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Understanding Cross-State Variations in Medicaid Enrollment During and After the COVID-19 Pandemic

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Abstract

Due to the implementation and unwinding of a "continuous coverage requirement", the COVID-19 pandemic gave rise to the most dramatic changes in Medicaid enrollments in the program's history. Nationwide, enrollments rose by 23 million individuals from February 2020 through March 2023, then declined by roughly 15 million by late 2024. Notably, changes in per capita enrollments varied dramatically across the country, with several states experiencing net declines and several states seeing their enrollments rise, on net, by more than 5 percent of their populations. Through a mix of descriptive and causal analyses, we explore several hypotheses regarding the possible causes of these variations. We find that a wide range of provisions designed to ease the frictions of the continuous coverage provision's winding down have surprisingly little predictive power. Similarly, we find that variations 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. Finally, states that enacted Medicaid expansions during the pandemic experienced relatively large net gains in enrollments. The baseline generosity of states' eligibility thresholds also predicts relatively large run-ups and net increases in enrollments.

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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).

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.

¹Our 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.

²As 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.

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 causes 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 test for the relevance of four hypotheses that have potential to at least partially explain cross-state variations in per capita Medicaid enrollments during this period. The first hypothesis 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 hypothesis we explore involves states' baseline Medicaid program generosity. We measure program generosity by states' income eligibility limits for adults, and relatedly by whether a state has enacted an ACA Medicaid expansion. We explore states' baseline political preferences as a third hypothesis, distinguishing between states where Donald Trump received higher versus lower vote shares in the 2016 presidential election. As a final hypothesis, we explore the amount of federal fiscal aid disbursed to states and local governments. 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. Taken together, we thus 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.

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 variations in federal aid to state and local governments have 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 states that enacted Medicaid expansions during the pandemic experienced relatively large net gains in enrollments; the baseline generosity of states' eligibility thresholds also predict relatively large run-ups and net increases in enrollments. In combination, however, 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 Kaiser Family Foundation (2024c). 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 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.

 $^{^{3}}$ 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.

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 Kaiser Family Foundation (2024*b*), hereafter KFF.⁵ 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.

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).

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 states' eligibility rules at baseline. The data relevant to this second hypothesis come from two sources. Kaiser Family Foundation (2024*b*) provides income eligibility limits separately for parents and adults

⁵Specifically we employ data from Tables 17, 21 and 23 from the Kaiser Family Foundation (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.

without children.⁶ 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 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 categorize states into three groups - 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.

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 the vote share 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

⁶See Table 5 in Kaiser Family Foundation (2024b).

2021 American Rescue Plan Act (ARPA). We divide the total aid allocated to a state by the state's 2020 population to construct aid per capita.

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). 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 of our analyses include an additional covariate that proxies for variations in each state's susceptibility to the pandemic's potential spread. In particular, we include a measure of population density in the period just prior to the pandemic. We construct this measure using the 2019 state population numbers from the U.S. Census Bureau (2021) and the state's land area in square miles in 2020 from the U.S. Census Gazetteer Files (U.S. Census Bureau 2020).

3 Methods

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

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

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 2023.⁷ 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.

Additionally, we estimate the following event-study regression:

Medicaid Enrollment_{s,t} =
$$\phi_s + \phi_t + \sum_{t \neq 2019} \rho_t X_s \times \text{Time}_t + \epsilon_{s,t}$$
 (2)

where 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 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

⁷To construct enrollment per capita, we divide total enrollment by the state's population in the calendar year.

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.⁸

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 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

⁸To avoid excessive clutter, the figures that present these estimates do not include the event-study coefficients associated with periods prior to March 2023.

or representative per million residents predicts roughly \$1,000 dollars in additional aid per capita. 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:

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

$$Y_s = \beta_0 + \beta_1 \frac{\text{Total } \widetilde{\text{Aid}}_s}{\text{Pop}_s} + u_s.$$
(4)

As before, Y_s represents a Medicaid enrollment outcome of interest, 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 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. This assumption has been discussed at length in prior work, which has found the instrument to be uncorrelated with a host of potential confounders including pre-pandemic economic trends, the baseline size of states' public sectors, forecasts of states' revenue shocks, population density, political partisanship, chronic disease prevalence and all-cause mortality.

