand found that, after five years, Medicaid expansion was associated with a 6% decrease in all-cause mortality among adults ages 20-64. The reductions were the greatest in counties with high poverty rates and among nonwhites and older adults.¹⁵ Both this study and the Oregon study were published in the same journal.

- A study on hospital care following automobile accidents found that uninsured individuals received substantially less care than Medicaid beneficiaries and had a 4.7 percentage point higher mortality rate.¹⁶
- A study on the effect of insurance status on mortality among HIV+ patients found that, compared to being uninsured, Medicaid reduced mortality by 60%.¹⁷
- A study on the impact of termination of Medicaid coverage found that loss of coverage resulted in deterioration of health status. After six months, the proportion of hypertensive patients with uncontrolled blood pressure in the group that lost coverage rose from 3% to 31% and the mean diastolic pressure increased by 10 mm Hg.¹⁸ A sustained increase of 10 mm Hg increases risk of death by 40%.¹⁹ There were also multiple deaths in the group that lost coverage compared to no deaths in the control group that retained coverage.²⁰ Deteriorated health status persisted after one year, especially among those patients who neither regained insurance nor received intervention from the study team.²¹

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- ¹ Amy Finkelstein et al., *The Oregon Health Insurance Experiment: Evidence from the First Year*, 127 Q. J. ECON. 1057, 1063 (2012).
- ² Katherine Baicker et al., *The Oregon Experiment – Effects of Medicaid on Clinical Outcomes*, 368 N. ENGLAND. J. MED. 1713, 1713 (2013).
- ³ Finkelstein et al., *supra* note 1, at 1064.
- ⁴ *Id.* at 1070-71; Baicker et al., *supra* note 2, at supp. app. 11-12, tbl. S9.
- ⁵ 46.93% of lottery winners reported having insurance compared to 35.8% of lottery losers. Baicker et al., *supra* note 2, at supp. app. tbl. S9.
- ⁶ 20.85% of lottery winners screened positive for depression at the end of the study compared to 30% of lottery losers. *Id.* at 1717.
- ⁷ *Id.* at 1718, 1720.
- ⁸ *Id.* at 1718-19.
- ⁹ 88.24% of lottery winners reported the same or better health than the previous year compared to 80.4% of lottery losers. *Id.* at 1717-18.
- ¹⁰ See, e.g., Karen B. DeSalvo et al., *Mortality Prediction with a Single General Self-Rated Health Question*, 21 J. GEN. INTERNAL MED. 267 (2006); Ellen L. Idler, Louise B. Russell & Diane Davis, *Survival, Functional Limitations, and Self-Rated Health in the NHANES I Epidemiologic Follow-up Study, 1992*, 152 J. EPIDEMIOLOGY 874 (2000); Ellen L. Idler & Yael Benyamini, *Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies*, 38 J. HEALTH & SOC. BEHAV. 21 (1997).
- ¹¹ See Baicker et al., *supra* note 2, at 1716; see also Kevin Drum, *What We Know – And What We Don't – About the Oregon Medicaid Study*, MOTHERJONES (May 5, 2013), <http://www.motherjones.com/kevin-drum/2013/05/what-we-know-oregon-medicaid-study>.
- ¹² Baicker et al., *supra* note 2, at 1715-16.
- ¹³ Austin Frackt, *Updated Power Calculation*, THE INCIDENTAL ECONOMIST (May 14, 2013), <http://theincidentaleconomist.com/wordpress/updated-power-calculation/>.
- ¹⁴ Baicker et al., *supra* note 2, at 1715.
- ¹⁵ Benjamin D. Sommers, Katherine Baicker & Arnold Epstein, *Mortality and Access to Care Among Adults after State Medicaid Expansions*, 367 N. ENGLAND. J. MED. 1025, 1028 (2012).
- ¹⁶ Joseph J. Doyle, Jr., *Health Insurance, Treatment and Outcomes: Using Auto Accidents as Health Shocks*, 87 REV. ECONOMICS & STATISTICS 256, 267 (2005).
- ¹⁷ Jayanta Bhattacharya, Dana Goldman & Neeraj Sood, *The Link Between Public and Private Insurance and HIV-Related Mortality*, 22 J. HEALTH ECONOMICS 1105, 1117 (2003).
- ¹⁸ Nicole Lurie et al., *Termination from Medi-Cal – Does It Affect Health?*, 311 N. ENGLAND. J. MED. 480, 483 (1984).
- ¹⁹ *Id.* at 484.
- ²⁰ *Id.* at 482-83.
- ²¹ Nicole Lurie et al., *Termination of Medi-Cal Benefits: A Follow-Up Study One Year Later*, 314 N. ENGLAND J. MED. 1266, 1267-68 (1986).