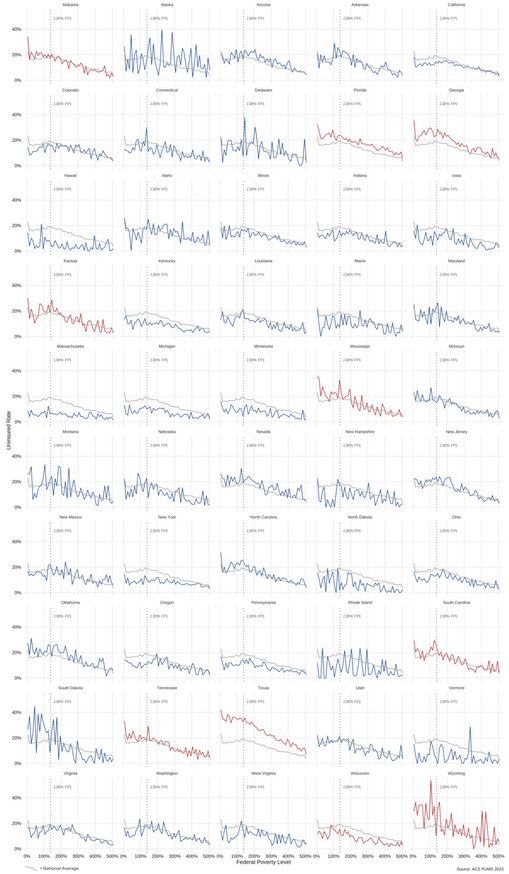
Your State, Your Coverage

How State Medicaid Expansion Decisions Shape Insurance Coverage Across the United States

Uninsured Rates by Income Level

Adults (Ages 18–64)



Source: ACS PUMS 2023

State Rankings

Low-Income Adults (Ages 18–64, ≤ 138% FPL)

Rank	State	Insured Rate
1	Massachusetts	91.8%
2	North Dakota	91.7%
3	Rhode Island	89.3%
4	Minnesota	88.6%
5	Hawaii	88.5%
6	Kentucky	88.0%
7	Oregon	88.0%
8	Iowa	87.9%
9	Michigan	87.9%
10	New York	87.5%
11	Vermont	87.2%
12	Indiana	87.1%
13	Wisconsin	86.3%
14	Pennsylvania	85.9%
15	Maine	85.9%
16	Alaska	85.4%
17	California	85.2%
18	Colorado	84.8%
19	Ohio	84.5%
20	Virginia	84.4%
21	West Virginia	84.3%
22	Washington	84.0%
23	New Mexico	83.4%
24	Illinois	83.2%
25	Louisiana	83.0%
26	New Hampshire	82.8%
27	Connecticut	82.8%
28	Delaware	82.8%
29	Idaho	81.4%
30	Nebraska	80.1%
31	Arizona	79.7%
32	Utah	79.6%
33	Missouri	79.2%
34	New Jersey	77.7%
35	Montana	77.5%
36	Maryland	77.4%
37	Arkansas	77.1%
38	Alabama	76.4%
39	Tennessee	75.8%
40	Kansas	75.5%
41	South Dakota	75.5%
42	Oklahoma	75.2%
43	Nevada	74.8%
44	Florida	74.0%
45	North Carolina	73.5%
46	South Carolina	72.9%
47	Mississippi	71.5%
48	Wyoming	70.3%
49	Georgia	70.2%
50	Texas	62.9%

Source: ACS PUMS 2023

Introduction

In 2014, the Affordable Care Act (ACA) allowed states to expand Medicaid eligibility to 138% of the federal poverty level (FPL), creating variation in coverage rates across the country (Lyon et al., 2016). This project will examine Medicaid expansion as a natural experiment and asks whether expanded eligibility changed insurance coverage for low-income adults.

The ACA's Medicaid expansion rests per capita on healthcare that any other high-income country, yet coverage remains conditional rather than universal (Health Care Costs, n.d.; World Bank Open Data, n.d.). Public insurance is tied to income, employment, age, disability, and state policy decisions. Medicaid, in particular, functions as a safety-net program rather than a universal right, and the Affordable Care Act's expansion of Medicaid to 138% of the federal poverty level created a clear boundary that expanded eligibility and those that did not, meaning that eligibility depends on meeting state-specific income criteria (Dickman et al., 2017; Eligibility Policy | Medicaid, n.d.; Lyon et al., 2016).

