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ABSTRACT

The implementation and unwinding of the FFCRA's continuous coverage requirement generated historically large changes in Medicaid enrollment during the COVID-19 pandemic. Using a combination of descriptive and causal analyses, we examine the substantial cross-state differences in these changes, which remain little understood. We find that policies designed to ease unwinding frictions, as well as federal fiscal assistance to states, have little predictive power, suggesting limited roles for administrative design or liquidity constraints. Political preferences have modest predictive power during the unwinding period. Pandemic-era Medicaid expansions and more generous baseline eligibility thresholds are strongly associated with larger net enrollment gains.

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1 Introduction

The COVID-19 pandemic gave rise to the most dramatic changes in Medicaid enrollments in the program's history. As seen in Figure 1, total Medicaid and CHIP enrollment increased by roughly 22.5 million individuals from March 2020 to March 2023, and subsequently declined by abut 14 million individuals From March 2023 to September 2024.[1] While the early-pandemic rise in enrollments was driven in part by the pandemic's effects on labor markets (Bundorf et al., 2021; Dague & Ukert, 2023), a crucial provision of the Families First Coronavirus Response Act (FFCRA) played a more central role in driving both the dramatic rise and subsequent decline.

The FFCRA, enacted in March 2020, offered states a 6.2 percentage point increase in their Federal Medical Assistance Percentages (FMAPs). Given the magnitude of states' Medicaid expenditures, this FMAP increase entailed substantial fiscal assistance. This fiscal assistance, however, came with a condition known as the continuous coverage requirement, which stipulated that states must cease disenrolling individuals who would otherwise have been deemed ineligible due, for example, to an increase in income (FFCRA, 2020).[2] This provision was in force until its end was legislated to occur on March 31, 2023, by the 2023 Consolidated Appropriations Act (KFF, 2024).

[1] Our calculations are based on monthly enrollment statistics from the Medicaid and CHIP Eligibility Operations and Enrollment Snapshot data. We note that although they use the same underlying source data, annual reports by the Medicare and CHIP Payment and Access Commission (MACPAC) provide enrollment counts which differ nominally from ours. These differences may arise in part from the use of different enrollment concepts (e.g., number of unique enrollees at a point in time versus over a period of time), differences in data vintages (which can vary due to revisions), or other factors. The July enrollment counts from Medicaid and CHIP Payment and Access Commission (2022, 2023, 2024) reports imply estimates of changes in enrollment that are qualitatively similar to ours; suggesting that enrollments rose by roughly 20 million individuals from July 2019 through July 2023, then declined by roughly 12 million individuals by July 2024.

[2] As discussed by Clemens, Ippolito, and Veuger (2021), this pairing of FMAP subsidies that would eventually expire with a mandate whose costs would rise over the course of the pandemic created an interesting dynamic with respect to the net fiscal implications of the FFCRA's Medicaid provisions for state budgets. Clemens and Mahajan (2026) find retrospectively that by the end of fiscal year 2025 the FMAP subsidies were sufficient to fully offset states' mandate costs in aggregate, but not for individual states. Twenty states experienced funding shortfalls, highlighting substantial cross-state variation in excess enrollment and costs driven by the requirement.

The continuous coverage requirement's effects on Medicaid enrollment nationwide were historically large. Furthermore, as shown in Figure 2, variations in states' per capita enrollments reveal dramatic heterogeneity in the continuous coverage requirement's net effects. From February 2020 through September 2024, a small number of states experienced net declines in their per capita enrollments, while several others saw their enrollments rise by more than 5 percent of their populations. Our goal in this paper is to explore the predictive power of a set of hypotheses regarding the possible correlates of these historically dramatic variations in Medicaid enrollments. Our analysis separately considers the increase in Medicaid enrollment that occurred from February 2020 through March 2023, the unwinding that occurred from March 2023 through September 2024, and the net changes in enrollment over this entire time period.

We employ a combination of descriptive and quasi-experimental analyses to examine four sets of potential predictors for cross-state variation in per capita Medicaid enrollment during and after the pandemic. These sets of predictors connect to ex ante reasonable hypotheses regarding factors that may plausibly have given rise to variations in enrollment change during the pandemic. Taken together, we consider the extent to which states were liquidity constrained, their political preferences, the baseline generosity of their Medicaid programs, and the provisions they enacted that held direct relevance for the execution of the continuous coverage provision's unwinding.

The first set of predictors we explore involves a combination of states' eligibility determination, coverage renewal, and outreach policies that were in place to streamline eligibility renewals during the unwinding phase. These systems were put in place by states either voluntarily or in response to requirements of the Consolidated Appropriations Act of 2023 to manage the unprecedented volumes of eligibility reviews resulting from the the unwinding of continuous coverage. The second set of predictors we explore involves states' baseline Medicaid program generosity. We measure program generosity by states' income eligibility limits for adults, ACA Medicaid expansion status, and a set of previously constructed

composite indices capturing dimensions of states' Medicaid programs that expand eligibility, reduce administrative barriers, and increase assistance to beneficiaries. We explore states' baseline political preferences as a third predictor, distinguishing between states where Donald Trump received higher versus lower vote shares in the 2016 presidential election. As a final mechanism, we explore the amount of federal fiscal aid disbursed to states and local governments during the pandemic. Here, we focus on the nearly $1 trillion in funds that were allocated by the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Families First Coronavirus Response Act (FFCRA), the Response and Relief Act (RRA), and the American Rescue Plan Act (ARPA) to state and local governments to undertake efforts in mitigating the economic and health effects of the pandemic.

We find that a wide range of provisions designed to ease the frictions of the continuous coverage provision's unwinding have surprisingly little predictive power for understanding variations in Medicaid enrollments during this time period. Similarly, we find that variation in federal aid to state and local governments has no predictive power, suggesting that liquidity constraints had little influence on states' management of Medicaid enrollments during this period. Variations in political preferences, as proxied by Trump's 2016 vote share, have modest predictive power within the unwinding episode, but not for understanding net changes in Medicaid enrollment over the full time period we analyze.

Finally, we find that the baseline generosity of states' income eligibility thresholds predict relatively large run-ups and net increases in enrollments. This is related in part, though not exclusively, to the pre-pandemic enactment of Medicaid expansions, which is also a relatively strong predictor of this period's enrollment fluctuations. Less surprisingly, the enactment of a Medicaid expansion during the pandemic itself also predicts net enrollment increases. Interestingly, other elements of Medicaid generosity—including measures of administrative burden and the breadth of benefit coverage—are not associated with net enrollment increases. The distinctive relevance of states' ACA Medicaid expansions and income eligibility thresholds is suggestive that the continuous coverage provision was particularly impactful for

the eligibility of adults with incomes near the poverty line. This group may be particularly prone to churning in and out of eligibility due to income fluctuations, which is precisely the mechanism the continuous coverage provision shut down. Taken together, the broad set of hypotheses we consider have modest predictive power for understanding the historically dramatic variations in Medicaid enrollments across states over the course of the COVID-19 pandemic.

The remainder of this paper proceeds as follows. Section 2 describe our data sources. Section 3 presents our empirical methods. Section 4 presents the results of our empirical analyses and section 5 concludes.

2 Data

In this section we describe the sources underlying the variables used in our analysis. We begin in subsection 2.1 by describing our outcome variables, which involve changes in Medicaid enrollment over the period surrounding the COVID-19 pandemic. Subsequent subsections describe the variables associated with the hypotheses we explore regarding the potential causes of variations in Medicaid enrollment trends across states. Summary statistics for all variables can be found in Table 1.

2.1 Outcome

The outcomes of interest throughout our analyses involve statewide total monthly Medicaid and CHIP enrollment. Medicaid enrollment counts for January 2014 to December 2017 are from the KFF (2024*c*). Enrollment counts for January 2018 to September 2024 are from the Centers for Medicare & Medicaid Services (2024).[3,4] To construct monthly enrollment per capita, we divide the monthly enrollment counts by the state's population in the calendar

[3]CMS provides both preliminary and updated enrollment statistics. We utilize the updated statistics in our analyses.

[4]The comparison of enrollment counts from KFF and CMS for overlapping months in 2017 confirm the compatibility of the two sources.

year. State population data by year are from the U.S. Census Bureau (U.S. Census Bureau 2021, 2024). The level of monthly Medicaid enrollments per capita is the outcome we analyze directly when we execute event-study analyses that are described by equation 2 in the following section.

In additional analyses, our outcomes describe changes in enrollment over the time periods associated with the continuous coverage provision's implementation and unwinding. We capture enrollment changes during the continuous coverage provision by calculating the change in each state's enrollment per capita from February 2020 (i.e., the month before the provision was enacted) to March 2023 (i.e., the month when the unwinding began). We construct enrollment changes during the unwinding phase by calculating the change in each state's enrollment per capita from March 2023 to September 2024. Finally, as a metric for describing the magnitude of the unwinding relative to the magnitude of the continuous coverage provision's impact, we take the ratio of the two changes described above. All Medicaid enrollment variables, including the ratio measure, are continuous.[5]

2.2 Outreach and Renewal Policies During the Unwinding

The first hypothesis we investigate involves whether enrollment trends were affected by states' outreach and renewal policies during the unwinding phase. Our measures of states' outreach and renewal policies come from KFF (2024*b*).[6] The data are a product of the 22nd annual survey of state Medicaid and CHIP program officials conducted by KFF and the Georgetown University Center for Children and Families in March 2024. These data are available for all states and the District of Columbia, with the exception of Florida.

[5]The ratio is defined such that states that disenroll a smaller share of individuals during the unwinding than they enrolled during the continuous coverage period have values between 0 and (-1). States that disenroll more individuals than they enrolled have values less than (-1). In the less common case where states continue to experience net enrollment growth during the unwinding period, the ratio is positive. Thus, the ratio can take any continuous value. In our data, all states except North Carolina experienced enrollment declines during the unwinding period, and 10 states had ratio values below (-1).

[6]Specifically we employ data from Tables 17, 21 and 23 from the KFF (2024*b*) report "A Look at Medicaid and CHIP Eligibility, Enrollment, and Renewal Policies During the Unwinding of Continuous Enrollment and Beyond" which capture processes adopted by states to aid enrollee outreach and ex parte renewals.

The KFF data provide two sets of variables. The first includes policies enacted by states during the unwinding phase to increase outreach to individuals for whom eligibility renewal verification was due. A stated goal of these policies was to reduce the likelihood that eligible individuals lost coverage for reasons related to a failure to provide the information required to recertify eligibility. The second set of variables includes policies adopted by states during the same period to improve ex parte renewal procedures. Ex parte, or automatic, renewal is the process of eligibility redetermination by state agencies without requiring individuals to provide information, signatures or any other active inputs (Centers for Medicare and Medicaid Services 2022).

In total, we consider fourteen separate provisions, each described in greater detail in Section 4.1. These variables are constructed as binary indicators, equal to one if a state adopted the policy and zero otherwise. We also construct a composite measure of renewal policy generosity, an index that aggregates across all relevant provisions, such that values closer to one indicate a higher share of unwinding policies adopted and values closer to zero indicate a lower share. In Appendix Table B.1, we provide a transparent description of the fourteen components and document policy adoption across states.[7] Appendix Figure A.1 presents a state-level map of the composite renewal policy index.

2.3 Baseline Medicaid Generosity

The second hypothesis we explore relates to the possibility that variations in the continuous coverage provision's impact may have been driven by variations in the generosity of states' Medicaid programs at baseline. The data relevant to this second hypothesis come from three sources. KFF (2024*b*) provides income eligibility limits separately for parents and adults without children.[8] These income eligibility limits are defined as a percentage of the Federal Poverty Level (e.g., 1.38 is 138% of the FPL). We also consider the status of ACA

[7] Data are not available for Florida.

[8] See Table 5 in KFF (2024*b*).

Medicaid expansions in each state. We obtain information on the status and timing of states' ACA Medicaid expansions from Centers for Medicare & Medicaid Services (2024). Based on these data, we construct three indicator variables corresponding to states that expanded Medicaid by February 2020, states that expanded Medicaid after February 2020, and states that had not expanded Medicaid by the end of our analysis window.

Finally, we consider a set of Social Safety Generosity Indices (SSGI) that capture, separately, the ease of Medicaid enrollment and renewal, the inclusiveness of coverage for immigrant populations, and the breadth of covered services and beneficiary cost-sharing requirements. We also include the overall Medicaid generosity index, which incorporates these dimensions as well as eligibility policies. We obtain the 2019 index values directly from the SSGI public database (State Safety-Net Generosity Index 2021). The indices range from 0 to 1, with higher values indicating greater generosity.[9,10] We emphasize that this baseline generosity index is conceptually distinct from our renewal policy generosity index—the former captures pre-existing program structure, while the latter reflects policy choices implemented during the unwinding period.

2.4 Political Partisanship

Our third hypothesis involves the possibility that Medicaid enrollment dynamics were influenced by variations in states' political preferences. Our proxy for political preferences is

[9]The original indices range from 0 to 100; we rescale them by dividing by 100. We use the administrative burden, benefits, and immigrant eligibility subindices separately, as well as the overall generosity index, which additionally incorporates income eligibility. Because we include separate measures of Medicaid income eligibility in our analysis, one might worry about overlap with the overall index. However, we consider the overall index and our income eligibility measures in separate specifications, so multicollinearity is not a concern.

[10]The construction of the indices is described in detail by Fox et al. (2020). They write: "The eligibility index is based on Medicaid income eligibility limits across categorical eligibility groups (children ages 0–11 months, 1–5 years, and 6–18 years; pregnant women; and low-income parents), as well as ACA Medicaid expansion status for adults without dependents and with income up to 133 percent of the federal poverty level. The administrative burden index captures variation in reductions in onerous enrollment and renewal rules, such as eliminating asset tests and face-to-face interviews across categorical eligibility groups. The immigrant eligibility index measures whether lawful permanent residents and unauthorized immigrants are eligible for Medicaid for children, pregnant women, and adults. Benefit comprehensiveness measures whether the state covers optional and mandatory benefits and whether copays are required for each benefit. (...) The index and sub-indices range from 0 to 100, where 100 corresponds to states adopting all policies under a given dimension or extending eligibility up to 400 percent of the federal poverty level; 0 indicates that none of the policies were adopted" (Fox et al., 2020, p.1910-1911).

the vote share, between 0 and 1, received by Donald Trump in the 2016 U.S. presidential election in each state. We obtain this vote share from the MIT Election Data and Science Lab (2023).

2.5 Federal Fiscal Aid

Our final hypothesis relates to the possibility that states may have been more generous in their management of Medicaid enrollments if they recieved more per capita fiscal aid from the federal government during the pandemic. Our measure of fiscal aid is taken directly from Clemens and Veuger (2021), who describe the variable's construction in substantial detail. The primary source for this variable is data from the COVID Money Tracker maintained by the Committee for a Responsible Federal Budget (2021). The fiscal aid variable reflects the sum total of per capita aid to state and local governments that was authorized by the four major pieces of relief legislation passed during the COVID-19 pandemic. These pieces of legislation were the March 2020 CARES Act, the March 2020 Families First Coronavirus Response Act (FFCRA), the December 2020 Response and Relief Act (RRA), and the March 2021 American Rescue Plan Act (ARPA). We divide the total aid allocated to a state by the state's 2020 population times one thousand, to construct aid per capita in thousands of dollars—a continuous variable.

Additionally, because federal aid was likely targeted, at least in part, towards states that exhibited high pandemic-driven need, we analyze the causal effect of federal aid using an instrumental variables estimation strategy. This estimation strategy, which also draws on analyses from Clemens and Veuger (2021), makes use of the fact that variations in per capita aid are strongly predicted by variations in each state's number of senators and congressional representatives per capita. In particular, states which enjoy high levels of per capita representation (namely low-population states that benefit from the U.S. Senate's allocation of two senators to each state regardless of population) received substantially larger distributions of per capita aid. We take our representation measure from Clemens and Veuger (2021), who

obtained rosters of the House of Representatives and Senate from the relevant time period from Lewis et al. (2021). We divide the number of a state's representatives by its population, and multiply this measure by one million, to obtain a continuous measure of representation per million residents. Our instrumental variables approach is further described in Section 3.

2.6 Covariates

While most of our analyses involve the bivariate relationship between Medicaid enrollment outcomes and the variables described above, some specifications incorporate additional covariates and outcomes. In some analyses, we include state population density immediately prior to the pandemic as a proxy for differences in states' susceptibility to COVID-19 transmission. We construct this measure using 2019 state population estimates from U.S. Census Bureau (2021) and state land area (in square miles) from the 2020 U.S. Census Gazetteer Files (U.S. Census Bureau 2020). In our test of the instrument's exclusion restriction, we include pre-pandemic values of several variables discussed earlier—including political preferences, population density, baseline Medicaid enrollment, and overall Medicaid generosity—as well as additional state characteristics. These include the share of the state's population aged 65 and older, constructed using data from the Centers for Disease Control and Prevention, National Center for Health Statistics (2026)'s WONDER database, the annual state per capita income, and the average monthly unemployment rate. Income and unemployment data are obtained from the Federal Reserve Bank of St. Louis's FRED database (Federal Reserve Bank of St. Louis 2025; U.S. Bureau of Labor Statistics 2025). Population density, the states' population share aged 65 and older, state per capita income and unemployment rate are all continuous variables.

