

BY NICK GARVEY

# Does Health Insurance Improve Health Outcomes?

**Jacob Goldin, Ithai Z Lurie, and Janet McCubbin.** “Health Insurance and Mortality: Experimental Evidence from Taxpayer Outreach.” *Quarterly Journal of Economics*, February 2021, vol. 136, no. 1, pp. 1–49.

**C**an health insurance cause people to live longer? Randomized studies of this question have been rare. In a recent article in the *Quarterly Journal of Economics*, Jacob Goldin of Stanford Law School and Ithai Lurie and Janet McCubbin of the U.S. Department of the Treasury’s Office of Tax Analysis used evidence from a randomized outreach study conducted by the Internal Revenue Service (IRS) to estimate a causal relationship between health insurance coverage and mortality outcomes.

Under the “individual mandate” of the Patient Protection and Affordable Care Act, commonly known as the Affordable Care Act or ACA, individuals without health insurance are required to pay a tax. At the time of the study, the tax was at least 2.5 percent of household income above the filing threshold (the rate is now zero). In 2017, the IRS identified 4.5 million households that had previously paid that tax. Of those 4.5 million households, the IRS randomly selected 3.9 million to receive a letter reminding them of the tax for not having insurance, as well as directing them to resources for finding insurance. This experiment forms the basis of the authors’ research.

First, the authors collected IRS administrative data, which records whether an individual is enrolled in health insurance that satisfies the

ACA’s “minimum essential coverage” provision. The IRS data also identified those households that were sent the reminder about their lack of coverage. The authors also collected data from the Social Security Death File on deaths among the 4.5 million households in the experiment.

Focusing attention only on people who had not found coverage in the brief period between payment of the tax and the letter mailing, the authors found that individuals who received a letter (the treatment group) were 1.1 percentage points more likely to enroll in coverage in the two subsequent years than those who did not receive a letter (the control group). The effect was strongest (1.8 percentage points more likely) among middle-aged adults, defined as those aged 45–64. The authors also noted that the coverage induced by receiving the letter was mostly from enrollment in healthcare.gov exchange plans followed by enrollment in Medicaid, with other sources of coverage being less important.

The authors then used assignment to the treatment or control group as the basis of what is known as an instrumental variable regression. Simply regressing mortality on months of insurance might not give us the causal effect of insurance coverage on mortality, because other unobserved factors may play a role. If a variable — in this case, whether the person received the letter or not — satisfies certain technical conditions, researchers can use it to estimate the causal effect of one variable on another without concern about confounding variables.

The authors first took care to rule out explanations for lower mortality in the treatment group other than

increased insurance coverage. For example, perhaps the letter reduced mortality by increasing after-tax incomes of people no longer paying the tax. But the intervention reduced the individuals’ tax bills by only \$4.70 on average, too small to plausibly account for the differences in mortality. The intervention could have also reduced mortality by pushing people into the labor force to obtain health insurance through employment. The authors noted, however, that Medicaid and exchange plan enrollment, and not employer-sponsored insurance, accounted for the vast majority of the increased coverage. It may also be that individuals who applied for Medicaid also qualified for other benefits programs such as the Supplemental Nutrition Assistance Program or Temporary Assistance for Needy Families, which improved their health outcomes. The authors showed that this is unlikely, since the mortality reduction was not significantly different for households whose incomes would qualify them for Medicaid and those whose incomes would not.

The authors found that for middle-aged adults, each additional month of coverage induced by the intervention was associated with a 0.18 percentage point reduction in mortality risk over the two-year time span. They caution that this estimate, while statistically significant, is imprecisely estimated — meaning there’s a good chance the actual effect could be much larger or smaller.

Ben Franklin once remarked that nothing in life is certain except for death and taxes. Yet even he likely did not foresee that taxes could save people from a premature death. **EF**