The second requirement is that congressional representation must be a strong, or relevant, predictor of the amount of aid each state received per resident. This fact has also been established in prior work. Here, we note that 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.

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 hypothesis in isolation. Section 4.5 concludes with an analysis of all four hypotheses simultaneously.

4.1 Medicaid Outreach and Renewal Provisions

Beginning March 2023, the unwinding of the continuous coverage requirement confronted state Medicaid agencies faced with unprecedented administrative burden. Upon the completion of a sustained period of low enrollment churn, states were faced with the substantial requirement of restoring enrollment as per pre-pandemic eligibility standards. Alongside this requirement came the policy goal of limiting the extent to which genuinely eligible individuals lost coverage for procedural reasons such as a failure to return renewal forms on time. The potential magnitude of this challenge was captured by an HHS projection that nearly 6.8 million eligible individuals would experience undue loss of coverage 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 on which we focus includes increased enrollee outreach,⁹ 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

⁹For example, sending text message reminders.

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 (Kaiser Family Foundation 2023*a*) or allowing community organizations access to renewal determination portals to assist enrollees in managing coverage (Kaiser Family Foundation 2024*b*). Each of these policies were newly adopted by states during the continuous coverage requirement's 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.¹⁰ During the unwinding phase, states implemented a number of measures to facilitate ex parte renewals. These include adopting 1902(e)(14)(A) Waivers,¹¹ improving system rules, expanding the set of data sources used in eligibility determination, changing the hierarchy 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 hypotheses for these variables relate to the unwinding phase and to the ratio of the changes in enrollment during the unwinding phase relative to the period during which the continuous coverage provision was in place.

¹⁰Greater burdens for enrollees have historically been associated with lower Medicaid enrollment (Fox, Stazyk, and Feng 2020).

¹¹Waivers 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.

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. The conclusions from Table 3 are similar; states' measures for improving ex parte renewal rates have no predictive power.

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 thus important to emphasize that the analysis of Buettgens et al. (2024) concluded with enrollment data from November 2023. We note further that the event study analyses we present in Figures 4 and 5, which track enrollment changes at a monthly frequency, are consistent with the findings of Buettgens et al. (2024) through November 2023. Specifically, we see some evidence, of varying degrees of strength, that states with more generous provisions had lower rates of disenrollment during the unwinding's initial months. By September 2024, however, none of the provisions are associated with statistically significant differentials in coverage, 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 (ex. 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, again, 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 a mere 1.1 percent of the cross-state variation in changes in per capita Medicaid enrollments.

The analyses above do not allow us to conclusively determine whether the outreach and renewal policies that states adopted had causal impacts on their Medicaid enrollment trajectories during the unwinding of continuous coverage since states' degree of enterprise in their adoption of these policies could be correlated with other factors affecting enrollment. However, we take away from these results a striking conclusion that policies that were exante projected and initially thought to have meaningful implications for enrollment paths did not ultimately hold predictive power in describing enrollment outcomes.¹² Indeed, by the conclusion of the unwinding period, net enrollments had, if anything, fallen more in states that adopted more provisions that were 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 facets of states' Medicaid programs that were independent of policy changes during the pandemic - the income eligibility limit for adults with children as a percentage of the federal poverty level (FPL), the income eligibility limit for adults without children as a percentage of the FPL and an indicator for each state's ACA Medicaid expansion status.¹³ Within Medicaid expansion status, we consider whether the state expanded Medicaid prior to February 2020 before the continuous coverage provision was enacted, whether the state expanded Medicaid at all.