3 Methods

Our initial sets of analyses describe the relationship between an explanatory variable of interest and Medicaid enrollment changes. Specifically, we estimate the following regression:

$$\mathrm{Y}_s = \beta_0 + \beta_1 \mathrm{X}_s + \epsilon_s. \tag{1}$$

In these regressions, Y_s represents each of three outcomes—the change in Medicaid enrollment per capita from February 2020 to March 2023, the change in Medicaid enrollment per capita from March 2023 to September 2024, and the change in Medicaid enrollment per capita from March 2023 to September 2024 divided by the change in Medicaid enrollment per capita from February 2020 to March 2023.[11] X_s denotes an explanatory variable of interest, which includes factors such as a state's renewal or outreach policy, its baseline Medicaid design, its political preferences, and the per capita federal aid it received.

In addition to estimating specifications that examine each factor separately, we also estimate a multivariate specification in which X_s is a vector containing the full set of explanatory variables. This allows us to assess whether the relationships identified in the univariate specifications persist after accounting for correlations among the various policy, political, demographic, and economic factors, and to identify which factors are most strongly associated with enrollment changes conditional on the others.

Additionally, we estimate the following event-study regression:

$$\text{Medicaid Enrollment}_{s,t} = \phi_s + \phi_t + \sum_{t \neq 2019} \rho_t \mathrm{X}_s \times \text{Time}_t + \epsilon_{s,t} \tag{2}$$

where $\text{Medicaid Enrollment}_{s,t}$ is the Medicaid enrollment per capita in state s in calendar time t, and ϕ_s and ϕ_t are state and time fixed effects, respectively. The coefficients ρ_t, on interactions between our explanatory variable of interest X_s and a set of month dummy

[11] To construct enrollment per capita, we divide total enrollment by the state's population in the calendar year.

variables, trace out the relationship between X_s and Medicaid Enrollment$_{s,t}$ over time. For all explanatory variables, the interaction between X_s and 2019 is omitted in the event-study analyses, such that each ρ_t can be interpreted as a continuous difference-in-differences style descriptive estimate of the relationship between representation and Medicaid enrollment in the reference period relative to 2019. Note that we use the full 2019 calendar year as the base period, as we have found that using a single month as the base period results in precision losses. In our study of variables related to outreach and renewal provisions implemented by states during the unwinding of continuous coverage, we additionally provide estimates of the effects of the policy from April 2023 to September 2024 from event-study analyses that treat March 2023 as the reference period. These estimates allow us to directly track the effects of an outreach or renewal provision on Medicaid enrollment in the periods following the cessation of the continuous coverage requirement relative to the period when the continuous coverage requirement was in place.[12] Together, these two estimation methods help assess whether a variable of interest predicts both the overall magnitude and the timing of changes in Medicaid enrollment.

Next, we aim to assess whether pandemic-era fiscal aid received by states and local governments had a causal impact on Medicaid enrollment changes. In this portion of our analysis, we note that a naive regression of Medicaid enrollment changes on states' fiscal aid per capita is subject to endogeneity concerns arising from the fact that fiscal assistance may have been targeted towards the states in greatest need. We address this concern by employing an instrumental variables strategy. Our instrument is the number of congressional representatives per capita. The first stage relationship, which captures the fact that overrepresented states enjoyed disproportionately higher fiscal aid per capita, has been established by Clemens and Veuger (2021), and is reproduced here. Clemens and Veuger (2021) explain that the bias toward overrepresented states in federal funding arose in large part from the

[12] To avoid excessive clutter, the figures that present these estimates do not include the event-study coefficients associated with periods prior to March 2023.

use of floor functions similar to those used to determine congressional representation in the otherwise proportional-to-population formulas for distributing general purpose fiscal relief. As shown in prior work utilizing this instrument to study the causal effect of pandemic-era fiscal aid on various economic and health outcomes (Clemens and Veuger 2021; Clemens, Hoxie, and Veuger 2022; Clemens et al. 2023; Clemens and Mahajan 2025), an additional senator or representative per million residents predicts roughly $1,000 dollars in additional aid per capita (Table 7). This is substantial in the context of states' annual expenditures and own-source revenues.

In addition to estimating OLS regressions of Medicaid enrollment changes on fiscal aid per capita, our analysis of fiscal aid thus emphasizes the following 2SLS strategy:

$$\frac{\text{Total Aid}_s}{\text{Pop}_s} = \gamma_0 + \gamma_1 \text{Reps Per Million}_s + \epsilon_s \tag{3}$$

$$\text{Y}_s = \beta_0 + \beta_1 \frac{\widehat{\text{Total Aid}}_s}{\text{Pop}_s} + u_s. \tag{4}$$

As before, Y_s represents a Medicaid enrollment outcome of interest, $\text{Reps Per Million}_s$ is the number of congressional representatives in a state divided by the 2020 state population, and Total Aid_s is total fiscal aid to a state divided by the 2020 state population in thousands of dollars.

The validity of this instrumental variables estimation framework depends on two factors. The first requirement is that congressional representation must be a strong, or relevant, predictor of the amount of aid each state received per resident. The formal test of our instrument's strength leads to an F-statistic of 196 on the excluded instrument in the first stage of our specifications. Our instrument thus passes conventional tests for instrument relevance.[13]

[13] Even when we conduct robustness checks that add controls for political preferences and population density (Appendix Table B.6), or exclude states with resource- or tourism-intensive industry bases (Appendix B.5), the magnitude of the first-stage relationship remains close to the baseline estimate, and the first-stage F-statistics remain well above conventional threshold values (169.4 and 49.4, respectively).

The second requirement is the exclusion restriction requirement which is that congressional representation must affect Medicaid enrollment only through its role in creating variation in fiscal aid, and not through other omitted variables. In Appendix Table B.4, we examine the relationship between the instrument and a range of baseline state characteristics that could plausibly affect Medicaid enrollment dynamics through channels other than fiscal aid. Because the instrument is based on congressional representation per capita, a key concern is that smaller and more overrepresented states may systematically differ from larger states in ways that independently shape enrollment responses during the pandemic.

One potential concern is that states with smaller pre-existing Medicaid programs may exhibit different marginal enrollment responses to a given increase in federal aid. To assess this possibility, we examine measures of baseline Medicaid program structure and generosity, including Medicaid enrollment per capita prior to the pandemic, whether the state had adopted the ACA Medicaid expansion before March 2020, and an index of overall Medicaid generosity.

A second potential concern involves political economy. Smaller and more overrepresented states tend to be more rural and politically conservative, characteristics that may influence Medicaid policy choices independently of fiscal aid. For example, political preferences may shape expansion decisions, eligibility standards, or administrative effort. To capture these dimensions, we examine the instrument's relationship with the state's vote share for Trump in the 2016 presidential election.

Third, states may differ systematically in demographic and socioeconomic characteristics in ways that independently affect Medicaid enrollment responses during the COVID-19 shock. In particular, differences in age structure may influence both health vulnerability and labor market exposure during the pandemic. We therefore examine the share of the state population age 65 or older in 2019, and population density. We also account for differences in baseline socioeconomic conditions by including income per capita as well as the state's unemployment rate in 2019.

Finally, smaller states may have labor markets that are disproportionately exposed to sector-specific economic disruptions during the pandemic. In particular, smaller states with greater reliance on resource extraction or tourism experienced larger employment losses during the pandemic's initial months, which could have affected Medicaid eligibility independently of federal fiscal transfers. To capture these dimensions, we examine measures of resource- and tourism-intensive industry exposure.

Our estimates in Table B.4 show that the instrument is uncorrelated with the vast majority of these characteristics, with the exception of resource- or tourism-intensive industry status. We therefore conduct two robustness checks to assess whether these patterns affect our main conclusions. First, in Table B.5, we re-estimate the relationship between fiscal aid and Medicaid enrollment changes excluding the six states with these industry bases. Second, in Table B.6, we re-estimate our instrumental variables specification from Table 7 including controls for political preferences (Trump vote share) and population density. Across both exercises, our conclusions from the baseline analysis are unchanged. Previous work has found our instrument to be uncorrelated with a host of additional potential confounders including pre-pandemic economic trends, the baseline size of states' public sectors, and forecasts of states' revenue shocks (Clemens and Veuger 2021), chronic disease prevalence, healthcare utilization and all-cause mortality (Clemens and Mahajan 2025).

4 Results

In this section we present the results of our empirical analyses. Subsections 4.1, 4.2, 4.3, and 4.4 present analyses of each of our four sets of predictors taken separately. In section 4.5, we conclude with an analysis that combines the predictors associated with all four of our hypotheses regarding sources of pandemic-era variations in Medicaid enrollments simultaneously.

4.1 Medicaid Outreach and Renewal Provisions

Beginning in March 2023, the unwinding of the continuous coverage requirement confronted state Medicaid agencies with unprecedented administrative burdens. Having had no reason to evaluate current beneficiaries' eligibility status under the continuous coverage requirement, states were faced with the challenge of re-initiating their evaluating of eligibility for their full stocks of enrollees as per pre-pandemic eligibility standards. Enforcing eligibility standards without eliminating some individuals' coverage for purely procedural reasons (e.g., a failure to return renewal forms on time) was expected to be difficult. The potential magnitude of this challenge was captured by an HHS projection that nearly 6.8 million eligible individuals would experience coverage loss for purely procedural reasons (Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services 2022). During the unwinding of continuous coverage, CMS issued guidance to states recommending the adoption of new policies or enforcement of existent eligibility determination procedures that might aid in preventing eligible individuals from losing Medicaid coverage.

Our first set of analyses thus explores whether and to what extent these policies predict variations in changes in Medicaid enrollments over the course of the pandemic. The first set of policies we consider includes increased enrollee outreach,[14] extended renewal response time, new methods for updating contact information in the enrollee's account, enhanced online account functionality, simplified renewal forms, additional translations on renewal forms, and the engagement of community-based organizations (CBOs) and managed care organizations (MCOs) in outreach. Community based organizations could facilitate renewals through various mechanisms such as, for example, door-knocking in communities with the greatest risk of losing coverage (KFF 2023*a*) or allowing community organizations access to renewal determination portals to assist enrollees in managing coverage (KFF 2024*b*). These policies were newly adopted by states during the continuous coverage requirement's

[14]For example, sending text message reminders.

unwinding phase. We also consider a variable for whether renewal notices were sent early, defined as more than 45 days prior to eligibility loss, which was a pre-pandemic dimension of states' renewal determination procedures.

The second set of policies on which we focus relates to ex parte renewals. Ex parte renewal is a process by which the agency conducts an automatic eligibility review using enrollee information that is already available to the state. If ex parte renewal is successful, the enrollee does not need to fill out and submit renewal forms separately. This process reduces administrative burden for both enrollees and state agencies.[15] During the unwinding phase, states implemented a number of measures to facilitate ex parte renewals. These include adopting 1902(e)(14)(A) Waivers,[16] improving system rules, expanding the set of data sources used in eligibility determination, changing the hierarchy of data sources used in eligibility determination, and revising restrictions on the age of data sources used in eligibility determination.

All of the aforementioned variables are categorical, where 1 denotes the state's adoption of a policy. Note that because outreach and renewal policies were enacted around the beginning of the continuous coverage provision's unwinding phase, we do not expect them to predict changes in Medicaid enrollment during pandemic's initial years. Rather, our hypothesis is that a more generous unwinding process, captured by the adoption of a larger share of these outreach and renewal policies, would slow the pace and reduce the overall magnitude of disenrollment relative to the pandemic-era enrollment run-up. Accordingly, we hypothesize that states with more generous unwinding policies would experience smaller declines in Medicaid enrollment between March 2023 and September 2024 (i.e., less negative enrollment changes). We also expect these states to exhibit a less negative ratio of enrollment change during the unwinding period to enrollment growth during the continuous coverage

[15] Greater burdens for enrollees have historically been associated with lower Medicaid enrollment (Fox, Stazyk, and Feng 2020).

[16] Waivers to improve ex parte renewal rates include, for example, renewal based on SNAP or TANF eligibility and allowing renewals for individuals with no or low income.

period, indicating that a smaller share of pandemic-era enrollment gains was reversed during unwinding.

The estimates in columns 4, 5, and 6 of Table 2 reveal that none of the variables that describe variations in states' renewal policies predict enrollment changes from March 2023 to September 2024. Some of the observed relationships in the remaining columns of Table 2 run contrary to our expectations. For instance, longer renewal response times (column 3) and MCO engagement in outreach (column 21) are both associated with smaller enrollment growth between February 2020 and March 2023, while sending renewal notices earlier (column 7) is associated with higher rates of enrollment reversal following unwinding. The conclusions from Table 3 are similar; there are no significant associations between states' measures for improving ex parte renewal rates and Medicaid enrollment paths.

Across all regressions, the highest R-squared is 7.3% (column 7 in Table 2), indicating that the variables considered explain only a small share of the cross-state variation in the outcome. Our conclusions remain unchanged when we consider all unwinding policy variables simultaneously, with results reported in Appendix Table B.2. We again find little evidence that these policies predict disenrollment trajectories during the unwinding period. If anything, a small number of variables are associated with moderately larger reversals of enrollment gains following the unwinding. When these 14 variables are considered jointly, the fraction of variance "explained" ranges from 21.5% to 28.1% across the three enrollment change outcomes. The adjusted R-squared statistic for each of these regressions is negative, however, indicating that the explanatory power of these 14 variables is no better than one would expect from an effort to predict 49 data points with 14 randomly generated regressors.

This initial evidence that a large set of outreach and renewal-related provisions lack predictive power may appear surprising. In particular, we note that an early 2024 analysis by Buettgens et al. (2024) found evidence of greater disenrollment in states that adopted relatively few waivers and that prioritized the review of individuals who were deemed likely to be ineligible. It is important to emphasize that the analysis in Buettgens et al. (2024)

concludes with enrollment data from November 2023. Our event-study analysis in Panel A of Figure 6, which tracks enrollment changes at a monthly frequency, is consistent with the findings of Buettgens et al. (2024). In particular, the orange circles show that states adopting waivers experienced higher enrollment (i.e., lower disenrollment) in the months from March 2023 through November 2023. By September 2024, however, neither waivers nor the host of other provisions displayed in Figures 4, 5 and 6 are associated with statistically significant coverage differentials, and point estimates take both positive and negative signs.

Additionally, to determine whether the overall generosity of states' renewal architecture predicts enrollment changes, we construct a composite index that aggregates across individual policy variables. The variable is constructed so that the denominator is the total possible policy variables for which information is available for the state (eg., 14 for states that provided survey responses for all included variables) and the numerator is the number of those policies that the state enacted (that is, the number of policies for which the value of the variable is 1). This variable thus ranges from 0 to 1 where a higher value represents more generous renewal procedures. We find in Table 4 that the generosity of outreach and renewal policies predicts enrollment changes during neither the continuous coverage period nor the unwinding period. Indeed, during the unwinding period, the index can predictively explain just 1.1 percent of the cross-state variation in changes in per capita Medicaid enrollments.

Since states' adoption of these policies could be correlated with other factors affecting enrollment, the analyses above do not allow us to conclusively determine whether states' outreach and renewal policies had causal impacts on their Medicaid enrollment trajectories during the unwinding of continuous coverage. However, we take away from these results a striking conclusion that policies that were ex-ante projected and initially thought to have meaningful implications for enrollment paths did not ultimately hold predictive power in describing enrollment outcomes.[17] Indeed, by the conclusion of the unwinding period, net enrollments had, if anything, fallen more in states that adopted more provisions that were

[17] See, for example, (KFF 2023*b*; The Commonwealth Fund 2024; KFF 2024*a*; Buettgens et al. 2024).

intended to reduce the extent of disenrollment for purely procedural reasons, as indicated by the negative coefficient in column 3 of Table 4.

4.2 Baseline Medicaid Generosity

Next, we examine whether a state's baseline Medicaid generosity predicts Medicaid enrollment changes during and following the pandemic. We consider three sets of variables that capture different dimensions of state Medicaid program generosity. The first consists of the income eligibility limits for adults with dependent children and adults without dependent children, measured as a percentage of the federal poverty level (FPL).[18] While income eligibility thresholds are a central component of program generosity, other dimensions may also be relevant. These include variation in covered benefits, eligibility restrictions related to immigration status, and baseline administrative burden, all of which may influence program access and participation. To capture these broader dimensions, we also consider a previously constructed State Safety-Net Generosity Index, measured in 2019 (State Safety-Net Generosity Index 2021). Specifically, we examine subindices capturing administrative burden, coverage generosity, and immigrant eligibility restrictions, as well as an overall generosity index that combines these dimensions into a single measure. The third set of measures consists of indicators for states' Medicaid expansion status under the Affordable Care Act. Specifically, we distinguish between states that expanded Medicaid prior to February 2020, before the continuous coverage provision was enacted; states that expanded Medicaid during or after the pandemic; and states that never adopted the Medicaid expansion.

