A National Survey of Trends in Health Insurance Coverage of Low-Income Adults Following Medicaid Expansion

Mark Olfson, MD, MPH[1,2,3], Melanie M. Wall, PhD[1,2,4], Colleen L. Barry, PhD, MPP[5,6], Christine Mauro, PhD[4], Tianshu Feng, MS[4], and Ramin Mojtabai, MD, PhD, MPH[5,7]

[1]Department of Psychiatry, Vagelos College of Physicians and Surgeons, Columbia University, New York, NY, USA; [2]New York State Psychiatric Institute, New York, NY, USA; [3]Department of Epidemiology, Mailman School of Public Health, Columbia University, New York, NY, USA; [4]Department of Biostatistics, Mailman School of Public Health, Columbia University, New York, NY, USA; [5]Department of Health Policy and Management, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA; [6]Department of Mental Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA; [7]Department of Psychiatry and Behavioral Sciences, School of Medicine, Johns Hopkins University, Baltimore, MD, USA.

J Gen Intern Med 35(6):1911–3
DOI: 10.1007/s11606-019-05409-5

INTRODUCTION

The Affordable Care Act (ACA) was designed to expand access to health insurance. The Medicaid expansion provision of the ACA has a potential to narrow gaps in insurance coverage of low-income adults through income-based eligibility rules that eliminate traditional categorical Medicaid eligibility criteria. Substantial gains in insurance coverage for low-income adults in expansion states have been previously reported during the first[1] and second[2] years following Medicaid expansion in 2014. As states weigh whether to expand Medicaid benefits under the ACA and Congress considers building upon or replacing the ACA, it is helpful to evaluate how the association between residence in a Medicaid expansion state and health insurance coverage for low-income adults has developed over subsequent years. The objective of this report is to evaluate the effects of the ACA Medicaid expansion on insurance coverage of low-income adults by comparing trends in their insurance coverage in expansion and non-expansion states before (2008–2013) and after (2014–17) the expansion.

METHODS

The 2008–2017 National Survey on Drug Use and Health (NSDUH), an annual cross-sectional national and state representative survey,[3] was analyzed focusing on adults, 18–64 years, with household incomes ≤ 138% of the Federal Poverty Level. Health insurance status (Medicaid, other public insurance, private insurance, uninsured), age, sex, race/ethnicity, level of education, annual family income, and state of residence were measured by self-report.

Trends in insurance coverage were compared among adults residing in expansion and non-expansion states before and after ACA expansion in January 2014. Difference-in-differences estimation[4] was used to compare trends in coverage across time and states. Multivariable logistic regression models were fit including survey year (2012–13; 2014–17), an expansion state dummy variable, an interaction term (year × expansion state), and covariates for state and sociodemographic characteristics as independent variables. Adjusted difference estimates in prevalence of coverage tested change over time within expansion and non-expansion states. The interaction contrast on a predicted prevalence scale provided a difference-in-differences test between expansion and non-expansion states. SUDAAN accounted for NSDUH's complex sample design and sample weights.

RESULTS

Between 2008–2009 and 2016–2017, the percentage of low-income adults without insurance declined from 33.5 to 14.1% in expansion states and from 43.2 to 32.4% in non-expansion states (Fig. 1). Between 2012–2013, the last 2 years before ACA, and 2014–2017, the percentage of low-income adults who were un-insured declined by 16.4% in expansion states and by 9.8% in non-expansion states (difference-in-differences -6.6%; 95% CI -9.1, -4.1) (Table 1).

Between 2012–13 and 2014–17, Medicaid coverage among low-income adults increased from 30.6 to 46.2% in expansion states and from 18.1 to 21.5% in non-expansion states (difference-in-differences 12.1%; 95% CI 9.9, 14.4) (Table 1). By contrast, significantly greater gains in private insurance coverage occurred during this period among low-income adults in non-

Received August 14, 2019
Revised August 14, 2019
Accepted September 20, 2019
Published online October 24, 2019

