Issue Brief
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The Reforming States Group

Milbank Memorial Fund

Exploring Claims That Medicaid Doesn't Improve Health

This Milbank Memorial Fund (MMF) Issue Brief was prepared in response to a request from the MMF's Reforming States Group (RSG) Steering Committee to help policymakers better understand three studies often cited in debates over Medicaid's effectiveness. Confronted with assertions that these studies were definitive, RSG members asked the MMF to assess the studies and the evidence they presented.

The studies include a review of claims data on surgical cases, a randomized study of clinical outcomes in Medicaid recipients in Oregon, and an analysis of emergency department use in the same randomized set of patients from Oregon. This Issue Brief states the policy claim associated with each study, analyzes each study's methodology and findings, and then summarizes the policy relevance of and key points for each study.

This Issue Brief was compiled by Mark Gibson, Program Officer of the Milbank Memorial Fund, and reviewed by members of the Reforming States Group.

POLICY CLAIM:

MEDICAID COVERAGE IS WORSE FOR HEALTH THAN BEING UNINSURED.

THE STUDY:

Primary Payer Status Affects Mortality for Major Surgical Operations.
Damien J., LaPar M.D. 2012.
Annals of Surgery. 252(3): 544-551. doi:10.1097/SLA.0b013e3181e8fd75.

ANALYSIS:

The title of this study is misleading. It implies a cause and effect relationship between the patient's type of insurance and his or her risk of dying from certain surgical procedures. Because this is a retrospective review of insurance claims, the results are subject to numerous influences other than the patient's insurer, which could account for the differences found. Although in some cases (but not all), Medicaid coverage was associated with poorer outcomes, no causal link was established between the two.

This distinction between association and cause is important and is often misunderstood when using research to inform decision making. For example, a large retrospective study showed that people who drink two or more cups of coffee per day lived longer than those who did not. Here, even though coffee drinking was associated with longer life, this study does not offer sufficient evidence to conclude that coffee caused increased longevity. Similarly, data show that women aged 15 to 25 years are much more likely to become pregnant than are women over age 40. Again, even though being 15 to 25 years old is *associated* with a

greater chance of becoming pregnant, it clearly does not cause women of that age to become pregnant.

The reason that these retrospective studies do not allow us to make a causal connection is the myriad other factors that could affect the observed result. For example, people who drink two cups of coffee a day may be less likely to be obese, have healthier diets, or be predominantly of one gender. Any of these other factors could be the real cause of greater longevity.

The authors of this surgical outcomes study tried to account for potential confounding factors by using a well-known risk adjustment methodology that considers many factors known to affect these outcomes. Even so, the authors recognized that factors not accounted for by risk adjustment could have caused Medicaid patients to have worse outcomes. Among these were higher rates of poverty and retrospective Medicaid eligibility, which causes sicker patients to be covered by Medicaid. In addition, Medicaid patients had the highest incidence of acquired immunodeficiency syndrome, depression, liver disease, neurologic disorders, and psychoses. Medicaid patients also had the highest incidence of metastatic cancer. The authors also acknowledged that other unknown confounders may have caused these poor outcomes.

Besides recognizing that the study design cannot support its title's bold claim, a closer look at the study's data shows a much more nuanced set of associations. First, the differences in health outcomes among the insurers were very small, and second, the outcomes were mixed. For example, fewer Medicaid patients died when having lung resections, pancreatectomy, and aortic aneurysm operations, while uninsured patients had better mortality outcomes in esophagectomy, colectomy, gastrectomy, hip replacement, and coronary artery bypass grafting (CABG).

Another finding seldom mentioned by those citing this study is that after the outcomes were risk adjusted, privately insured patients had higher pulmonary, urinary, gastrointestinal, systemic, and procedure-related complications than did uninsured patients. But these findings are seldom used to argue that being uninsured is superior to being privately insured.

SUMMARY:

The data in this study are insufficient to establish a causal link between patients' health outcomes and their insurance carriers. Although being insured by Medicaid is, in some cases, associated with worse outcomes than being uninsured, it also is true that sometimes being privately insured is associated with worse outcomes than being uninsured. Moreover, the heterogeneity of the study results strongly suggests that factors other than the source of insurance are linked to the health outcomes studied here.

POLICY CLAIM:

OREGON'S MEDICAID EXPANSION HAS NOT IMPROVED THE HEALTH OF PATIENTS RECEIVING COVERAGE.

THE STUDY:

The Oregon Experiment—Effects of Medicaid on Clinical Outcomes.
Baicker K., Taubman S., Allen H., Bernstein M., Gruber J., Newhouse J., Schneider E., Wright B.J., Zaslavsky A.M., Finkelstein A.N. 2013.
New England Journal of Medicine. 368:1713-1722. doi:10.1056/NEJMsa1212321.