Because low-income households often experience economic volatility, state decisions can have lasting consequences for financial stability and access to healthcare (Gross & Notowidigdo, 2011; Sommers et al., 2016). Examining Medicaid expansion as a policy intervention allows us to assess whether differences in coverage rates translate to measurable disparities in insurance coverage.

Most people don't see where this line is drawn, but visualization can make the boundary visible. By comparing uninsured rates among low-income adults in expansion and non-expansion states, we can visually trace how outcomes diverge following Medicaid expansion. Making these policy shifts visible allows us to examine whether differences in state decisions are associated with measurable changes in coverage rates among low-income adults.

Data

This project uses the American Community Survey (ACS) Public Use Microdata Sample (PUMS) 1-year files from 2010 to 2023 (n = 14).

The American Community Survey (ACS) is an annual, nationally representative survey conducted by the U.S. Census Bureau that collected detailed information on demographic, economic, and insurance characteristics of the U.S. population (Bureau, n.d.). Because it includes state identifiers, which is key for comparing policy differences across states, and consistent questions on income and poverty level, and detailed insurance coverage indicators, ACS is well-suited for examining how Medicaid expansion is associated with changes in insurance coverage among low-income adults across states and over time.

Individual-level data were drawn from the ACS PUMS files for 11 survey years (2010–2019, 2021–2023; 2020 was excluded due to data quality issues). The data consists of two files (.household and .person) containing 26 raw files in total. Because each file contains millions rows and hundreds of columns, column selection was applied at load time to retain only the variables required for analysis: state (ST/STATE), age (AGEP), income-to-poverty ratio (POVPIP), insurance indicators (PRIVATE, PUBCOV, HINS1, and HINS4), and survey weights (PWGTP for person-level estimates).

Numeric codes were mapped to full state names via a lookup table, and each observation was assigned it's state's Medicaid expansion year (or NA for non-expanding states) based on published implementation dates. The data was subset to working-age adults 18–64 years old. Observations missing values for income-to-poverty ratio (POVPIP) or insurance were dropped, as both are required for the weighted analysis. Puerto Rico and District of Columbia (DC) were excluded, limiting the analysis to the 50 U.S. states.

Methods

Uninsured rates were estimated for working-age adults (18–64) at or below 138% of the federal poverty level (FPL). All uninsured rates were calculated using the ACS survey weights.

To visualize the relationship between income and coverage, the continuous income-to-poverty ratio was grouped into 10 point bins, with uninsured rates calculated in each income bin. The 138% FPL threshold was marked to reflect the statutory Medicaid eligibility threshold, and a national average uninsured rate was plotted alongside the state-specific trend line for comparison.

The primary causal analysis uses a difference-in-differences (DiD) design, which compares how uninsured rates changed over time in states that adopted Medicaid expansion relative to those that did not. Non-expansion states serve as the control, or as the counterfactual, an example for what would have happened had the opposite decision been made. This allows for the analysis of coverage change due to expansion to be separated from broader trends affecting all states simultaneously, such as other ACA policies. The model is estimated using two-way fixed effects via fixest::feols, controlling for state and year fixed effects (Bergé, 2018). To ensure a stable pre-period, the sample was restricted to states that expanded in 2016 and states that never expanded, excluding late adopters. This was done to keep treatment timing consistent, reduce complexity, and improve interpretability.

For non-expansion states, the counterfactual shows what their uninsured rates may have been if they had expanded Medicaid, estimated from the pre-2014 trend. Where their uninsured rate may have looked like if they never expanded. The shaded area between the actual and counterfactual lines represents the estimated effect of the policy for each year. State-specific plots follow the same approach, although for late-adopting states the estimates are approximated based on results from the 2016 expansion cohort.

This approach relies on the assumption that in the absence of Medicaid expansion, uninsured rates in expansion and non-expansion states would have continued along similar trends. The pre-2014 trends are plotted to support this assumption, however, it cannot be formally verified.

Results

In 2023, uninsured rates among low-income adults (≤ 138% FPL) showed a clear gap between expansion and non-expansion states. Expansion states consistently had increased. The uninsured rate was also notably more unstable before 138% FPL, indicating a clear disparity for low-income adults. Expansion states consistently fell below the national average uninsured rate across most income levels, while non-expansion states were generally above it. The gap between expansion and non-expansion states was largest among adults below 100% FPL.