The net implications of Medicaid expansion status and enrollment generosity for the evolution of enrollment under the continuous coverage provision are a priori ambiguous. One channel of interest involves the relevance of eligibility thresholds for the tendency of individuals to churn in and out of eligibility. On this score, it is of note that extremely

[18] The income eligibility limit for adults without dependent children is 0 percent of the FPL in states that did not cover this population.

low eligibility thresholds may render it infeasible to maintain eligibility while maintaining employment; moderately higher eligibility thresholds, by contrast, may make it possible to receive benefits while maintaining employment (Yelowitz 1995), but with modest income increases potentially then resulting in lost eligibility (Clemens and Wither 2024). To the extent that higher eligibility thresholds enable benefit receipt by individuals with fluctuating incomes, they will also tend to predict the magnitude of the continuous coverage provision's impact, since the continuous coverage provision shut down churn of this form. A distinct but relatively straightforward point is that the clearest implication of this set of provisions is that the implementation of an expansion during the pandemic itself would have direct implications for the number of eligible beneficiaries (Dague and Ukert 2024). We distinguish between ACA Medicaid expansions that took place during versus prior to the pandemic in order to separate the direct enrollment effects of expansions during the pandemic from an earlier expansion's implications for the potential importance of eligibility churn among members of the pre-pandemic beneficiary pool.

Our hypotheses regarding the effect of baseline Medicaid generosity relate to the plausibility of differential Medicaid churn in states with more relative to less generous income eligibility thresholds. With higher income cutoffs, enrollment includes a larger share of individuals who are more likely to cycle on and off the program due to income fluctuations around eligibility thresholds. The continuous coverage provision temporarily halted this cycling, leading to an accumulation of suppressed churn that was largest where baseline churn was highest. When redeterminations began, churn would have resumed, producing sharper declines in those states. Accordingly, we hypothesize that states with more generous baseline Medicaid programs would experience greater enrollment growth during the continuous coverage period and more pronounced disenrollment during the unwinding period, resulting in a more negative ratio of unwinding to continuous coverage enrollment changes (i.e., larger reversals). The descriptive national trends in Figure 3 are consistent with at least one component of our hypothesis, showing that states with ACA Medicaid expansions experienced

larger gains in enrollment during the continuous coverage provision relative to states where Medicaid never expanded. Our regression analysis will assess the extent to which cross-state variation in both the enrollment run-up and disenrollment phases is ultimately predicted by baseline program generosity.

The results of our analyses appear in Table 5 and in Figures 8, 9, and 10. Columns 1 and 2 of Table 5's panel A show that states with higher adult eligibility thresholds experienced substantially larger increases in Medicaid enrollments under the continuous coverage provision. Consistent with this initial finding, column 7 of panel A shows that Medicaid expansion states experienced larger enrollment gains during this initial February 2020 to March 2023 period. Measures of Medicaid generosity captured by the Social Safety Net Generosity indices show little correlation with enrollment run-ups, as seen in columns 3–6 of Panel A. States with Medicaid programs that were more comprehensive in their inclusion of immigrant populations exhibit somewhat larger enrollment gains. Notably, the R-squared statistics underlying these regressions reveal the measures from the Social Safety Net Generosity index to have far less predictive power than either the income eligibility thresholds or the indicator for having passed an ACA Medicaid expansion. This pattern is informative in light of our hypotheses—the dimensions of generosity that are not most directly linked to Medicaid churn appear to have little predictive power for enrollment changes during the continuous coverage period.

Columns 8 and 9 divide the expansion states into those that had expanded during the pandemic and those that expanded prior to the pandemic. Unsurprisingly, the point estimate is larger for those that expanded during the pandemic, though it is estimated with low precision due to the small number of states in this group. The point estimate on the indicator for having enacted a pre-pandemic ACA Medicaid expansion is very strongly statistically significant.

Panel B of Table 5 reveals, perhaps surprisingly, that the measures of baseline Medicaid generosity that predicted enrollment increases during under the continuous coverage provi-

sion were not predictive of larger enrollment declines during the unwinding of the continuous coverage provision. This carries the implication that higher income eligibility thresholds were associated with net increases in enrollment over the full period under analysis, as shown in the event study evidence reported in Figures 8 and 10. The index of administrative generosity, as captured in column 4, is predictive of larger enrollment declines, but yields a low R-squared. Finally, panel C shows that overall, having a more generous Medicaid program predicts smaller reversals of enrollment increases during the unwinding period, consistent with the evidence in Figures 8 and 10.

4.3 Political Preferences

The generosity and overall design of states' Medicaid programs has long been correlated with partisan political preferences. For example, the implementation of the Affordable Care Act (and the associated timing of Medicaid expansions) is correlated with political partisanship (Grogan and Park 2017; Béland, Rocco, and Waddan 2019). States' political leanings could also affect their approach to implementing policy provisions during the pandemic, as discussed earlier in section 4.1. These considerations lead us to investigate whether a state's political affiliation is independently predictive of Medicaid enrollment changes during this time period. Our proxy for a state's political preferences is Donald Trump's vote share in the 2016 U.S. presidential election.

We hypothesize that states in which Donald Trump won a larger share of votes in the 2016 presidential election might display smaller enrollment increases while the continuous coverage provision was in effect, and larger or faster declines during the unwinding period. This would be consistent with the tendency for Republican leaning states to maintain lower eligibility thresholds and to be less likely to implement ACA Medicaid expansions. Contrary to this hypothesis, the analysis, as presented in Table 6 and Figure 11, reveals little correlation between Donald Trump's 2016 vote share and the magnitude of Medicaid enrollment changes during this time period. An examination of the dynamics in Figure 11 provides

some suggestive evidence that states with a higher Trump vote share may have unwound enrollments faster than states with lower Trump vote shares, although this difference is not estimated with sufficient precision to arrive at strong conclusions. While some differences may have emerged during the initial months of the unwinding (i.e., between March 2023 and January 2024), the magnitude of the unwinding through September of 2024 is both economically and statistically indistinguishable in states with higher vs. lower Trump vote shares.

4.4 Federal Aid

Our final hypothesis relates to the fiscal assistance made available to states by the federal government to bolster their budgets during the pandemic. To the extent that these funds eased liquidity constraints, we hypothesize that they may have led states to manage their Medicaid enrollments more generously. Additionally, better funded states may have strengthened their administrative capacity for managing an unwinding that preserved enrollment among the eligible while efficiently disenrolling those who were no longer eligible. We hypothesize that greater fiscal aid would generate larger enrollment run-ups during the continuous coverage period, followed by larger disenrollment during unwinding. Additionally, a greater share of the initial enrollment gains would be reversed, implying a more negative ratio of unwinding-period enrollment change to continuous-coverage-period enrollment growth.

The results of our analysis of federal aid are reported in Table 7. Whether we estimate the relationship between fiscal aid and Medicaid enrollments using ordinary least squares or whether we instrument for aid using variations in states' representation in Congress, we find no evidence of a relationship. States that received more generous fiscal assistance, which ranged meaningfully from roughly $2,000 to $6,000 per state resident and is strongly predicted by our instrument, experienced no larger or smaller increase in enrollment under the continuous coverage provision. They similarly saw neither larger nor smaller declines in enrollment during the unwinding phase. Their net changes in enrollment were, again,

indistinguishable from zero. Our results are robust to the inclusion of 2016 Trump vote share and state population density as covariates (Table B.6), as well as to excluding states with higher industry reliance on resource extraction and tourism (Table B.5), which we find to be correlated with political representation. These results mitigate concerns that our estimates are driven by these potential confounders.

4.5 Combined Analysis of All Hypotheses

In Table 8, we conclude our analyses by estimating equation 1 with a set of explanatory variables that encompass all four candidate state-level correlates of pandemic Medicaid enrollment discussed and analyzed above. That is, we regress Medicaid enrollment changes on the generosity of the outreach and renewal policies enacted by states during the unwinding phase (as captured by the composite index analyzed in Table 4), states' Medicaid expansion status, their Trump vote share in 2016, and our instrument for fiscal aid, namely their congressional representation per million residents. We also add states' 2019 population density as a covariate that proxies for variations in susceptibility to the health effects of the pandemic.

Because each explanatory variable is hypothesized to predict a different component of enrollment change, the purpose of this exercise is not to test a distinct hypothesis. Rather, it is to assess whether the relationships identified in the preceding analyses persist when the various proposed mechanisms are considered simultaneously. Given that several of these factors are correlated across states, the resulting coefficients can be interpreted as the partial association between each mechanism and enrollment changes, holding the others constant.

The multivariate analysis in Table 8 bolsters our earlier analyses; no variable other than Medicaid expansion status is a robust predictor of Medicaid enrollment gains during the pandemic.[19] In addition, unwinding policy generosity is not associated with smaller enroll-

[19] In Appendix Table B.3, we replace the Medicaid expansion indicator with an alternative measure of baseline Medicaid generosity—the income eligibility limit for adults with dependent children. This measure is also a significant predictor of Medicaid enrollment gains. Expansion status and eligibility thresholds are strongly correlated. Consequently, a regression

ment reversals and, if anything, is associated with larger reversals. Indeed, this collection of variables can predictively explain no more than 20 percent of the variation in Medicaid enrollment increases during the continuous coverage period and no more than 10 percent of the variation in the enrollment declines that occurred during the unwinding period.

We conclude the discussion of this exercise by acknowledging two key limitations. First, several of these measures may be endogenous to pandemic-era enrollment trends, implying differential validity for causal interpretation across variables. The potential for reverse causality is especially relevant for Medicaid expansion decisions adopted during the pandemic and for outreach and renewal policies implemented during the unwinding period. Accordingly, results for these variables should be interpreted with particular caution. Nevertheless, in Appendix Table B.7, we exclude states that expanded Medicaid between March 2020 and September 2024 and find that our results are qualitatively unchanged under this restriction, although some estimates become more or less precisely estimated relative to the full sample.

Concerns about reverse causality are less pronounced for measures determined prior to the pandemic, such as baseline program generosity, baseline political leaning, and congressional representation per capita. Among these, congressional representation per capita is intended to serve as an instrument for fiscal aid, as it is predetermined by historical apportionment and plausibly affects enrollment dynamics only through its influence on federal transfers. It therefore carries the strongest basis for a causal interpretation, subject to the validity of the exclusion restriction.

Second, the included metrics may be correlated within states. When we examine the adjusted R-squared—which adjusts for the mechanical increase in fit from adding regressors—from the joint specification in Table 8 for the outcome measuring enrollment changes from February 2020 to March 2023, we find that it exceeds the R-squared values from the individual bivariate regressions. This pattern is somewhat reassuring with respect to concerns

that includes both variables at the same time yields a positive but statistically insignificant coefficient on the parental income limit, and a positive and significant coefficient on Medicaid expansion.

about redundancy, as it suggests the regressors are not merely capturing a single underlying dimension but instead contribute incremental information. At the same time, these conclusions do not readily extend to post-unwinding enrollment changes or reversals, where the comparison between the adjusted R-squared in Table 8 and the individual regressions is less straightforward.

Overall, the estimates in Table 8 are best interpreted as descriptive rather than causal, aimed at characterizing cross-state associations between enrollment changes and a set of state characteristics and policy choices that have been proposed as potential drivers of enrollment growth and subsequent disenrollment. We view the analysis as focused on describing correlates of cross-state variation in Medicaid enrollment trajectories during and after the COVID-19 pandemic. Any null associations should therefore be interpreted as limited explanatory power for the observed variation, rather than as conclusive evidence against a variable's mechanistic role. Several factors could attenuate estimated relationships toward zero, including measurement error, policy endogeneity, the possibility that the realized effects of policies (e.g., policies to increase outreach and ex parte renewals during unwinding) differ from its intended design because of variation in implementation across states, and the inherently limited power afforded by a relatively small number of state-level observations.

5 Summary and Conclusion

In this paper, we analyze the historically dramatic variations in Medicaid enrollments over the course of the the COVID-19 pandemic. We explore the extent to which proxies for the mechanisms linked to several hypotheses can predictively account for the cross-state variation in Medicaid enrollment changes between February 2020 and September 2024. We find that three of these candidate explanations, namely the fiscal aid to state governments, the structure of states' eligibility outreach and renewal policies, and a proxy for political preferences, have trivial explanatory power. This is surprising, as these hypotheses span the major

classes of explanations to which one would generally turn to understand variations in the management of states' Medicaid programs, namely differential slack in states' budget constraints, variations in political preferences, and variations in their implementing institutions. An implication we draw from this set of results is that the pandemic's effects on Medicaid enrollments may, in the end, have had little to do with decisions states made actively over the course of the pandemic itself. Indeed, aside from the enactment of a Medicaid expansion during the pandemic, the only variables for which we find evidence of explanatory power are variables that relate to the baseline generosity of the states' eligibility rules.

We draw several tentative conclusions from our analyses. First, the finding for which we advance the strongest causal case involves our analysis of federal aid, in which we deploy an instrumental variables framework. We find that incremental federal aid had no effect on the generosity with which states managed Medicaid enrollments during this time period. This provides evidence that states were not meaningfully discouraging enrollment as a response to lower aid allocations. This is not surprising, as sources including the National Association of State Budget Officers have documented that, contrary to early pandemic fears, states' revenue streams ultimately exceeded pre-pandemic forecasts. States were thus far less liquidity constrained than initially anticipated.

Second, our findings with respect to political preferences and the structure of states' eligibility outreach and renewal policies may strike many as surprising. As the unwinding of the continuous coverage provision approached, policy commentators viewed states' approaches to managing the unwinding as having potentially substantial implications for the unwinding's effects on enrollment. Our analysis suggests that, in the end, available measures of states' policy choices can predictively account for far less of the cross-state variation in the unwinding's path than one might have expected. Future research will be needed to shed light on which dimensions of state policy had meaningful impacts on the evolution of coverage during this important historical episode.

