

VIEWPOINT

Medicaid Expansion and Health

Assessing the Evidence After 5 Years

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Studies have shown that Medicaid expansion has been associated with greater access to care, more preventive care, and improved chronic disease management.¹ Medicaid expansion has also improved financial well-being among low-income families.² While these are important findings, they are process measures that precede any potential changes in health. The critical question posed by many policy makers is whether Medicaid expansion improves health. Five years after implementation of the expansion an evidence base has begun to emerge.

To examine the relationship between Medicaid expansion and health directly, researchers have typically compared expansion vs nonexpansion states before and after 2014. In terms of data sources and outcomes, studies have relied on several strategies, such as surveying patients about their health, examining condition-specific outcomes using administrative data, and analyzing population-wide health indicators. In this Viewpoint, we consider these groups of studies and their collective evidence.

Self-reported Health

One basic measure of health comes from a common question in many government surveys: "In general, how would you rate your health?" Multiple choices of responses are offered to this question, such as "excellent," "good," or "poor." There are several rationales for this measure. First, it is consistent with the World Health Organization's definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Second, optimizing symptom management and maintaining functional status are a priority in the care of many conditions. Third, self-reported health is a validated predictor of future morbidity and mortality.³

Another advantage of this measure is its ease of collection and timeliness with which it becomes available to researchers. Accordingly, several of the earliest studies examining Medicaid expansion focused on this outcome with mixed results; some found significant improvements while others found no effect. In more recent studies with longer follow-up and in populations experiencing larger coverage gains, the majority of studies have found that Medicaid expansion has been associated with improved self-reported health.^{1,4}

Condition-Specific Health Outcomes

Health insurance may hold the greatest benefit for individuals with serious health concerns. Several studies have focused on condition-specific health outcomes, often in health care settings that primarily serve vulnerable populations.

For instance, in a study of federally qualified health centers using government-collected health care quality data, researchers found that Medicaid expansion was

associated with improved control of hypertension, but not diabetes.⁵ While improved blood pressure control is an important outcome, the long-term effects of expansion on cardiovascular disease are less certain. Researchers using hospital registry data analyzed patients admitted with congestive heart failure, finding increased coverage but no change in in-hospital mortality associated with the Medicaid expansion.⁶

Another high-risk condition that has been studied is end-stage renal disease (ESRD). Although Medicare provides insurance to most patients with ESRD, this coverage does not become active until the fourth month of dialysis, leaving many patients uninsured during the critical period of dialysis initiation. In a study using federal government registry data for all patients initiating dialysis, Medicaid expansion was associated with a significant increase in the quality of predialysis care and a relative mortality reduction of 8.5% from a baseline mortality rate of 6.9%. Overall, the study estimated a number needed to treat of 18 individuals with ESRD gaining Medicaid coverage to avoid 1 death in the first year following dialysis initiation.⁷

Another study used hospital registry data to examine the treatment of patients with 5 common surgical conditions (diverticulitis, aortic aneurysm, peripheral artery disease, acute cholecystitis, and acute appendicitis). Medicaid expansion was associated with earlier presentation to the hospital and increased receipt of optimal care, improving outcomes such as aortic aneurysm repair prior to rupture and limb salvage for peripheral artery disease. These changes in outcomes were concentrated in the Medicaid and uninsured subgroups, as would be expected if Medicaid expansion was the causal mechanism.⁸

While these studies of condition-specific outcomes all use rigorous pre-post designs with control groups and detailed administrative data, they share a common methodological challenge: the characteristics of patients who present for care in clinics or hospitals might change because of Medicaid coverage. For instance, if Medicaid expansion makes some patients with moderate chest pain more readily seek care, the composition or case-mix of patients who are present in a hospital registry of patients with acute myocardial infarction may change. This can lead to a faulty conclusion about the effect of the policy because the populations present in the data set are fundamentally different than they would have been in the absence of Medicaid expansion.

This challenge does not mean that registry data and medical records cannot be used to assess the relationship between Medicaid expansion and health outcomes. Some of the studies described above attempt to address this limitation by examining the rates of utilization over time (ie, incidence rates) and comparing the

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characteristics of individuals in the data set before and after expansion to assess whether there were any major composition shifts.⁷ In addition, this study design may be more plausible for some conditions for which care is likely to occur with or without insurance (eg, severe trauma, acute appendicitis, ESRD), but less so for conditions that lead to more discretionary use of health care. Future research should be cognizant of the substantial risk of bias from compositional changes when studying a population defined by the active pursuit of medical care.

Population-Level Survival

An alternative study design that avoids the potential bias of composition shift is to analyze population-wide outcomes, including mortality, regardless of whether an individual pursued medical care. However, the Affordable Care Act (ACA) presents methodological challenges for this approach as well. Unlike evaluations of single-state Medicaid expansions that occurred before the ACA or Massachusetts' 2006 health reform, there is no obvious control group for the ACA as a whole. This is because the ACA increased insurance coverage in all states through the Health Insurance Marketplaces and a streamlined application process, which led to higher enrollment among individuals who were already eligible for Medicaid, even in nonexpansion states. Without information in most population health data sets on which individuals gained Medicaid coverage because of the ACA, this general approach may be underpowered to detect changes in health outcomes.

Despite these limitations, 2 studies have provided suggestive evidence that population-level mortality has declined following Medicaid expansion. One article examined population-level cardiovascular mortality rates and found that Medicaid expansion counties had 4.3 fewer deaths per 100 000 residents annually than counties in nonexpansion states, a significant change.⁹ Another study linked survey data identifying lower-income adults with government vital statistics, documenting a significant reduction in mortal-

ity of roughly 9% from a baseline mortality rate of approximately 1400 per 100 000 individuals.¹⁰

Conclusions

An increasing number of studies have provided rigorous evidence that Medicaid expansion, which has increased the number of Medicaid recipients by more than 10 million since 2013, has been associated with improved health of low-income US residents in various ways, including self-reported health, acute and chronic disease outcomes, and mortality reductions. However, this literature is less definitive than the evidence demonstrating that Medicaid increases access to care and promotes financial well-being. In part, this is due to the inherent downstream nature of health outcomes relative to insurance coverage. For instance, if 100 individuals enroll in Medicaid, only 20 to 30 might use that coverage in a given year to obtain a particular treatment. Further, of those individuals, only a small portion might have experienced a measurable adverse outcome without receiving that care, and perhaps not for several years.

Going forward, the debate over whether Medicaid improves health should address 2 distinct questions. The first question, which has received the most attention, is whether low-income populations are healthier after gaining Medicaid coverage. The studies reviewed in this Viewpoint indicate that Medicaid has indeed been related to improvement of multiple (although not all) health outcomes. The second question is whether Medicaid expansion is the most effective or efficient means of improving health of this population, and how this compares to the effects of other less scrutinized aspects of the US health care system, such as the effect of private health insurance on health. Whether new approaches within Medicaid (eg, work requirements, greater cost-sharing, or health behavior incentives) improve on traditional Medicaid, or whether alternative investments in private insurance expansion, social services, or direct safety net funding would be more or less effective ways to do so remain important unanswered questions.

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