At the state level, Massachusetts ranked first in insurance coverage among low-income adults, with 91.8% of the population being covered. Texas ranked last at 62.9%. The concentration of non-expansion states at the bottom of the rankings was striking, with 9 of the 10 non-expansion states falling within the bottom 15 nationally. Based on the DiD estimate, the ACA Medicaid expansion reduced the uninsured rate in counterfactual had the state expanded, an estimated 10,000 low-income adults in Texas alone have been left uninsured as a consequence of non-expansion.

Prior to 2016, uninsured rate trends in expansion and non-expansion states moved along similar trajectories. Following the ACA Medicaid expansion in 2016, expansion states saw a sharp decline in uninsured rates, while non-expansion states remained flat. The gap remained persistent through 2023, the latest year included in the analysis. Of the 50 states, 40 have now adopted Medicaid expansion, and 9 of the 10 that have not continue to show higher uninsured rates among low-income adults relative to the national average.

Limitations

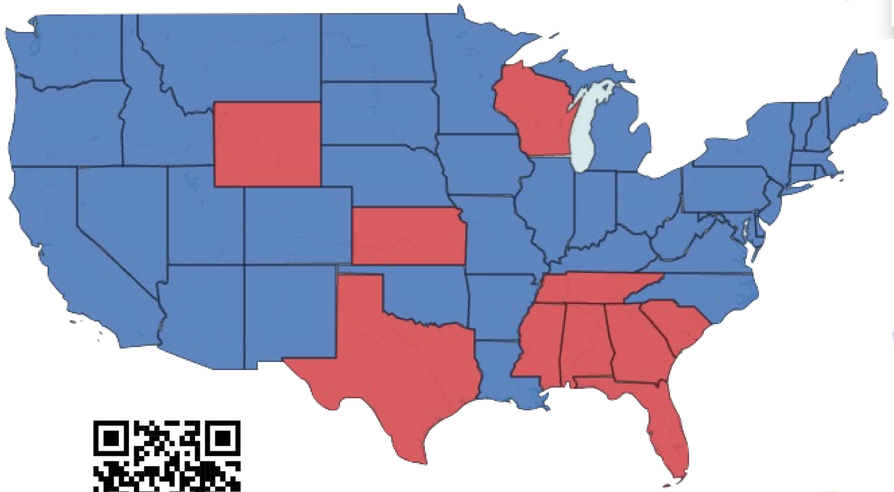
Several limitations should be considered when interpreting these results. The DiD design relies on the parallel trends assumption, which is supported by the pre-2014 trends, but cannot be formally verified. The main analysis is restricted to 2016 adopters and never-expanders, carrying additional uncertainty for late adopters. The state-specific uninsured rate estimates for non-expansion states are based on the 2016 cohort estimates based on models and state populations, not direct counts. Finally, additional confounders may be present that impact both expansion decisions and uninsured rates. Further analysis is required to address these limitations and validate these results.

Conclusions

Medicaid expansion has had a measurable and sustained impact on insurance coverage among low- income adults. States that expanded consistently achieved lower uninsured rates than those that did not. Non-expansion states remained clustered at the bottom of the national coverage ranking, and the estimated loss of thousands of uninsured individuals attributed to non-expansion in Texas alone demonstrates the impact of expansion decisions. With 10 states yet to expand, the visualizations here will be useful for exploring the effects of expansion decisions.

References

1. Bureau, U. C. (n.d.). PUMS Data. Census.Gov. Retrieved February 22, 2026, from https://www.census.gov/programs-surveys/acs/data/pums.html
2. Gross, T. M., Douglas, T. C. & Conlin, C. R. (2016). Medicaid Expansion under the Affordable Care Act: Implications for Insurance-related Disparities in Pulmonary, Critical Care, and Sleep Annals of the American Thoracic Society, 0(4), 641–647. https://doi.org/10.1513/annalsATS.201602-072PS
3. Health Care Costs: What's the Problem? (n.d.). AMRC. https://doi.org/10.1596/1813-9450-6602
4. World Bank Open Data. (n.d.). World Bank Open Data. Retrieved February 15, 2026, from https://data.worldbank.org/
5. Dickman, S. L., Himmelstein, D. U., & Woolhandler, S. (2017). Inequity and the health-care system in the USA. The Lancet, 389(10077), 1431–1441. https://doi.org/10.1016/S0140-6736(17)30398-7
6. Eligibility Policy | Medicaid. (n.d.). Retrieved February 15, 2026, from https://www.medicaid.gov/medicaid/eligibility-policy/
7. Sommers, B. D., Gruber, J. A., Sweetl, K., & Rosenbaum, S. (2016). Medicaid and Marginally Attached Adults' Labor Market Outcomes After Affordable Care Act Expansion: Health Affairs, 35(4), 740–747. https://doi.org/10.1377/hlthaff.2015.1267
8. Bergé, L (2018). "Efficient estimation of maximum likelihood models with multiple fixed-effects: the R package FENmlm." CREA Discussion Papers.



