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Medicaid Expansion May Give Us Room to Breathe

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The Patient Protection and Affordable Care Act, often referred to as the Affordable Care Act (ACA), was signed into law by President Barack Obama on March 23, 2010. A key aspect, expansion of Medicaid eligibility to adults less than 65 years of age with incomes up to 138% of the federal poverty level, did not go into effect until January 1, 2014 (1). Since the inception of the ACA, there have been multiple attempts to repeal or critically weaken it. In the 2012 landmark *National Federation of Independent Business v. Sebelius* decision, the Supreme Court ruled that the mandated Medicaid expansion portion of the ACA was not a valid exercise of Congress's power, as it would coerce states to either accept the expansion or risk losing existing Medicaid funding. The federal government, they argued, must allow states to continue at pre-ACA levels of funding and eligibility if they chose (2).

Since 2010, 33 states and the District of Columbia have offered expanded Medicaid services to their citizens (3). In January 2019, Virginia began enrollment and Maine followed in February. Utah, Nebraska, and Idaho are expected to expand Medicaid in the near future after the passage of ballot initiatives in the 2018 election (3). State enactment of Medicaid expansion initially followed political lines, with states along the West coast and Northeast implementing expansion and Southern states eschewing it. The gradual shift in states toward enacting Medicaid expansion has been driven by two

factors: 1) a change toward a more favorable perception among the populace, and 2) a realization among lawmakers of the amount of federal assistance their state is missing by refusing to participate. Between 2013 and 2022, the 14 states that have yet to expand Medicaid stand to lose over \$300 billion and the hospitals within those states may lose over \$100 billion (4). In addition, the federal tax dollars from citizens of those states are subsidizing the expansion of Medicaid in the other 33 states.

Despite the shift of states toward expanding Medicaid, one central question remains: are patients' lives improved by expanding access to Medicaid? Variations of this question have been asked by researchers with increasing urgency. Currently, over 1,300 articles appear in a PubMed.gov search for "Medicaid expansion." However, only two systematic reviews are identified (5, 6). Together, these reviews show that insurance coverage, healthcare use, and quality of primary care increased while the uninsured rate declined. However, studies examining the effect on the critically ill are lacking.

It is in this context that we interpret the work presented in this issue of *AnnalsATS* by Admon and colleagues (pp. 886–893) (7). The team examined ICU admissions and mechanical ventilation rates among patients with severe exacerbations of asthma, chronic obstructive pulmonary disease, and congestive heart failure. These three chronic conditions are common and can be optimally managed in the ambulatory setting, thereby reducing severe exacerbations that may require mechanical ventilation in the ICU. The

primary outcome was receipt of mechanical ventilation using the *International Classification of Diseases, Ninth Revision* (ICD-9) procedure code. This choice of outcome was practical because it was easy to measure and unlikely to be miscoded in administrative data. Although one could argue that ICU admissions (one of several secondary outcomes of the study) may be driven, at least in part, by financial reimbursements, the application of mechanical ventilation is less likely to be motivated by such considerations.

This retrospective cohort study included hospital discharge data for patients admitted to ICUs within seven states between January 1, 2012 (after the Supreme Court decision) through September 30, 2015 (when U.S. hospitals began transitioning from ICD-9-CM to ICD-10 and tracking of procedures became more complex).

The authors performed appropriate statistical tests to minimize study biases. They used a difference-in-differences approach to account for the declining use of mechanical ventilation rates over time in patients with chronic obstructive pulmonary disease and congestive heart failure likely due

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to the emergence of noninvasive ventilation. The investigators also adjusted their analyses to account for variability at patient, hospital, and regional levels. They conducted several sensitivity analyses to examine the robustness of their findings.

As expected, in expansion states, the uninsured rates dropped among patients hospitalized with one of the three conditions from 12% before expansion to 4% after expansion. Concurrently, the rates of Medicaid coverage in these states increased from 20% to 30%. In nonexpansion states, the changes were less significant (uninsured rates decreased from 11% to 9% and Medicaid coverage changed from 23% to 24%). In a fully adjusted difference-in-differences model, Medicaid expansion was associated with a decline in mechanical ventilation rate of -0.2% per quarter-year (95% confidence interval, -0.3% to 0.0%). After noninvasive ventilation was included in the definition of mechanical ventilation, the results remained similar. Curiously, hospital admission rates

did not differ between expansion and nonexpansion states.

The limitations of the study include the evaluation of data from a limited number of states. The differences between states that expanded Medicaid and those that did not are substantial in terms of location, population demographics, and even medical practice. By including less than 15% of the states, the authors may have missed these important confounding factors even after making adjustments in the analysis. Furthermore, they were unable to distinguish between patients who were on Medicaid before expansion and those who received Medicaid as a result of the expansion. The study may have been underpowered to detect a difference in mortality.

What do we make of this study? The findings of decreased uninsured rates and improved Medicaid coverage are consistent with those from studies involving patients in

the ambulatory setting. However, the lack of a decrease in hospital admission rates similar to the decreased rates of mechanical ventilation among patients receiving care in states with expanded Medicaid coverage suggests that an alternative pathway may be at work. Perhaps, as suggested by the authors, the states that expanded Medicaid also expanded their care of these patients in other ways not associated with health insurance coverage.

Admon and colleagues's study offers reassurance that we continue to improve the care we deliver to patients with chronic respiratory diseases. It also adds to the burgeoning literature indicating that the journey the United States began in 2010 with the enactment of the ACA is helping to improve lives. For that, we can all breathe a sigh of relief. ■

Author disclosures are available with the text of this article at www.atsjournals.org.

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