ANALYSIS:

The data in this study come from a random sample of adults aged 19 to 64, with incomes below the federal poverty level and less than $2,000 in personal assets, who entered a lottery to qualify for Medicaid coverage. The study compares the health status of those people selected in the lottery who completed an application and met eligibility requirements with those people who entered the lottery but were not selected and thus remained uninsured. The effects of coverage were tracked for two years and released in several reports. In the first year, the metrics included health care utilization, financial hardship, self-reported health status, and depression. In the second year, clinical measurements were added, including blood pressure, cholesterol, and glycated hemoglobin. In addition, diagnoses of or treatment for high blood pressure, elevated cholesterol, and diabetes were tracked.

Randomized controlled trials (RCT) are seen as the gold standard for establishing cause and effect since they allow the intervention to be tested in two identical groups. The only difference between the groups is the intervention. Thus if the results differ from group to group, the difference must be caused by the intervention.

In year one, those people covered by Medicaid used the hospital 30% more than did those not covered, an increase driven by regular admissions, not by admissions through the emergency department. In addition, Medicaid coverage increased the likelihood that patients used outpatient care by 35% and prescription drugs by 15%. It did not affect the self-reported use of emergency departments. Having Medicaid coverage also significantly decreased financial hardship. It raised the number reporting their health as "good to excellent" by 25% and lowered the probability that patients would screen positive for depression by 10%.

In year two, Medicaid coverage reduced the rates of depression by 30% (9.2% percentage points relative to a base of 30), a statistically significant effect. "Statistical significance" is a research term that describes how likely it is that a study result is caused by chance. To be deemed statistically significant, a study must show that there is less than a 5% likelihood that the result is due to chance.

To develop an informed opinion about whether this study shows that Medicaid coverage improves health outcomes depends on two factors. The first is whether a 30%

decrease in depression is a significant improvement in the health of those covered by Medicaid. If a substantial decrease in depression is regarded as a desirable health outcome, then Medicaid coverage has that effect in this population. The second is whether a study's results are statistically significant. If a trial is otherwise well designed and executed—and its results are statistically significant—then policymakers can be confident that the results of the trial are valid.

Some of the findings in this study (reduction in depression) were statistically significant, and therefore we can be confident that they are not the result of chance and that Medicaid coverage was responsible for the observed difference. Similarly, we can be confident that the use of various preventive services increased. Other findings in this study, though positive, do not meet this threshold and leave open the possibility they were caused by chance. Other measures tracked by the study are as follows:

Physical health results:

- There were no statistically significant improvements in blood pressure, cholesterol levels, or blood sugar levels in diabetics. Although each of these outcomes showed improvement, the trends still could have been caused by chance.

Health care interventions:

- There was a statistically significant increase in the diagnosis of diabetes and the use of diabetes medications.

Prevention activities:

- There were statistically significant increases in cholesterol screening, Pap smears, mammograms, and PSA testing.
- Changes in colon cancer screening and flu shots did not reach statistical significance.

SUMMARY:

RCTs are the gold standard for establishing cause and effect. When the results of a properly conducted RCT are statistically significant (less than a 5% chance that the results are due to chance), then we can be confident that the results are real. The claim that Medicaid coverage does not improve health seems to be based entirely on the fact that while showing improvement in levels of cholesterol, hemoglobin A1C, and blood pressure, these trends were not statistically significant and thus may have been caused by chance. This assertion ignores both significant improvements in depression and the use of preventive services that, research shows, will improve health over the long term.

POLICY CLAIM:

MEDICAID COVERAGE INCREASES EMERGENCY DEPARTMENT USE.

THE STUDY:

Medicaid Increases Emergency Department Use: Evidence from Oregon's Health Insurance Experiment.
Taubman S., Allen H., Wright B., Baicker K., Finkelstein A. 2014.
Science. 343(6168): 263-268.

ANALYSIS:

This article also relies on data obtained from the Oregon Medicaid Program coverage lottery. Using a random sample of low-income adults, the study compares people selected in the lottery with those not selected and thus remaining uninsured (see the preceding study for details). Because the population in this study is limited, the title—"Medicaid Increases Emergency Department Use"—may be misleading if it is interpreted to mean that Medicaid coverage leads to greater emergency department (ED) use in the Medicaid program overall.

This study analyzed data from the initial 13 months of Medicaid coverage for people previously without health insurance. In contrast to findings from another Oregon Health Experiment study, which looked only at evidence from the first year and showed no increase in ED visits, this analysis shows that within the first 13 months of having Medicaid coverage, this population increased its use of the emergency department. The authors account for this difference by noting that the first-year data were self-reported and that the current study was based on a review of hospital records.

These results demonstrate that simply having access to health insurance and primary care does not reduce this population's use of the emergency department (at least during the first 13 months of coverage). This increased use of the ED was evident even among those patients who also were using more primary care than they had before they were insured.

The authors themselves recognized the limits to the generalizability of their findings. The time frame of the study is short, signaling the need to continue following this population and their use of the ED. The population studied is different (adult, white, urban dwelling, and voluntarily signing up for Medicaid) from those covered by other Medicaid expansions. For example, a different study of the effect of Medicaid expansion on children showed no change in ED use.