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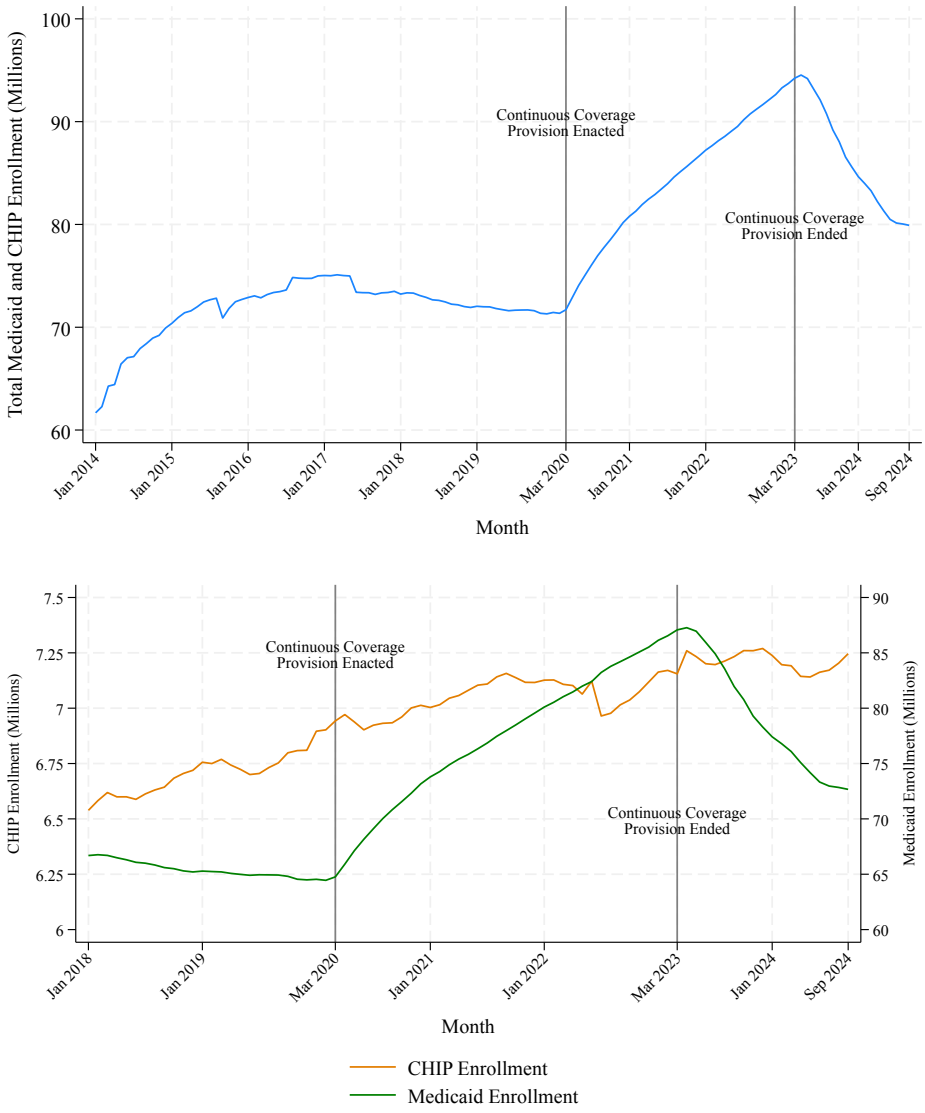
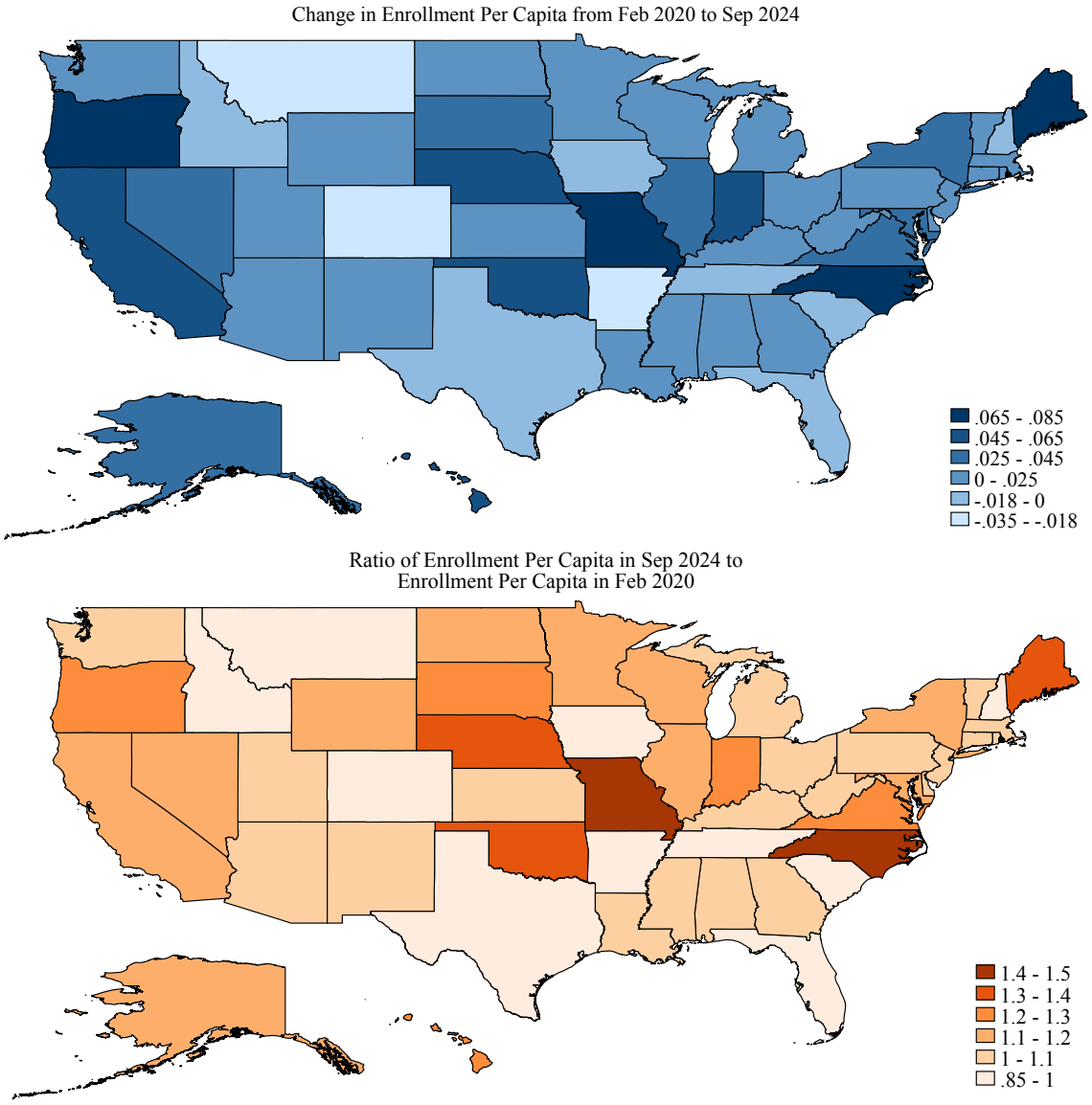
Figure 1: Change in Medicaid Enrollment in the U.S. from January 2014 to September 2024



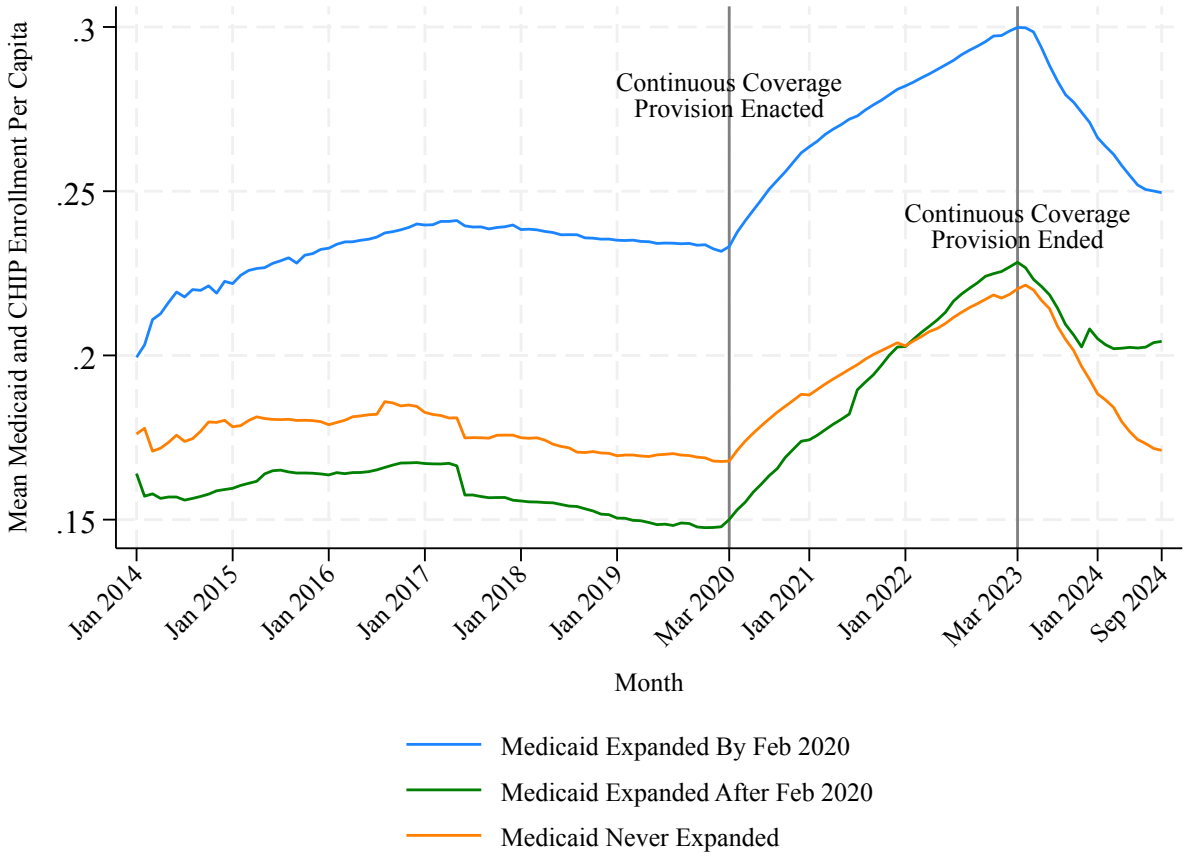
Notes: This figure presents the monthly enrollment in Medicaid and CHIP in the U.S. in millions. The monthly enrollment data for January 2014 to December 2017 are from KFF (KFF 2024*c*). Data for January 2018 to September 2024 are from the CHIP Eligibility Operations and Enrollment Snapshots (Centers for Medicare & Medicaid Services 2024). The top panel presents trends in total enrollment while the bottom panel presents the trends separately for CHIP (left y-axis) and Medicaid (right y-axis) enrollment. Since the CHIP and Medicaid enrollment are available separately only in the CMS data, the time series in the bottom panel begins in January 2018.

Figure 2: Change in Medicaid Enrollment Per Capita By State From the Enactment of Continuous Coverage to September 2024



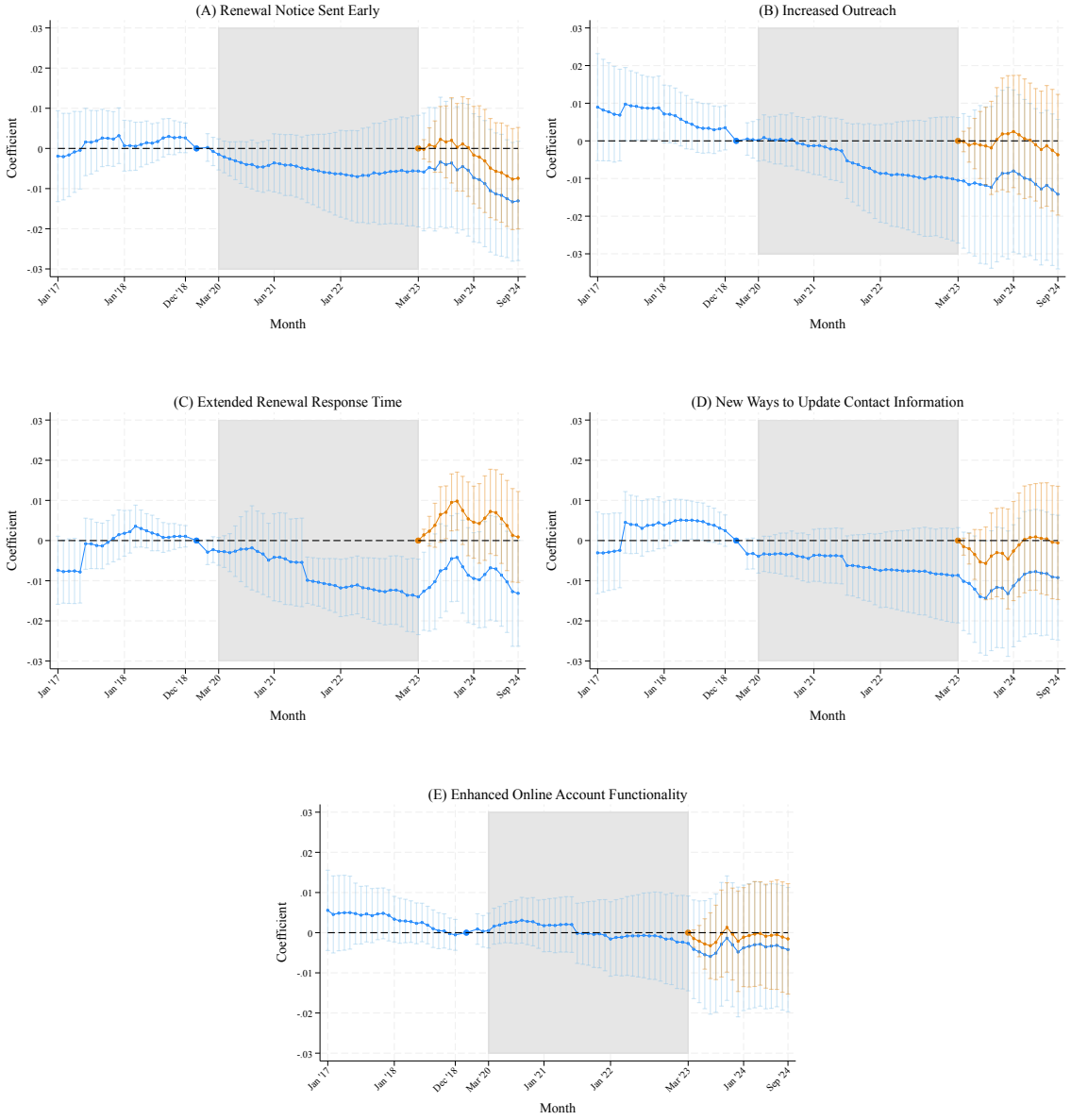
Notes: This figure presents the change in Medicaid and CHIP enrollment per capita by state. Enrollment per capita is constructed by dividing total enrollment in the state by the state's population in the calendar year. The outcome in the top panel is the difference between the enrollment per capita in September 2024, the latest month in our data, and the enrollment per capita in February 2020, the month just prior to the enactment of the continuous coverage provision through the FFCRA. The outcome in the bottom panel is the ratio of enrollment per capita in September 2024 to the enrollment per capita in February 2020. Data for enrollment are from the Centers for Medicare & Medicaid Services (2024) and data for population are from the U.S. Census Bureau (U.S. Census Bureau 2021, 2024).

Figure 3: Trends in Medicaid Enrollment Per Capita by State Medicaid Expansion Status



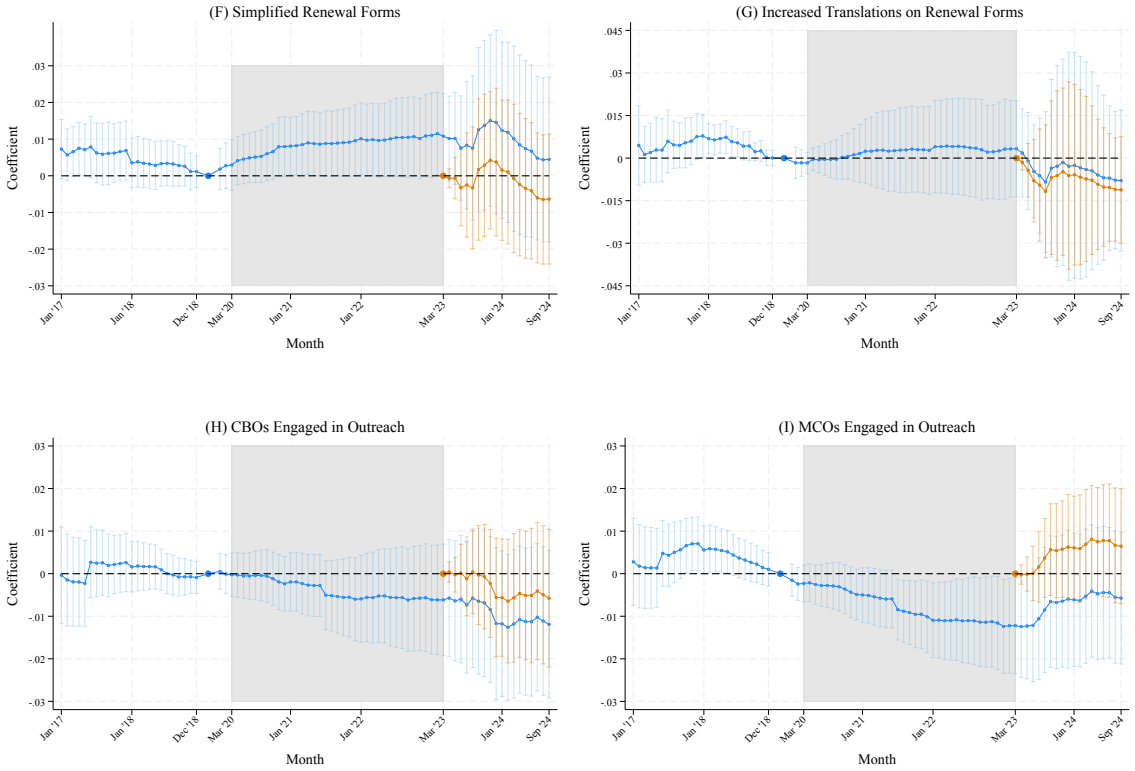
Notes: This figure presents the mean state monthly enrollment per capita by Medicaid expansion status. The blue line presents the mean for states that enacted the ACA Medicaid expansion in or before February 2020 (N=36). The green line presents the mean for states that enacted the ACA Medicaid expansion in or after March 2020 (N=5). The orange line presents the mean for states that had not expanded Medicaid by September 2024 (N=10).