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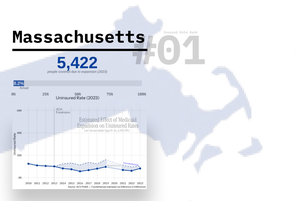
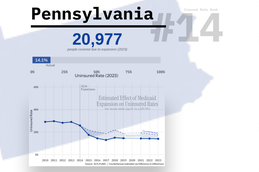
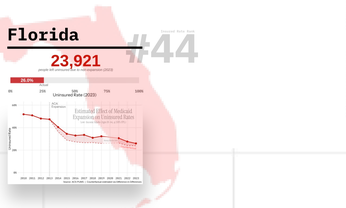
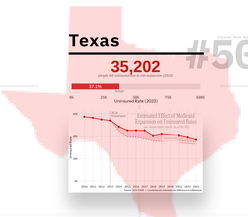


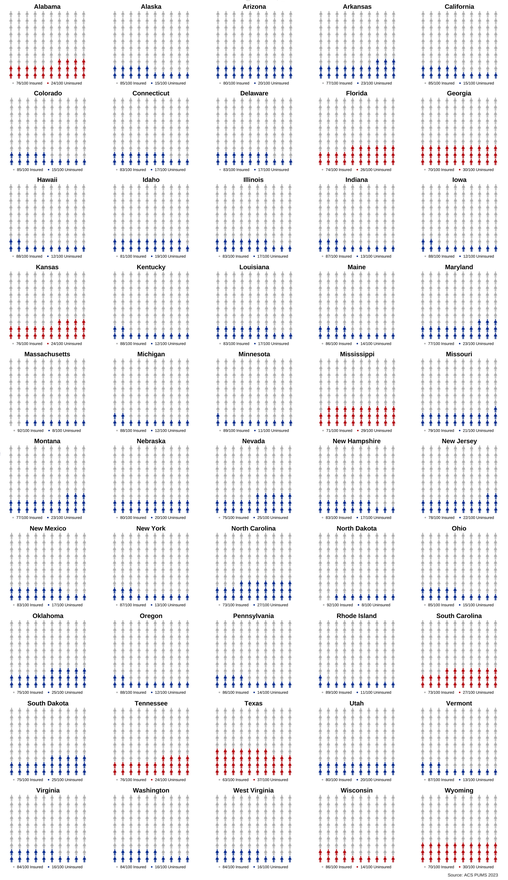
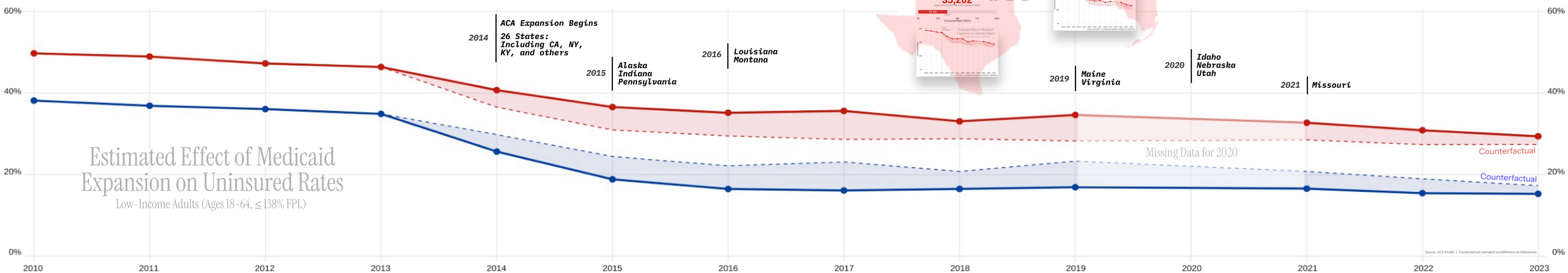






Uninsured Rates by State

Low-Income Adults (Ages 18–64, ≤ 138% FPL)



Source: ACS PUMS 2023