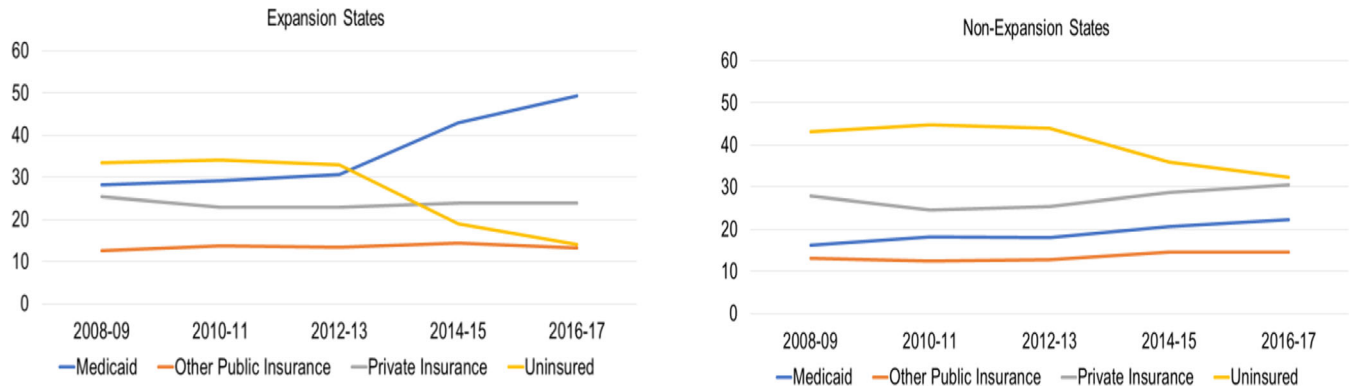

Figure 1 Changes in insurance among low-income adults in expansion and non-expansion states, 2008–2017. Data from NSDUH. Low-income defined as ≤ 138% of the Federal Poverty Level.

Table 1 Changes in Health Insurance Among Low-Income Adults, 2012–2017

Health insurance	Medicaid expansion states		Difference estimate % (95% CI)	Medicaid non-expansion states		Difference estimate (95% CI)	Difference-in-differences estimate (95% CI)
	2012–13 % (95% CI)	2014–17 % (95% CI)		2012–13 % (95% CI)	2014–17 % (95% CI)		
Medicaid, only	30.6 (29.2, 32.1)	46.2 (45.2, 47.1)	15.6 (13.8, 17.3)	18.1 (17.0, 19.2)	21.5 (20.7, 22.2)	3.4 (2.1, 4.7)	12.1 (9.9, 14.4)
Private insurance	23.0 (21.7, 24.3)	24.0 (23.2, 24.8)	1.0 (− 0.5, 2.5)	25.4 (23.9, 27.0)	29.7 (28.9, 30.5)	4.3 (2.6, 6.0)	− 3.3 (− 5.6, − 1.1)
Other public insurance	13.4 (12.4, 14.5)	13.8 (13.2, 14.5)	0.4 (− 0.9, 1.6)	12.8 (11.9, 13.8)	14.7 (14.1, 15.4)	1.9 (0.7, 3.1)	− 1.5 (− 3.2, 0.2)
Uninsured	33.0 (31.6, 34.5)	16.6 (15.9, 17.3)	− 16.4 (− 18.1, − 14.8)	44.0 (42.4, 45.7)	34.2 (33.3, 35.1)	− 9.8 (− 11.7, − 8.0)	− 6.6 (− 9.1, − 4.1)

Data from NSDUH. Low-income defined as ≤ 138% of the Federal Poverty Level (FPL). Differences adjusted for age, sex, race/ethnicity, state, and education

expansion states (25.4 to 29.7%) than in expansion states (23.0 to 24.0%) (difference-in-differences -3.3%; 95% CI -5.6, -1.1).

DISCUSSION

Between 2012–2013 and 2014–2017, the gap widened in insurance coverage between low-income adults in expansion and non-expansion states. This divergence was primarily driven by an increase in Medicaid coverage in expansion states over the 4 years following the 2014 ACA expansion. An absence of significant change in private coverage in expansion states allays concerns that low-income adults in these states dropped private coverage to enroll in Medicaid.[5] Financial subsidies for Marketplace plans available through the ACA to low-income eligible adults in non-expansion states (whose income was 100 to 138% of the federal poverty level) may have contributed to gains in private insurance in this population.

Study limitations include the possibility that other contemporaneous changes in the policy landscape may have contributed to trends in coverage, reliance on self-report data, and measurement of insurance status at the time of the survey rather than throughout the year.

National estimates of the effects of the ACA on health insurance coverage of low-income adults can help inform state decisions concerning whether to continue or initiate Medicaid expansions and congressional deliberations concerning replacement or expansion of the ACA. Findings suggest that through the 2014 to 2017 period, Medicaid expansion was associated with increased health insurance coverage for low-income adults.

Corresponding Author: *Mark Olfson, MD, MPH; New York State Psychiatric Institute, New York, NY, USA (e-mail: Mark.Olfson@nyspi.columbia.edu).*

Funding Information *This study was supported by the National Institute on Drug Abuse (grant R01 DA039137).*

Compliance with Ethical Standards:

Conflict of Interest: *The authors report no conflicts of interest.*

REFERENCES

1. **Wherry LR, Miller S.** Early coverage, access, utilization, and health effects associated with the Affordable Care Act Medicaid expansions: a quasi-experimental study. Ann Intern Med. 2016;164(12):795-803.

2. **Decker SL, Lipton BJ, Sommers BD.** Medicaid expansion coverage effects grew in 2015 with continued improvements in coverage quality. Health Affairs 2017;36(5):819-825.
3. Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health. http://www.samhsa.gov/data/population-data-nsduh/reports. Accessed 26 June 2019.
4. **Imbens GW, Wooldridge JM.** Recent developments in the econometrics of program evaluation. J Econ Lit. 2009;47(1):5-86.
5. **Shore-Sheppard L, Buchmueller TC, Jensen GA.** Medicaid and crowding out of private insurance: a re-examination using firm level data. J Health Econ 2000;19:61-91.