Figure 4: The Relationship Between Patient Outreach Procedures and Medicaid Enrollment (Part 1)



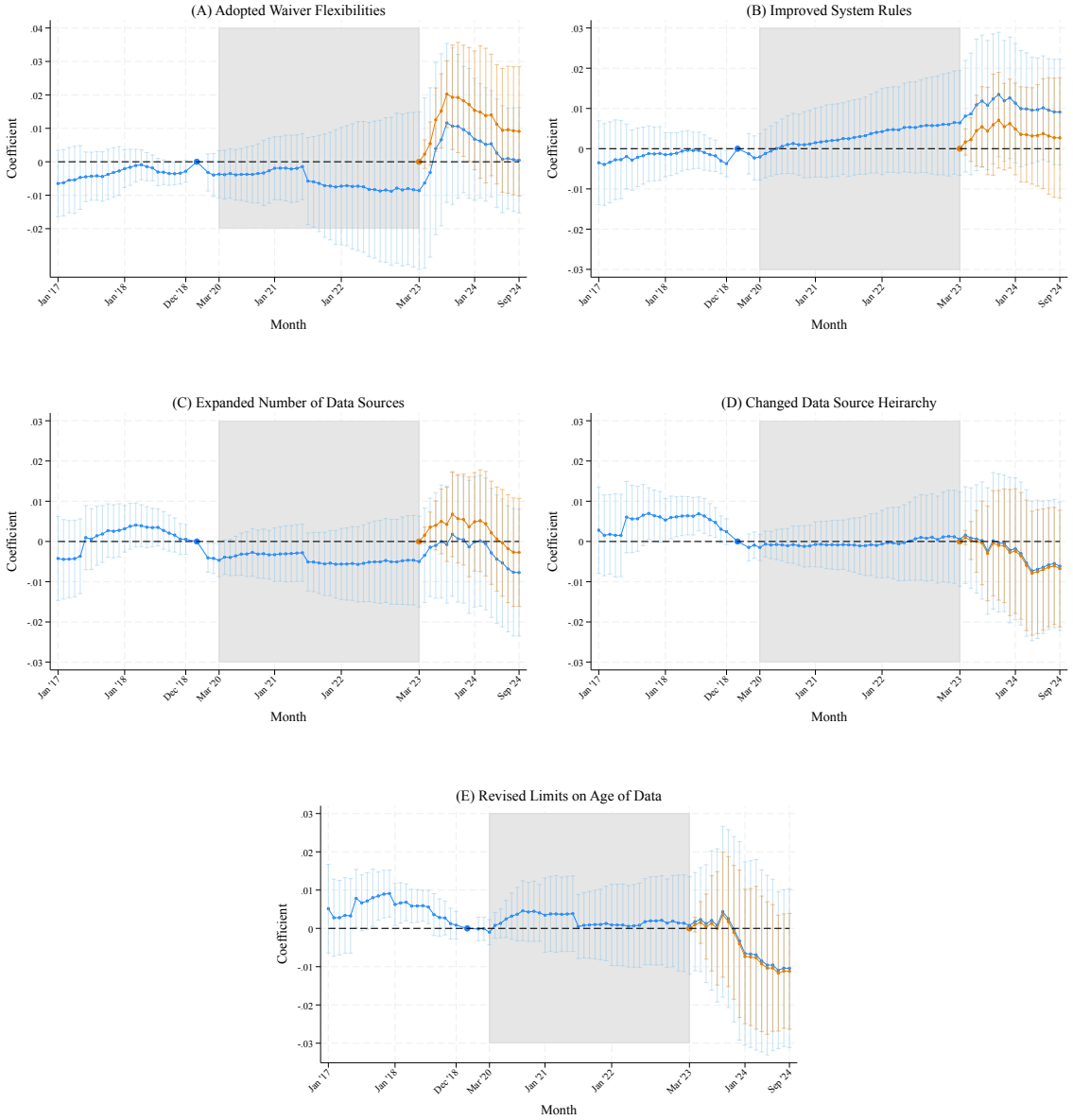
Notes: This figure presents the estimates from equation 2 of the relationship between states' outreach procedures and renewal policies, and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The blue line denotes the event-study estimates from a specification in which 2019 is the reference period. The orange line denotes the event-study estimates from a specification in which March 2023 is the reference period. Each panel corresponds to a different policy variable. All policy variables are categorical (0/1) and are further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 5: The Relationship Between Patient Outreach Procedures and Medicaid Enrollment (Part 2)



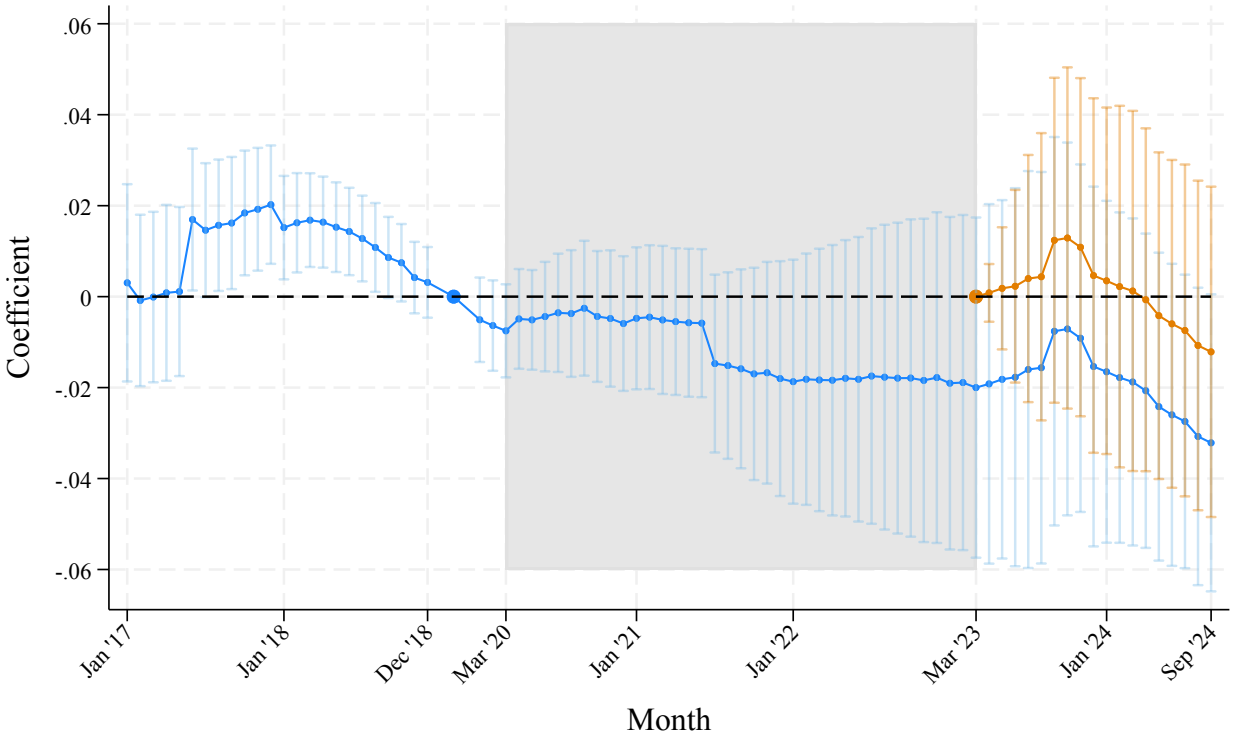
Notes: This figure presents the estimates from equation 2 of the relationship between states' outreach procedures and renewal policies, and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The blue line denotes the event-study estimates from a specification in which 2019 is the reference period. The orange line denotes the event-study estimates from a specification in which March 2023 is the reference period. Each panel corresponds to a different policy variable. All policy variables are categorical (0/1) and are further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 6: The Effect of Changes in Ex Parte Renewal Procedures on Medicaid Enrollment



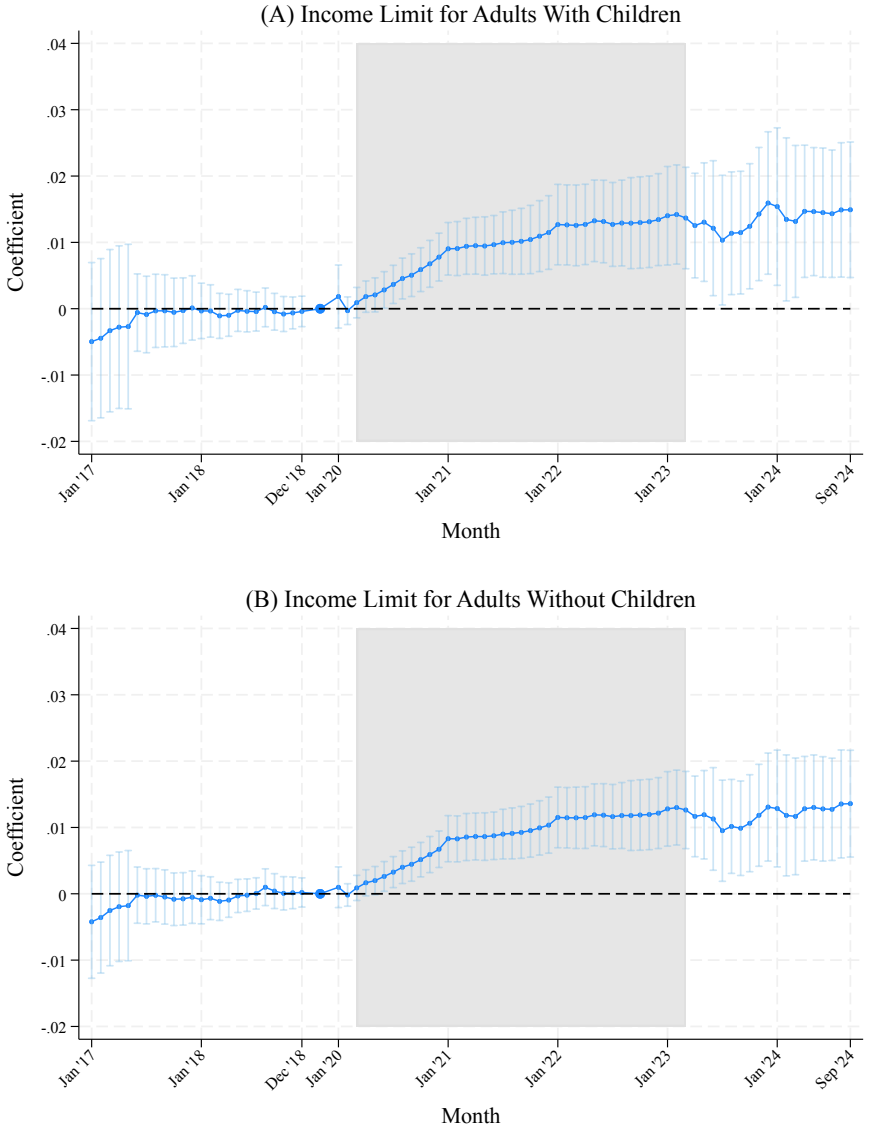
Notes: This figure presents the estimates from equation 2 of the relationship between states' ex parte renewal procedures and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The blue line denotes the event-study estimates from a specification in which 2019 is the reference period. The orange line denotes the event-study estimates from a specification in which March 2023 is the reference period. Each panel corresponds to a different policy adopted by states to streamline ex parte renewal. All policy variables are categorical (0/1) and are further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 7: The Relationship Between the Overall Generosity of Medicaid Unwinding Policies and Medicaid Enrollment



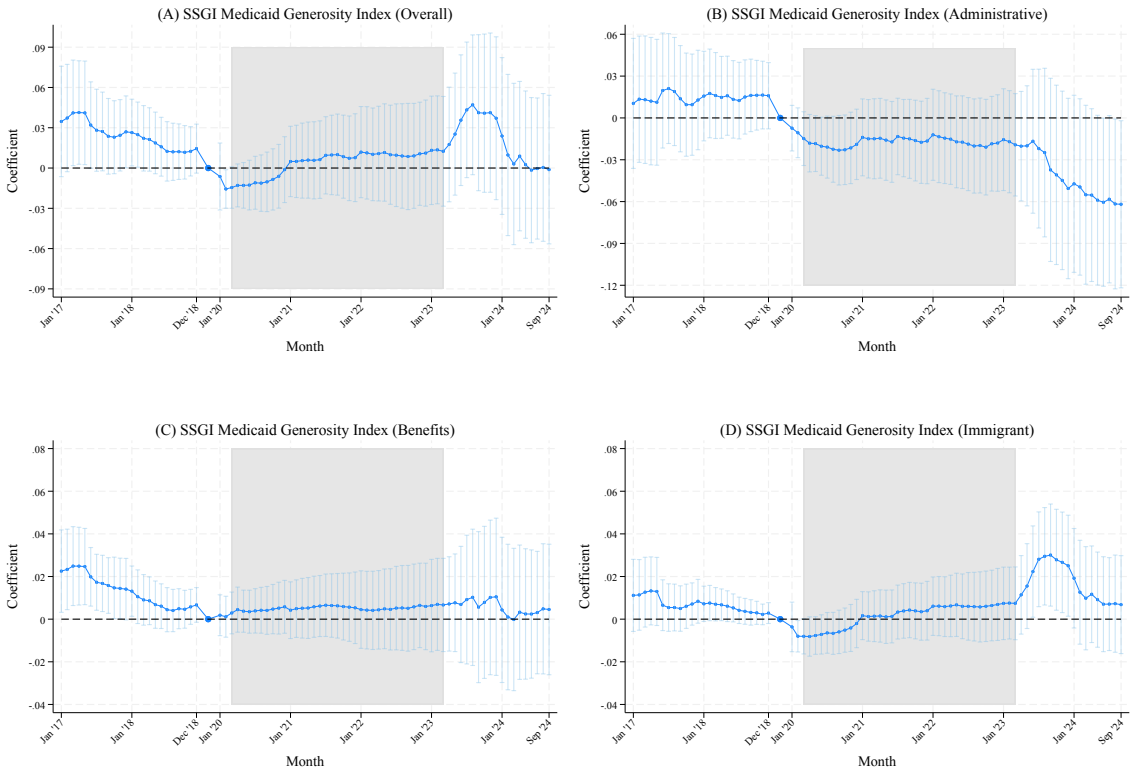
Notes: This figure presents the estimates from equation 2 of the relationship between states' overall unwinding policy generosity and their Medicaid and CHIP enrollment per capita. The explanatory variable is a policy index which aggregates across all explanatory variables from Tables 2 and 3 such that a value closer to 1 denotes a larger share of unwinding policies adopted and a value closer to 0 denotes a smaller share of unwinding policies adopted. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The blue line denotes the event-study estimates from a specification in which 2019 is the reference period. The orange line denotes the event-study estimates from a specification in which March 2023 is the reference period. The policy index variable is further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 8: The Relationship Between Baseline Medicaid Income Eligibility Limits and Medicaid Enrollment



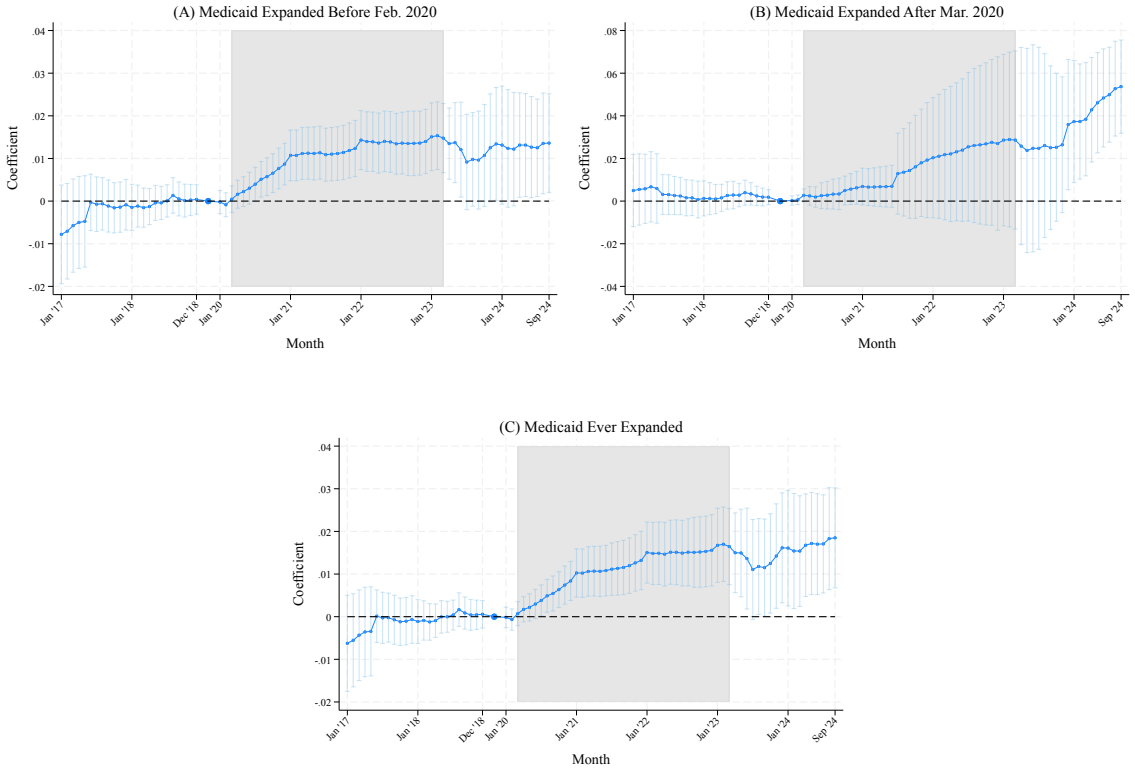
Notes: This figure presents the estimates from equation 2 of the relationship between states' baseline Medicaid generosity and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The reference period is 2019, so that the coefficients mark the relationship in each month relative to the relationship in all months in 2019. The explanatory variables in panels A and B are continuous and are equal to the states' income limits as a % of the Federal Poverty limit divided by 100 (eg., 1.38 if the income limit is 138% of the FPL). All explanatory variables are further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 9: The Relationship Between Baseline Medicaid Generosity Indices and Medicaid Enrollments