SUMMARY:

This analysis of a randomized sample of low-income adults gaining access to Medicaid coverage shows an increase in their use of the ED. We can have confidence in this conclusion because the sample was randomized and the results were statistically significant.

Furthermore, this increase persisted even when these patients were using more primary care services than they had before gaining insurance coverage. But since the population in this study is different from many other populations covered by Medicaid and since the time frame of the study is short, more research may be needed to understand the effect of Medicaid coverage over time and across all eligible populations. For example, another study found no increase in ED use among children gaining access to Medicaid, and recent program evaluations of further Medicaid reforms in Oregon show a decrease in ED use.

KEY POINTS:

Exploring Claims that Medicaid Doesn't Improve Health

PRIMARY PAYER STATUS AFFECTS MORTALITY FOR MAJOR SURGICAL OPERATIONS

Annals of Surgery

- The title of this study is misleading. Although the study finds associations between Medicaid patients and poor health outcome, the study design prevents us from concluding that Medicaid is the cause of these differences.
- The study design does not account for many confounding variables, such as the Medicaid patients' increased incidence of acquired immunodeficiency syndrome, depression, liver disease, neurologic disorders, and psychoses. The Medicaid patients also had the highest incidence of metastatic cancer among the groups studied.
- The results were inconsistent. For some procedures, the Medicaid patients had worse outcomes, but for other procedures, they fared better than those who either were covered by private insurance or were uninsured. In fact, in some cases the uninsured patients had better outcomes than did those who were commercially insured, which further demonstrates that it makes no sense to claim that Medicaid coverage causes worse health outcomes than being uninsured.

THE OREGON EXPERIMENT—EFFECTS OF MEDICAID ON CLINICAL OUTCOMES

New England Journal of Medicine

- This study showed convincingly that having Medicaid coverage improved depression among those in the population studied in this experiment.
- The study also showed convincingly that having Medicaid coverage increased the use of preventive services and the diagnosis and treatment of diabetes.
- The study showed trends toward the improvement of cholesterol levels, blood sugar levels among persons diagnosed with diabetes, and blood pressure. However, the trends were not sufficient to conclude that they were not caused by chance.

MEDICAID INCREASES EMERGENCY DEPARTMENT USE: EVIDENCE FROM OREGON'S HEALTH INSURANCE EXPERIMENT

Science

- The study demonstrated that ED use increased among this adult population who gained access to Medicaid coverage. Policymakers should take these findings into account when covering similar groups.
- The increase in ED use persisted even among those who used primary care services and services that could have been provided in primary care settings.
- The study looked at only the first 13 months that these patients had Medicaid coverage. Because this population previously had been uninsured, they may need more time to shift their behaviors to more appropriate ED use.
- This population was white, urban, and signed up for Medicaid voluntarily and thus were not representative of many others eligible for Medicaid.
- Studies of children gaining access to Medicaid did not show a similar increase in ED use.

ABOUT THE MILBANK MEMORIAL FUND

The Milbank Memorial Fund is an endowed operating foundation that works to improve the health of populations by connecting leaders and decision makers with the best available evidence and experience. Founded in 1905, the Fund engages in nonpartisan analysis, collaboration, and communication on significant issues in health policy. It does this work in three ways: publishing high quality, evidence-based reports, books, and *The Milbank Quarterly*, a peer-reviewed journal of population health and health policy; convening state health policy decision makers on issues they identify as important to population health; and building communities of health policymakers to enhance their effectiveness.

ABOUT THE REFORMING STATES GROUP

The Reforming States Group (RSG) is a bipartisan, voluntary group of state health policy leaders from both the executive and legislative branches who, with a small group of international colleagues, convene regularly to share information and experiences, develop professional networks, and work on practical solutions to pressing problems in health care—all while using the best available evidence and experience to improve population health. Supported by the Milbank Memorial Fund since 1992, the RSG is led by a Steering Committee: Thomas C. Alexander (South Carolina), Linda Berglin (Minnesota), Susan Birch (Colorado), Harriette L. Chandler (Massachusetts), Terry L. Cline (Oklahoma), Eileen L. Cody (Washington), Steven M. Costantino (Rhode Island), Gene Davis (Utah), Richard N. Gottfried (New York), David E. Heaton (Iowa), Jean Hunhoff (South Dakota), Chuck Hunter (Montana), M. Jane Kitchel (Vermont), Robyn Kruk (Australia), Wendy Long (Tennessee), Nick Macchione (California), Bob Nakagawa (Canada), John T. Nilson (Canada), Scott Y. Nishimoto (Hawaii), John M. O'Bannon (Virgina), Gerry A. Oligmueller (Nebraska), Sheila Peterson (North Dakota), John M. Rusche (Idaho), Charles K. Scott (Wyoming), John Selig (Arkansas), Leticia Van de Putte (Texas), Donald Williamson (Alabama).