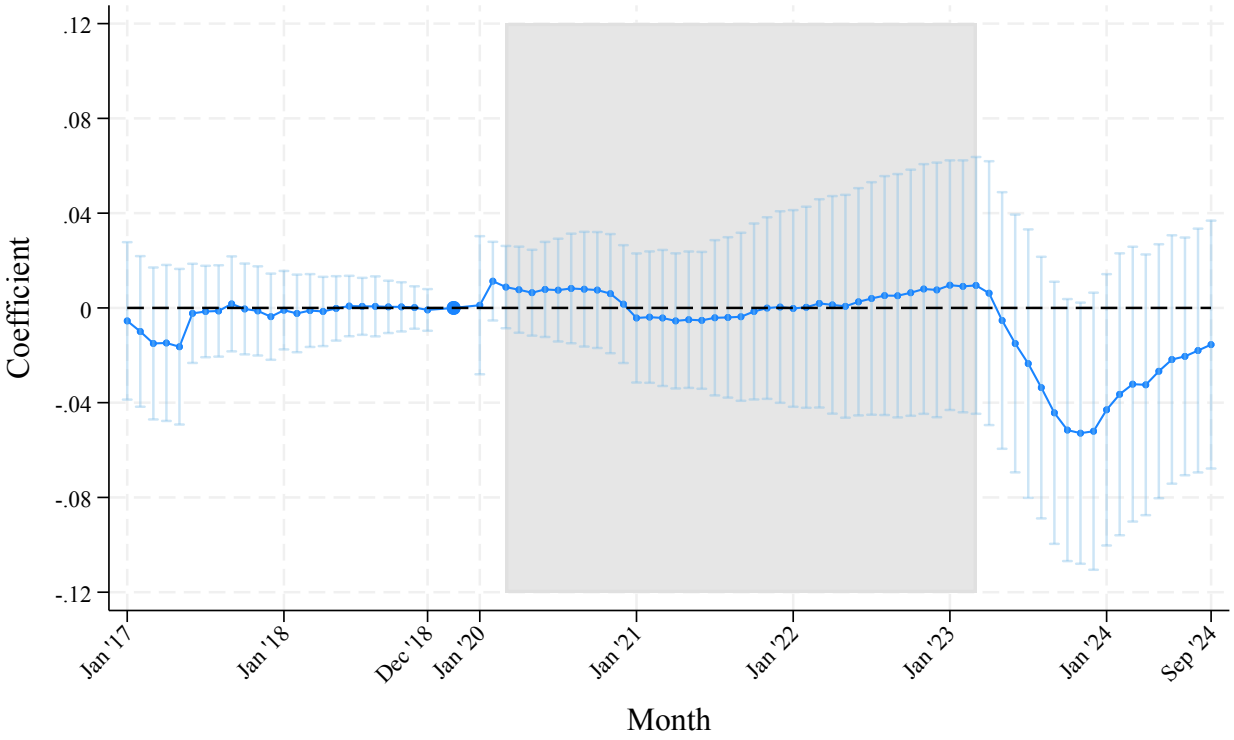
Notes: This figure presents the estimates from equation 2 of the relationship between states' baseline Medicaid generosity and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The reference period is 2019, so that the coefficients mark the relationship in each month relative to the relationship in all months in 2019. Each panel corresponds to a different State Safety-Net Generosity Index (2021) index. All explanatory variables are further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 10: The Relationship Between Medicaid Expansion Status and Medicaid Enrollment



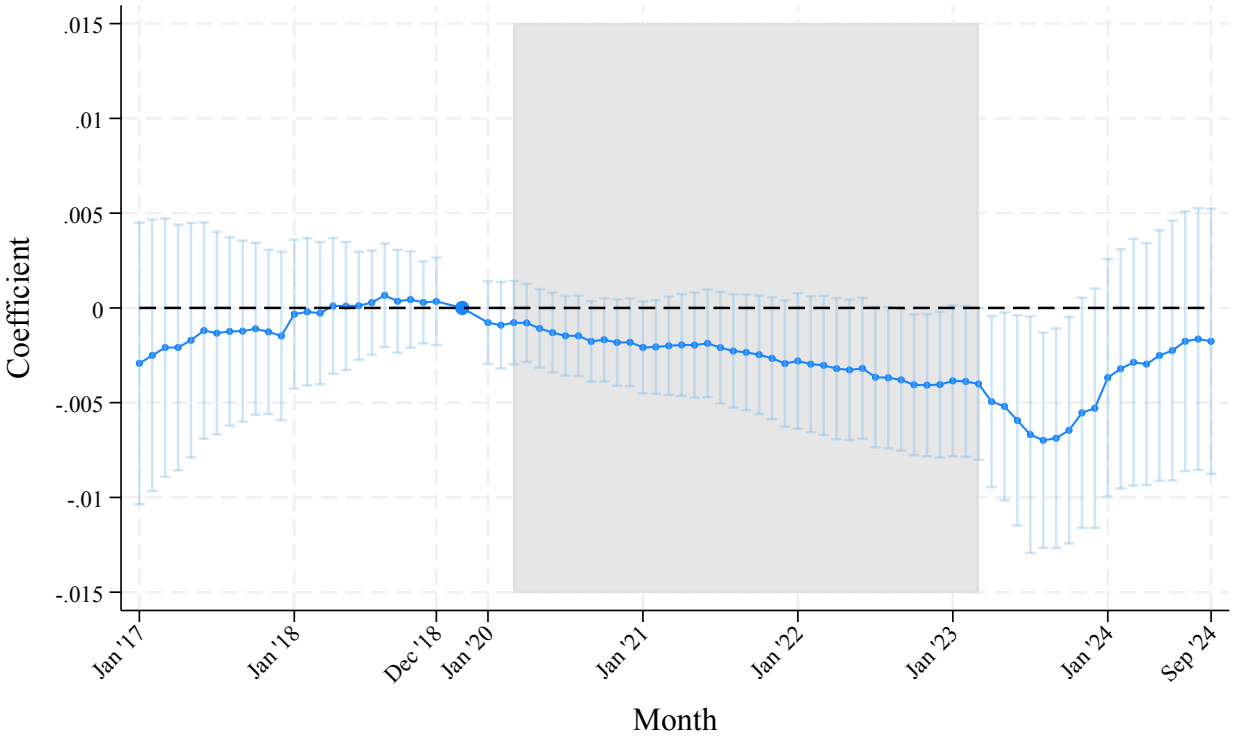
Notes: This figure presents the estimates from equation 2 of the relationship between states' baseline Medicaid generosity and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The reference period is 2019, so that the coefficients mark the relationship in each month relative to the relationship in all months in 2019. The variables in panels A, B and C are categorical (0/1). The data underlying the estimates in panel A include states which expanded Medicaid in or before February 2020 and states that did not expanded Medicaid by September 2024. The data underlying the estimates in panel B include states which expanded Medicaid in or after March 2020 and states that did not expanded Medicaid by September 2024. The data underlying the estimates in panel C include all states, separated by whether or not they expanded Medicaid by September 2024. All explanatory variables are further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 11: The Relationship Between the 2016 Trump Vote Share and Medicaid Enrollment



Notes: This figure presents the estimates from equation 2 of the relationship between states' 2016 Trump vote share and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The reference period is 2019, so that the coefficients mark the relationship in each month relative to the relationship in all months in 2019. The explanatory variable is continuous and is further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Figure 12: The Relationship Between Congressional Representation Per Capita and Medicaid Enrollment



Notes: This figure presents the estimates from equation 2 of the reduced-form relationship between states' congressional representatives per capita and their Medicaid and CHIP enrollment per capita. The dot marks the estimated coefficient and the vertical lines denote the confidence interval associated with it. The reference period is 2019, so that the coefficients mark the relationship in each month relative to the relationship in all months in 2019. The explanatory variable is continuous and is further described and summarized in Table 1. The shaded region on the figure represents the period during which the continuous coverage requirement was in place.

Table 1: Summary Statistics

Variable	Dummy Var. (0 or 1)	Mean	SD	Min	Max	Obs	Description
Monthly Medicaid Enrollment Per Capita (Jan. 2014 to Sep. 2024)	No	0.23	0.07	0.09	0.43	6,564	Total Medicaid and CHIP enrollees in the state / State population
Monthly Medicaid Enrollment Per Capita (Mar. 2020 to Sep. 2024)	No	0.25	0.07	0.10	0.43	2,805	Total Medicaid and CHIP enrollees in the state / State population
Change in Enrollment Per Capita from Feb. 2020 to Mar. 2023	No	0.07	0.02	0.04	0.15	51	
Change in Enrollment Per Capita from Mar. 2023 to Sep. 2024	No	-0.05	0.02	-0.09	0.04	51	
Ratio of Change in Enrollment Per Capita	No	-0.73	0.39	-1.52	0.88	51	Mar. 2023 to Sep. 2024 / Feb. 2020 to Mar. 2023
Renewal Notices Sent Early	Yes	0.65	0.48	0	1	49	State sends renewal notices at least 46 (and up to 90) days before the end of the eligibility period
Increased Outreach	Yes	0.74	0.44	0	1	50	State increased outreach to enrollees about renewals
Extended Renewal Response Time	Yes	0.14	0.35	0	1	50	State extended renewal response time
New Ways to Update Contact Information	Yes	0.54	0.50	0	1	50	State provided enrollees with new ways to update contact information
Enhanced Online Account Functionality	Yes	0.52	0.50	0	1	50	State enhanced online account functionality
Simplified Renewal Forms	Yes	0.20	0.40	0	1	50	State simplified renewal form
Increased Translations on Renewal Forms	Yes	0.08	0.27	0	1	50	State increased translations of renewal notices and/or forms
CBOs Engaged in Outreach	Yes	0.62	0.49	0	1	50	State engaged CBOs in renewal process
MCOs Engaged in Outreach	Yes	0.52	0.50	0	1	50	State engaged MCOs in renewal process
Adopted Waiver Flexibilities	Yes	0.84	0.37	0	1	50	State adopted Section 1902(e)(14)(A) waiver flexibilities to increase ex parte renewal rates
Improved System Rules	Yes	0.78	0.42	0	1	50	State improved system rules to conduct ex parte renewals
Expanded Number of Data Sources	Yes	0.44	0.50	0	1	50	State expanded the number of data sources used in ex parte renewals
Changed Data Source Hierarchy	Yes	0.24	0.43	0	1	50	State changed the hierarchy of data sources used in ex parte renewals
Revised Limits on Age of Data	Yes	0.18	0.39	0	1	50	State revised the limits on the age of data used in ex parte renewals
Policy Index	No	0.46	0.20	0.07	0.93	50	The sum of values of all dummy variables above / Total dummy variables above for the state

Notes: This table presents summary statistics for all variables used in our analyses and provides information about how they are constructed.

Tables

Table 1: Summary Statistics

Variable	Dummy Var. (0 or 1)	Mean	SD	Min	Max	Obs	Description
Medicaid Income Eligibility Limit for Parents	No	1.22	0.42	0.15	2.21	51	(% FPL / 100)
Medicaid Income Eligibility Limit for Adults Without Children	No	1.14	0.55	0	2.15	51	(% FPL / 100)
Medicaid Expanded Before Feb. 2020	Yes	0.71		0	1	36	
Medicaid Expanded After Mar. 2020	Yes	0.10		0	1	5	
Medicaid Never Expanded	Yes	0.20		0	1	10	
Overall Medicaid Generosity	No	0.55	0.11	0.36	0.83	51	State scored on overall Medicaid program generosity
Administrative Medicaid Generosity	No	0.68	0.10	0.49	0.89	51	State scored on Medicaid program administrative burden (lower burden = higher score)
Medicaid Benefits Generosity	No	0.67	0.21	0.16	1.00	51	State scored on Medicaid coverage generosity
Medicaid Immigrant Coverage Generosity	No	0.39	0.24	0.00	1.00	51	State scored on Medicaid coverage generosity for immigrants
Trump Vote Share	No	0.48	0.12	0.04	0.69	51	The share of votes that went to Donald Trump in the state in the 2016 U.S. presidential election
Congressional Reps Per Million Residents	No	2.14	0.89	1.30	5.19	50	(Total state representatives / 2020 state population) × 1,000,000
Fiscal Aid Per Capita (Thousands of $)	No	2.83	0.94	1.80	5.93	50	(Total state fiscal aid / 2020 state population) / 1,000
Population Density	No	425.94	1615.74	1.28	11586.77	51	Total state population in 2019 / Land area in sq. miles in 2020

Notes: This table presents summary statistics for all variables used in our analyses and provides information about how they are constructed.

Table 2: The Relationship Between Outreach Procedures and Medicaid Enrollment Change

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Change in Medicaid Enrollment Per Capita						Ratio of Change in Medicaid Enrollment		
	Feb. 2020 to Mar. 2023			Mar. 2023 to Sep. 2024					
Renewal Notice Sent Early	-0.005			-0.007			-0.176*		
	(0.007)			(0.006)			(0.090)		
Increased Outreach		-0.011			-0.004			-0.147	
		(0.008)			(0.008)			(0.122)	
Extended Renewal Response Time			-0.012**			0.001			-0.134
			(0.005)			(0.006)			(0.107)
Observations	49	50	50	49	50	50	49	50	50
Mean Dep. Var.	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.734	-0.734	-0.734
R-sq	0.015	0.061	0.046	0.032	0.005	0.000	0.073	0.028	0.015
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Change in Medicaid Enrollment Per Capita						Ratio of Change in Medicaid Enrollment		
	Feb. 2020 to Mar. 2023			Mar. 2023 to Sep. 2024					
New Ways to Update Contact Information	-0.005			-0.001			-0.087		
	(0.006)			(0.007)			(0.114)		
Enhanced Online Account Functionality		-0.003			-0.002			-0.093	
		(0.006)			(0.007)			(0.111)	
Simplified Renewal Forms			0.008			-0.006			-0.042
			(0.005)			(0.009)			(0.144)
Observations	50	50	50	50	50	50	50	50	50
Mean Dep. Var.	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.734	-0.734	-0.734
R-sq	0.020	0.006	0.029	0.000	0.001	0.012	0.013	0.015	0.002
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Change in Medicaid Enrollment Per Capita						Ratio of Change in Medicaid Enrollment		
	Feb. 2020 to Mar. 2023			Mar. 2023 to Sep. 2024					
Increased Translations on Renewal Forms	0.005			-0.011			-0.137		
	(0.009)			(0.009)			(0.160)		
CBOs Engaged in Outreach		-0.006			-0.006			-0.194	
		(0.006)			(0.008)			(0.128)	
MCOs Engaged in Outreach			-0.010*			0.007			-0.013
			(0.005)			(0.007)			(0.110)
Observations	50	50	50	50	50	50	50	50	50
Mean Dep. Var.	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.734	-0.734	-0.734
R-sq	0.005	0.024	0.066	0.017	0.015	0.020	0.009	0.060	0.000

Notes: This table presents the estimates from equation 1 of the relationship between states' outreach procedures and renewal policies, and changes in their Medicaid and CHIP enrollment per capita. Each row represents the association between a different policy variable and the outcome. The first 3 columns show the relationship between the policy variable and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. The following 3 columns show the relationship between the policy variable and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. The final 3 columns show the relationship between the policy variable and the ratio of the first two outcomes. All policy variables are categorical (0/1). All explanatory variables and outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3: The Relationship Between Changes in Ex Parte Renewal Procedures and Medicaid Enrollment Change

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Change in Medicaid Enrollment Per Capita										Ratio of Change in Medicaid Enrollment				
	Feb. 2020 to Mar. 2023					Mar. 2023 to Sep. 2024									
Adopted Waiver Flexibilities	-0.005					0.009					0.066				
	(0.012)					(0.010)					(0.123)				
Improved System Rules		0.009					0.003					0.115			
		(0.006)					(0.007)					(0.110)			
Expanded Number of Data Sources			-0.001					-0.003					-0.081		
			(0.005)					(0.007)					(0.110)		
Changed Data Source Hierarchy				0.002					-0.007					-0.074	
				(0.006)					(0.007)					(0.104)	
Revised Limits on Age of Data					0.001					-0.011					-0.202
					(0.006)					(0.008)					(0.129)
Observations	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Mean Dep. Var.	0.066	0.066	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.048	-0.048	-0.734	-0.734	-0.734	-0.734	-0.734
R-sq	0.008	0.036	0.000	0.001	0.000	0.021	0.002	0.003	0.016	0.035	0.004	0.015	0.011	0.007	0.041

Notes: This table presents the estimates from equation 1 of the association between states' ex parte renewal procedures and changes in their Medicaid and CHIP enrollment per capita. Columns 1 to 5 show the association between the ex parte renewal procedure and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Columns 6 to 10 show the relationship between the procedure and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Columns 11 to 15 show the relationship between the explanatory variable and the ratio of the outcome in columns 6 to 10 to the outcome in columns 1 to 5. All ex parte renewal variables are categorical (0/1). The explanatory variables and outcomes are further described and summarized in Table 1.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4: The Relationship Between the Overall Generosity of Medicaid Unwinding Policies and Medicaid Enrollment Change

	(1)	(2)	(3)
	Change in Medicaid Enrollment Per Capita		Ratio of Change in
	Feb. 2020 to Mar. 2023	Mar. 2023 to Sep. 2024	Medicaid Enrollment
Policy Index	-0.014	-0.012	-0.427*
	(0.018)	(0.018)	(0.240)
Observations	50	50	50
Mean Dep. Var.	0.066	-0.048	-0.734
Mean of Index	0.433	0.433	0.433
R-sq	0.021	0.011	0.050

Notes: This table presents the estimates from equation 1 of the relationship between the overall generosity of states' policies during the unwinding phase of continuous coverage and changes in their Medicaid and CHIP enrollment per capita. The policy index aggregates across all explanatory variables from Tables 2 and 3 such that a value closer to 1 denotes a larger share of unwinding policies adopted and a value closer to 0 denotes a smaller share of unwinding policies adopted. Column 1 shows the association between the policy index and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Column 2 shows the relationship between the policy index and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the policy index and the ratio of the outcome in column 2 to the outcome in column 1. The policy index variable and outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5: The Relationship Between Baseline Medicaid Generosity and Medicaid Enrollment Change

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Change in Medicaid Enrollment Per Capita, Feb. 2020 to Mar. 2023									
Income Limit									
(Adults With Children)	0.014***								
	(0.004)								
(Adults W/out Children)		0.013***							
		(0.003)							
Medicaid Generosity									
Overall			0.028						
			(0.019)						
Administrative				-0.009					
				(0.018)					
Benefits					0.006				
					(0.011)				
Immigrant						0.015*			
						(0.008)			
Medicaid Expanded									
Ever							0.017***		
							(0.004)		
Before Feb. 2020								0.016***	
								(0.004)	
After Mar. 2020									0.028
									(0.020)
Observations	51	51	51	51	51	51	51	46	15
Mean Dep. Var.	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066
R-sq	0.093	0.135	0.025	0.002	0.004	0.037	0.129	0.210	0.228
Panel B: Change in Medicaid Enrollment Per Capita, Mar. 2023 to Sep. 2024									
Income Limit									
(Adults With Children)	0.001								
	(0.005)								
(Adults W/out Children)		0.001							
		(0.004)							
Medicaid Generosity									
Overall			-0.014						
			(0.021)						
Administrative				-0.043*					
				(0.024)					
Benefits					-0.002				
					(0.009)				
Immigrant						-0.001			
						(0.009)			
Medicaid Expanded									
Ever							0.002		
							(0.005)		
Before Feb. 2020								-0.001	
								(0.004)	
After Mar. 2020									0.025
									(0.020)
Observations	51	51	51	51	51	51	51	46	15
Mean Dep. Var.	-0.048	-0.048	-0.048	-0.048	-0.048	-0.048	-0.048	-0.048	-0.048
R-sq	0.000	0.001	0.004	0.036	0.000	0.000	0.001	0.001	0.185

Table 5: The Relationship Between Baseline Medicaid Generosity and Medicaid Enrollment Change (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel C: Ratio of Change in Medicaid Enrollment									
Income Limit									
(Adults With Children)	0.213**								
	(0.081)								
(Adults W/out Children)		0.197***							
		(0.065)							
Medicaid Generosity									
Overall			0.136						
			(0.363)						
Administrative				-0.811*					
				(0.424)					
Benefits					0.063				
					(0.204)				
Immigrant						0.177			
						(0.158)			
Medicaid Expanded									
Ever							0.271***		
							(0.091)		
Before Feb. 2020								0.195**	
								(0.084)	
After Mar. 2020									0.821***
									(0.259)
Observations	51	51	51	51	51	51	51	46	15
Mean Dep. Var.	-0.734	-0.734	-0.734	-0.734	-0.734	-0.734	-0.734	-0.734	-0.734
R-sq	0.053	0.078	0.001	0.047	0.001	0.012	0.079	0.072	0.560

Notes: This table presents the estimates from equation 1 of the relationship between the generosity of states' baseline Medicaid programs and changes in their Medicaid and CHIP enrollment per capita. Income limits are continuous and are constructed as the state's income limit as a % of the Federal Poverty level divided by 100 (ex. 1.38 if the income limit is 138% of the FPL). Medicaid generosity is defined by states' taking on values between 0 and 1, where 1 corresponds to maximum possible generosity, and 0 to minimum possible generosity. Overall Medicaid generosity takes into account state generosity with regards to administrative burden, benefits, immigrant coverage generosity, and general eligibility requirements. Administrative generosity assesses the extent to which states simplify application or renewal requirements, such as by allowing online applications or reducing wait time. Benefits generosity is determined by state generosity with regards to Medicaid coverage of medical services, medical devices, and prescription medications. The data underlying the estimates of the relationship between Medicaid expansion before February 2020 and Medicaid enrollment include states which expanded Medicaid in or before February 2020 and states that did not expand Medicaid by September 2024. The data underlying the estimates of the relationship between Medicaid expansion after February 2020 and Medicaid enrollment include states which expanded Medicaid in or after March 2020 and states that did not expand Medicaid by September 2024. The data underlying the estimates of the relationship between Medicaid expansion, overall, and Medicaid enrollment include all states, separated by whether or not they expanded Medicaid by September 2024. The Medicaid expansion status variables are categorical (0/1). Panel A shows the association between the explanatory variable and the difference between the state's enrollment per capita in March 2024 (when the continuous coverage provision ended) and the state's enrollment per capita in February 2020 (when the continuous coverage provision was enacted). Panel B shows the relationship between the explanatory variable and the difference between the state's enrollment per capita in September 2024 (the latest month in our data) and the state's enrollment per capita in March 2023 (when the continuous coverage provision ended). Panel C shows the relationship between the explanatory variable on the ratio of the outcome in Panel A to the outcome in Panel B. All explanatory variables and outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 6: The Relationship Between the 2016 Trump Vote Share and Medicaid Enrollment Change

	(1)	(2)	(3)
	Change in Medicaid Enrollment Per Capita		Ratio of Change in
	Feb. 2020 to Mar. 2023	Mar. 2023 to Sep. 2024	Medicaid Enrollment
Trump Vote Share	-0.002	-0.025	-0.401
	(0.026)	(0.028)	(0.364)
Observations	51	51	51
Mean Dep. Var.	0.066	-0.048	-0.734
R-sq	0.000	0.017	0.015

Notes: This table presents the estimates from equation 1 of the relationship between states' 2016 vote share for Donald Trump and changes in their Medicaid and CHIP enrollment per capita. Column 1 shows the association between the Trump vote share and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Column 2 shows the relationship between the Trump vote share and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the Trump vote share and the ratio of the outcome in column 2 to the outcome in column 1. The Trump vote share variable and outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 7: The Relationship Between Federal Fiscal Aid and Medicaid Enrollment Change

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Federal Aid	Change in Medicaid Enrollment Per Capita						Ratio of Change in		
	Per Capita	Feb. 2020 to Mar. 2023			Mar. 2023 to Sep. 2024			Medicaid Enrollment		
	(USD thousands)	OLS	IV 2SLS	Red. Form	OLS	IV 2SLS	Red. Form	OLS	IV 2SLS	Red. Form
Federal Aid Per Capita		-0.002	-0.003		0.003	0.002		0.034	0.012	
(USD Thousands)		(0.002)	(0.002)		(0.003)	(0.003)		(0.046)	(0.054)	
Congressional Reps	0.945***			-0.003			0.002			0.012
(Per Million Residents)	(0.067)			(0.002)			(0.003)			(0.051)
Observations	50	50	50	50	50	50	50	50	50	50
First Stage F-Stat	196.4									
Mean Dep. Var.	2.828	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.734	-0.734	-0.734
R-sq	0.807	0.013	0.011	0.021	0.013	0.013	0.007	0.007	0.004	0.001

Notes: This table presents the estimates of the relationship between federal fiscal aid received by states and changes in their Medicaid and CHIP enrollment per capita. The outcome in columns 2 to 4 is the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. The outcome in columns 5 to 7 is the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. The outcome in columns 8 to 10 is the ratio of the outcome in columns 5 to 7 to the outcome in columns 2 to 4. Column 1 presents the first stage relationship from equation 3 between the instrument, the state's congressional representatives per million residents, and the independent variable of interest namely federal aid per capita. Columns 4, 7 and 10 present the reduced form relationship between the instrument and the outcome directly. Columns 3, 6 and 9 present the final IV 2SLS estimates from equation 4 of the relationship between fiscal aid and medicaid enrollment change. Columns 2, 5 and 8 provide the relationship between fiscal aid and enrollment using equation 1, without using an instrumental variables strategy. The fiscal aid and congressional representation variables as well as the outcomes are further described and summarized in Table 1.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

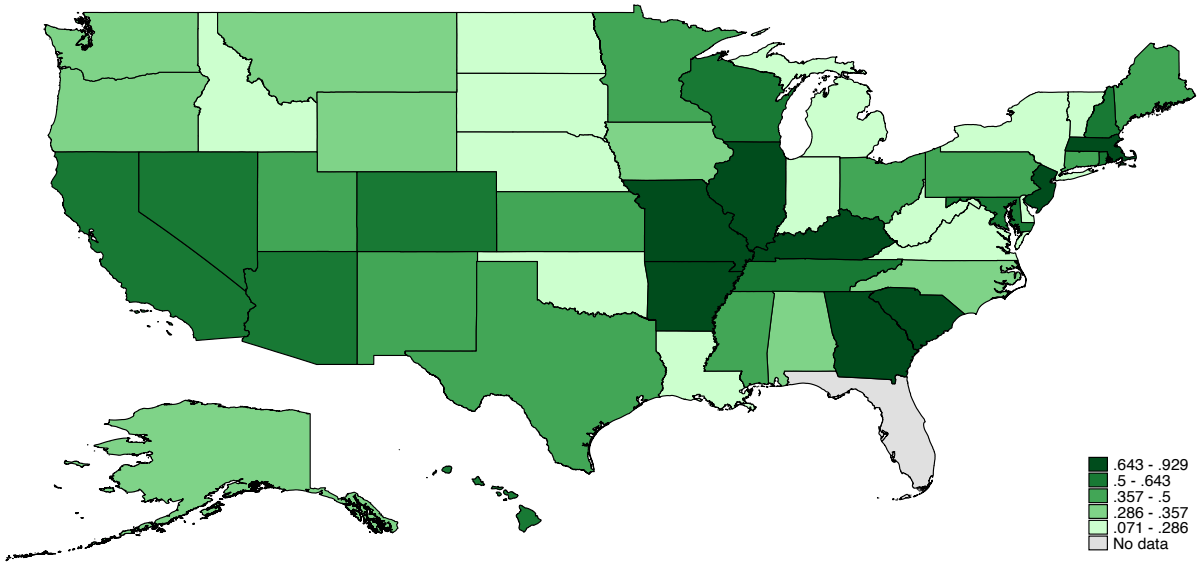
Table 8: The Relationship Between Overall Unwinding Policy Generosity, Medicaid Expansion Status, 2016 Trump Vote Share and Federal Aid and Medicaid Enrollment Change

	(1)	(2)	('3)
	Change in Medicaid Enrollment Per Capita		Ratio of Change in
	Feb. 2020 to Mar. 2023	Mar. 2023 to Sep. 2024	Medicaid Enrollment
Policy Index	-0.008	-0.023	-0.521*
	(0.018)	(0.019)	(0.295)
Medicaid Ever	0.020***	-0.007	0.154
Expanded	(0.006)	(0.006)	(0.111)
Trump Vote	0.018	-0.070*	-0.771
Share	(0.037)	(0.037)	(0.512)
Congressional Reps	-0.005	0.002	-0.020
(Per Million)	(0.003)	(0.004)	(0.064)
Population	0.000	0.000	0.000
Density	(0.000)	(0.000)	(0.000)
Observations	49	49	49
Mean Dep. Var.	0.066	-0.048	-0.734
R-sq	0.198	0.095	0.140
Adj. R-sq	0.105	-0.010	0.040

Notes: This table presents the estimates from equation 1 of the relationship between renewal and outreach policies during the unwinding phase, Medicaid expansion status, the 2016 Trump vote share and congressional representation, and Medicaid enrollment changes. We utilize the state's population density, a proxy for the severity of the pandemic, as a control variable. Column 1 shows the relationship between the variables and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Column 2 shows the relationship between the variables and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the variables and the ratio of the outcome in column 2 to the outcome in column 1. All explanatory variables and outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Appendix A: Figures

Figure A.1: Cross-State Variation in the KFF Outreach and Ex Parte Renewal Policy Index



Notes: This map presents the index score for the generosity of policies adopted by states during the unwinding of continuous coverage. The policy index aggregates across all explanatory variables from Tables 2 and 3 such that a value closer to 1 denotes a larger share of unwinding policies adopted and a value closer to 0 denotes a smaller share of unwinding policies adopted. Estimates from equation 1 of the relationship between this index and changes in Medicaid and CHIP enrollment per capita can be found in Table 4. For summary statistics on generosity variables, see Table 1. Appendix Table B.1 provides a complete listing of the state-level values for the generosity indicators used to construct the composite index. Medicaid generosity variables are obtained from KFF (2024*b*).

Appendix B: Tables

Table B.1: KFF Renewal Policy Variables by State (Part A)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Renewal Notice Sent Early	Increased Outreach	Extended Response Time	Contact Information	Account Function.	Simplified Form	Increased Transl.
Alabama	1	1	0	0	0	0	0
Alaska	0	0	0	1	1	0	0
Arizona	1	1	0	1	1	0	0
Arkansas	1	1	0	1	1	1	1
California	1	1	0	1	0	0	0
Colorado	1	1	0	0	1	1	0
Connecticut	1	1	0	0	0	0	0
Delaware	0	1	0	0	0	0	0
Dist. of Columbia	1	1	0	0	1	0	0
Florida	NR	NR	NR	NR	NR	NR	NR
Georgia	0	1	1	1	1	0	0
Hawaii	0	1	0	1	1	1	1
Idaho	1	1	0	0	0	1	0
Illinois	1	1	0	1	1	1	0
Indiana	0	0	0	0	1	0	0
Iowa	1	1	0	1	0	0	0
Kansas	0	1	1	1	1	0	0
Kentucky	0	1	1	1	1	0	0
Louisiana	1	1	0	0	0	0	0
Maine	0	1	0	0	1	1	0
Maryland	1	1	1	1	0	0	0
Massachusetts	1	1	1	1	1	1	1
Michigan	1	0	0	0	0	0	0
Minnesota	1	1	0	1	0	0	0
Mississippi	1	1	0	1	1	0	0
Missouri	1	1	0	1	1	0	0
Montana	1	0	0	1	0	0	0
Nebraska	0	0	0	0	0	0	0
Nevada	1	0	0	1	1	1	0
New Hampshire	1	1	0	1	1	0	0
New Jersey	1	1	1	1	1	1	0
New Mexico	0	1	0	1	1	0	0
New York	1	0	0	0	0	0	0
North Carolina	NR	1	0	0	0	0	0
North Dakota	0	0	0	0	0	0	0
Ohio	1	1	0	1	0	0	0
Oklahoma	0	0	0	0	0	0	0
Oregon	1	0	0	0	0	1	0

Notes: Continued on next page.

Table B.1: KFF Renewal Policy Variables by State (Part A)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Renewal Notice Sent Early	Increased Outreach	Extended Response Time	Contact Information	Account Function.	Simplified Form	Increased Transl.
Pennsylvania	1	1	0	0	0	0	1
Rhode Island	1	1	0	1	1	0	0
South Carolina	1	1	1	1	1	0	0
South Dakota	0	0	0	1	1	0	0
Tennessee	0	1	0	0	1	0	0
Texas	1	0	0	1	1	0	0
Utah	1	1	0	0	1	0	0
Vermont	0	1	0	0	0	0	0
Virginia	1	0	0	0	0	0	0
Washington	1	1	0	1	0	0	0
West Virginia	0	1	0	0	0	0	0
Wisconsin	0	1	0	1	1	0	0
Wyoming	1	1	0	0	0	0	0

Notes: 1 = policy adopted; 0 = not adopted; NR = not reported by state. Table B.1 (Part A) variables comprise 7 of the 14 state Medicaid renewal policy dummies used to construct composite generosity index. See Table 4 for composite regression results and Tables 2, 3 for results from regressing on individual correlates. Column key: (1) *Renewal Notice Sent Early* = State sends renewal notices at least 46 (and up to 90) days before the end of the eligibility period; (2) *Increased Outreach* = State increased outreach to enrollees about renewals; (3) *Extended Response Time* = State extended renewal response time; (4) *Contact Information* = State provided enrollees with new ways to update contact information; (5) *Account Functionality* = State enhanced online account functionality; (6) *Simplified Form* = State simplified renewal forms; (7) *Increased Translations* = State increased translations of renewal notices and/or forms. For summary statistics on dummy variables, see Table 1.

Table B.1: KFF Renewal Policy Variables by State (Part B)

	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Engaged CBOs	Engaged MCOs	Adopted Waiver	Improved Rules	Expanded Data Sources	Data Source Hierarchy	Revised Data Age Limit
Alabama	1	1	1	0	0	0	0
Alaska	0	0	1	1	1	0	0
Arizona	1	1	1	1	0	0	0
Arkansas	1	1	1	1	1	1	1
California	1	1	1	1	1	0	0
Colorado	0	0	1	1	1	1	1
Connecticut	0	1	1	1	1	1	0
Delaware	0	0	1	1	0	0	0
District of Columbia	1	1	1	1	0	0	0
Florida	NR	NR	NR	NR	NR	NR	NR
Georgia	1	1	1	1	1	1	1
Hawaii	0	1	1	1	1	0	0
Idaho	0	0	0	0	0	0	0
Illinois	1	1	1	1	1	1	1
Indiana	1	0	1	1	0	0	0
Iowa	1	0	0	1	0	0	0
Kansas	1	0	1	0	0	0	0
Kentucky	1	1	1	1	1	0	1
Louisiana	1	0	1	0	0	0	0
Maine	0	0	1	1	1	0	0
Maryland	1	1	1	1	1	0	0
Massachusetts	1	1	1	1	0	0	0
Michigan	0	0	1	1	1	0	0
Minnesota	1	0	1	1	0	1	0
Mississippi	0	0	1	0	1	0	0
Missouri	1	1	1	1	1	1	0
Montana	0	0	1	1	1	0	0
Nebraska	0	0	1	0	0	0	0
Nevada	0	0	0	1	1	1	1
New Hampshire	1	1	1	1	0	0	0
New Jersey	1	1	1	1	1	0	0
New Mexico	1	0	1	1	0	0	0
New York	0	0	1	1	0	0	0
North Carolina	0	1	1	1	0	0	0
North Dakota	1	1	1	1	0	0	0
Ohio	1	1	1	1	0	0	0
Oklahoma	0	0	0	1	0	0	0
Oregon	0	0	1	1	0	0	1

Notes: Continued on next page.

Table B.1: KFF Renewal Policy Variables by State (Part B)

	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Engaged CBOs	Engaged MCOs	Adopted Waiver	Improved Rules	Expanded Data Sources	Data Source Hierarchy	Revised Data Age Limit
Pennsylvania	1	1	1	0	0	0	0
Rhode Island	1	1	1	1	1	0	0
South Carolina	1	1	1	1	1	0	0
South Dakota	0	0	0	0	0	0	0
Tennessee	1	1	1	1	1	0	1
Texas	1	1	1	0	0	0	1
Utah	1	1	1	1	0	0	0
Vermont	0	0	1	0	1	1	0
Virginia	1	0	1	1	0	0	0
Washington	1	1	0	0	0	0	0
West Virginia	1	0	0	1	0	1	0
Wisconsin	1	1	1	1	0	1	0
Wyoming	0	0	0	1	1	1	0

Notes: 1 = policy adopted; 0 = not adopted; NR = not reported by state. Table B.1 (Part B) variables comprise 7 of the 14 state Medicaid renewal policy dummies used to construct composite generosity index. See Table 4 for composite regression results and Tables 2, 3 for results from regressing on individual correlates. Column key: (1) *Engaged CBOs* = State engaged CBOs in renewal process; (2) *Engaged MCOs* = State engaged MCOs in renewal process; (3) *Adopted Waiver* = State adopted Section 1902(e)(14)(A) waiver flexibilities to increase ex parte renewal rates; (4) *Improved Rules* = State improved system rules to conduct ex parte renewals; (5) *Expanded Data Sources* = State expanded the number of data sources used in ex parte renewals; (6) *Data Source Hierarchy* = State changed the hierarchy of data sources used in ex parte renewals; (7) *Revised Data Age Limit* = State revised the limits on the age of data used in ex parte renewals. For summary statistics on dummy variables, see Table 1.

Table B.2: The Relationship Between Outreach and Ex Parte Renewal Procedures and Medicaid Enrollment Change

	(1)	(2)	(3)
	Change in Medicaid Enrollment Per Capita		Ratio of Change in
	Feb. 2020 to Mar. 2023	Mar. 2023 to Sep. 2024	Medicaid Enrollment
Renewal Notice Sent Early	-0.006	-0.010	-0.227**
	(0.007)	(0.007)	(0.101)
Increased Outreach	-0.007	-0.013	-0.249*
	(0.009)	(0.008)	(0.139)
Extended Renewal	-0.011	0.001	-0.095
Response Time	(0.007)	(0.008)	(0.142)
New Ways to Update	-0.001	0.005	0.093
Contact Information	(0.007)	(0.009)	(0.131)
Enhanced Online	-0.005	-0.001	-0.070
Account Functionality	(0.007)	(0.008)	(0.141)
Simplified Renewal Forms	0.010	0.011	0.255
	(0.008)	(0.012)	(0.186)
Increased Translations	0.007	-0.019	-0.207
on Renewal Forms	(0.008)	(0.013)	(0.184)
CBOs Engaged in Outreach	0.005	-0.003	0.000
	(0.011)	(0.011)	(0.144)
MCOs Engaged in Outreach	-0.007	0.014	0.115
	(0.009)	(0.008)	(0.108)
Adopted Waiver Flexibilities	-0.001	0.009	0.113
	(0.013)	(0.012)	(0.130)
Improved System Rules	0.011	-0.004	0.033
	(0.008)	(0.007)	(0.095)
Expanded Number of	0.001	0.000	0.002
Data Sources	(0.007)	(0.009)	(0.143)
Changed Data Source Hierarchy	-0.001	0.004	0.091
	(0.009)	(0.007)	(0.117)
Revised Limits on Age of Data	-0.00182	-0.0185*	-0.324*
	(0.010)	(0.009)	(0.167)
Observations	49	49	49
Mean Dep. Var.	0.066	-0.048	-0.734
R-sq	0.223	0.215	0.281
Adj. R-sq	-0.097	-0.109	-0.015

Notes: This table presents the estimates from equation 1 of the relationship between states' outreach and ex parte renewal procedures during the unwinding of continuous coverage, and changes in their Medicaid and CHIP enrollment per capita. Column 1 shows the relationship between the variables and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Column 2 shows the relationship between the variables and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the variables and the ratio of the outcome in column 2 to the outcome in column 1. All explanatory variables and outcomes are categorical (0/1), and are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.3: The Relationship Between Overall Unwinding Policy Generosity, Baseline Medicaid Generosity, 2016 Trump Vote Share and Federal Aid and Medicaid Enrollment Change

	(1)	(2)	(3)	(4)	(5)	(6)
	Change in Medicaid Enrollment Per Capita				Ratio of Change in	
	Feb. 2020 to Mar. 2023		Mar. 2023 to Sep. 2024		Medicaid Enrollment	
Policy Index	-0.011	-0.008	-0.021	-0.023	-0.541*	-0.522*
	(0.018)	(0.018)	(0.020)	(0.020)	(0.295)	(0.299)
Income Limit (Adults With) Children)	0.017***	-0.006	-0.005	0.009	0.148	0.020
	(0.006)	(0.013)	(0.006)	(0.007)	(0.103)	(0.229)
Medicaid Ever Expanded		0.025*		-0.015*		0.136
		(0.013)		(0.008)		(0.246)
Trump Vote Share	0.012	0.018	-0.067*	-0.070*	-0.802	-0.771
	(0.038)	(0.037)	(0.037)	(0.037)	(0.510)	(0.518)
Congressional Reps (Per Million)	-0.005	-0.005	0.002	0.002	-0.020	-0.020
	(0.003)	(0.003)	(0.004)	(0.004)	(0.064)	(0.065)
Population Density	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	49	49	49	49	49	49
Mean Dep. Var.	0.066	0.066	-0.048	-0.048	-0.734	-0.734
R-sq	0.166	0.200	0.090	0.098	0.137	0.140
Adj. R-sq	0.069	0.086	-0.016	-0.031	0.037	0.017

Notes: This table presents the estimates from equation 1 of the relationship between renewal and outreach policies during the unwinding phase, baseline Medicaid generosity (measured by both the income limit for adults with children and by the state's Medicaid expansion status), the 2016 Trump vote share and congressional representation, and Medicaid enrollment changes. We utilize the state's population density, a proxy for the severity of the pandemic, as a control variable. Columns 1-2 show the relationship between the variables and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Columns 3-4 show the relationship between the variables and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Columns 5-6 show the relationship between the variables and the ratio of the two prior outcomes. All explanatory variables and outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.4: The Relationship Between Congressional Representation and State Characteristics

Panel A

	(1) Trump Vote Share (2016)	(2) Population Density (2019)	(3) Pop. Share Above 65 (2019)	(4) Resource or Tourism Intensive State Industry	(5) Pre-pandemic Medicaid Expansion	(6) Medicaid Enrollment Per Capita (2019)	(7) State Income Per Capita (2019)	(8) State Unemployment Rate (2019)	(9) Medicaid Overall Generosity (2020)
Congressional Reps (Per Million Residents)	0.015 (0.022)	-44.550 (43.170)	0.005 (0.004)	0.161** (0.069)	0.028 (0.083)	-0.006 (0.012)	657.300 (919.900)	-0.110 (0.166)	-0.009 (0.015)
Observations	50	50	50	50	50	50	50	50	50
Mean Dep. Var.	0.483	425.938	0.169	0.118	0.706	0.211	54,052	3.571	0.551
R-sq	0.018	0.022	0.044	0.194	0.003	0.010	0.006	0.016	0.006

Panel B

	(1) Pop. Share Above 65 (2019)	(2) Resource or Tourism Intensive State Industry	(3) Pre-pandemic Medicaid Expansion	(4) Medicaid Enrollment Per Capita (2019)	(5) State Income Per Capita (2019)	(6) State Unemployment Rate (2019)	(7) Medicaid Overall Generosity (2020)
Congressional Reps (Per Million Residents)	0.005 (0.004)	0.159** (0.071)	0.062 (0.065)	-0.004 (0.010)	164 (1,411)	-0.124 (0.163)	0.002 (0.009)
Trump Vote Share (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Population Density (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50	50	50	50	50	50	50
Mean Dep. Var.	0.169	0.118	0.706	0.211	54,052	3.571	0.551
R-sq	0.063	0.198	0.249	0.090	0.454	0.028	0.370

Notes: This table presents estimates of the relationship between a state's congressional representatives per million residents—the instrumental variable used in our analysis in Table 7—and baseline state characteristics that may independently drive changes in enrollment through channels other than the amount of fiscal aid received. In Panel A, the estimates reflect the bivariate relationship between the instrument and each state characteristic, with heteroskedasticity-robust standard errors. Columns 1 and 2 use the state's vote share for Trump in the 2016 presidential election, a proxy for political preferences, and its 2019 population density, a proxy for susceptibility to the health effects of the pandemic, as the outcomes. In Panel B, these two variables are included as controls in each regression. The outcome in column 3 is the share of the state's population age 65 or older in 2019. Column 4 uses an indicator for whether the state had a resource- or tourism-intensive industry base. Column 5 uses an indicator for whether the state enacted a Medicaid expansion prior to March 2020. Column 6 uses state Medicaid enrollment per capita in 2019. Column 7 uses state income per capita in 2019. Column 8 uses the state unemployment rate, and column 9 uses an index capturing baseline levels of overall Medicaid generosity. Data sources for these variables are described in Section 2.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.5: The Relationship Between Federal Fiscal Aid and Medicaid Enrollment Change (Excluding States with Resource or Tourism Heavy Industry)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Federal Aid	Change in Medicaid Enrollment Per Capita						Ratio of Change in		
	Per Capita	Feb. 2020 to Mar. 2023			Mar. 2023 to Sep. 2024			Medicaid Enrollment		
	(USD thousands)	OLS	IV 2SLS	Red. Form	OLS	IV 2SLS	Red. Form	OLS	IV 2SLS	Red. Form
Federal Aid Per Capita		-0.001	-0.003		-0.001	-0.002		-0.003	-0.047	
(USD Thousands)		(0.004)	(0.004)		(0.004)	(0.006)		(0.069)	(0.097)	
Congressional Reps	0.834***			-0.003			-0.002			-0.039
(Per Million Residents)	(0.121)			(0.003)			(0.005)			(0.081)
Observations	44	44	44	44	44	44	44	44	44	44
First Stage F-Stat	47.4									
Mean Dep. Var.	2.673	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.746	-0.746	-0.746
R-sq	0.664	0.003		0.01	0.001		0.002	0		0.005

Notes: This table presents the estimates of the relationship between federal fiscal aid received by states and changes in their Medicaid and CHIP enrollment per capita. The outcome in columns 2 to 4 is the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. The outcome in columns 5 to 7 is the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. The outcome in columns 8 to 10 is the ratio of the outcome in columns 5 to 7 to the outcome in columns 2 to 4. Column 1 presents the first stage relationship from equation 3 between the instrument, the state's congressional representatives per million residents, and the independent variable of interest namely federal aid per capita. Columns 4, 7 and 10 present the reduced form relationship between the instrument and the outcome directly. Columns 3, 6 and 9 present the final IV 2SLS estimates from equation 4 of the relationship between fiscal aid and medicaid enrollment change. Columns 2, 5 and 8 provide the relationship between fiscal aid and enrollment using equation 1, without using an instrumental variables strategy. The sample excludes states with resource-intensive industrial bases (Alaska, North Dakota, and Wyoming) and tourism-intensive economies (Hawaii, Nevada, and Florida), as these states were disproportionately affected by the economic disruption of the early pandemic period. In some regressions, the R-sq is negative, and therefore unreported. The fiscal aid and congressional representation variables as well as the outcomes are further described and summarized in Table 1.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.6: The Relationship Between Federal Fiscal Aid and Medicaid Enrollment Change (With Trump Vote Share and Population Density Covariates)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Federal Aid	Change in Medicaid Enrollment Per Capita						Ratio of Change in		
	Per Capita	Feb. 2020 to Mar. 2023			Mar. 2023 to Sep. 2024			Medicaid Enrollment		
	(USD thousands)	OLS	IV 2SLS	Red. Form	OLS	IV 2SLS	Red. Form	OLS	IV 2SLS	Red. Form
Federal Aid Per Capita		-0.002	-0.004		0.002	0.003		0.029	0.020	
(USD Thousands)		(0.002)	(0.002)		(0.003)	(0.004)		(0.052)	(0.057)	
Congressional Reps	0.982***			-0.003			0.003			0.020
(Per Million Residents)	(0.075)			(0.002)			(0.004)			(0.056)
Trump Vote Share	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Population Density	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	50	50	50	50	50	50	50	50	50	50
First Stage F-Stat	169.4									
Mean Dep. Var.	2.828	0.066	0.066	0.066	-0.048	-0.048	-0.048	-0.734	-0.734	-0.734
R-sq	0.807	0.013	0.011	0.021	0.013	0.013	0.007	0.007	0.004	0.001

Notes: This table presents the estimates of the relationship between federal fiscal aid received by states and changes in their Medicaid and CHIP enrollment per capita. The outcome in columns 2 to 4 is the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. The outcome in columns 5 to 7 is the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. The outcome in columns 8 to 10 is the ratio of the outcome in columns 5 to 7 to the outcome in columns 2 to 4. Column 1 presents the first stage relationship from equation 3 between the instrument, the state's congressional representatives per million residents, and the independent variable of interest namely federal aid per capita. Columns 4, 7 and 10 present the reduced form relationship between the instrument and the outcome directly. Columns 3, 6 and 9 present the final IV 2SLS estimates from equation 4 of the relationship between fiscal aid and medicaid enrollment change. Columns 2, 5 and 8 provide the relationship between fiscal aid and enrollment using equation 1, without using an instrumental variables strategy. All specifications include covariates for the state's vote share for Donald Trump in the 2016 presidential election, and its 2019 population density. The fiscal aid and congressional representation variables as well as the outcomes are further described and summarized in Table 1.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.7: The Relationship Between Overall Unwinding Policy Generosity, Baseline Medicaid Generosity, 2016 Trump Vote Share and Federal Aid and Medicaid Enrollment Change (Excluding States Expanding Medicaid During the Pandemic)

	(1)	(2)	('3)
	Change in Medicaid Enrollment Per Capita		Ratio of Change in
	Feb. 2020 to Mar. 2023	Mar. 2023 to Sep. 2024	Medicaid Enrollment
Policy Index	-0.006	-0.014	-0.264
	(0.011)	(0.015)	(0.235)
Medicaid Expanded	0.016***	-0.013**	0.036
Before Feb. 2020	(0.005)	(0.006)	(0.103)
Trump Vote	-0.011	-0.087**	-1.303**
Share	(0.028)	(0.035)	(0.542)
Congressional Reps	-0.003	0.003	0.024
(Per Million)	(0.002)	(0.004)	(0.055)
Population	0.000	0.000	0.000
Density	(0.000)	(0.000)	(0.000)
Observations	44	44	44
Mean	0.066	-0.048	-0.734
R-sq	0.257	0.202	0.212

Notes: This table presents the estimates from equation 1 of the relationship between renewal and outreach policies during the unwinding phase, Medicaid expansion status, the 2016 Trump vote share and congressional representation, and Medicaid enrollment changes. We exclude states that enacted a Medicaid expansion after February 2020. We utilize the state's population density, a proxy for the severity of the pandemic, as a control variable. Column 1 shows the relationship between the variables and the difference between the state's enrollment per capita in March 2024, when the continuous coverage provision ended, and the state's enrollment per capita in February 2020, when the continuous coverage provision was enacted. Column 2 shows the relationship between the variables and the difference between the state's enrollment per capita in September 2024, the latest month in our data, and the state's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the variables and the ratio of the outcome in column 2 to the outcome in column 1. All explanatory variables and outcomes are further described and summarized in Table 1.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$