The net implications of Medicaid expansion status and enrollment generosity for the evolution of enrollment under the continuous coverage provision are a priori ambiguous.

 $^{^{12}}$ See, for example, (Kaiser Family Foundation 2023*b*; The Commonwealth Fund 2024; Kaiser Family Foundation 2024*a*; Buettgens et al. 2024).

 $^{^{13}}$ The income eligibility limits for adults without children is 0% of the FPL in states that did not cover this population.

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 low eligibility thresholds tend to be sufficiently low as to render it very difficult to maintain eligibility while maintaining employment. To the extent that such factors predict churn, they will also tend to predict the magnitude of the continuous coverage provision's impact since the continuous coverage provision shut down churn. Separately, states with varying generosity in their eligibility thresholds might also vary with respect to the quality of their administrative systems, such that enrollment and renewals are more or less streamlined. 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).

Our hypotheses regarding the effect of baseline Medicaid generosity arise from our examination of national trends in Medicaid enrollment by Medicaid expansion status. These trends are depicted in Figure 3, which suggests that states with ACA Medicaid expansions experienced both larger gains in enrollment while the continuous coverage provision was in place and smaller declines when the provision was unwound, relative to states where Medicaid never expanded. Our regression analyses thus assess the statistical strength of the relationship between enrollment changes and Medicaid expansions status or, separately, the income limits for adults with and without children.

The results of this set of analyses appear in Table 5 and Figure 7. Columns 1 and 2 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 3 shows that Medicaid expansion states experienced larger enrollment gains during this initial February 2020 to March 2023 period. Columns 4 and 5 divide the expansion states into those that had expanded during the pandemic and those that expanded prior to the pandemic. The point estimate is larger for those that expanded during the pandemic, though it is estimated with less precision due to the small number of states in this group. Columns 6 through 10 reveal, perhaps surprisingly, that neither Medicaid expansion status nor income eligibility limits predict the magnitude of enrollment declines during the unwinding of the continuous coverage provision. Finally, columns 11 through 15 show that having a more generous Medicaid program predicts smaller reversals of enrollment increases during the unwinding period. This appears to be driven primarily by the sizably larger rate of enrollment increases rather than smaller rates of enrollment decreases. These patterns are broadly confirmed by the event study estimates reported in Figure 7.

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 8, 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 8 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 the net effect would result in larger reversals of enrollment increases, manifesting in a negative coefficient on the ratio of changes during the unwinding to changes during the provision.

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.

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 of the hypotheses 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. The multivariate analysis in Table 8 bolsters our earlier analyses; no variable other than Medicaid expansion status plays a role in predicting Medicaid enrollment changes. 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.

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 explanatory power of several candidate hypotheses that might plausibly underlie the cross-state variations that unfolded 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 itself, 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 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, state policy makers may have had less control over 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 the KFF (Kaiser Family Foundation 2024c). Data for January 2018 to September 2024 are from the CHIP Eligibility Operations and Enrollment Snapshots (Centers for Medicaie & 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 5: 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 6: 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 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 7: The Relationship Between Baseline Medicaid Generosity 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. Each panel corresponds to a different aspect of the state's baseline Medicaid program. 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 (ex. 1.38 if the income limit is 138% of the FPL). The variables in panels C, D and E are categorical (0/1). The data underlying the estimates in panel C 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 D 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 E 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.





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 9: 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.

Variable	Dummy Var. (0 or 1)	Mean	SD	Min	Max	Obs	Description
Monthly Medicaid Enrollment Per Capita	No	0.23	0.07	0.09	0.43	6,564	Total Medicaid and CHIP enrollees in the state $/$ State population
Jan. 2014 to Sep. 2024) 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	No	0.07	0.02	0.04	0.15	51	
Change in Error of Mail: 2020 Change in Enrollment Per Capita from Mar 2073 to Sen 20124	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		50	State provided enrollees with new ways to update contact information
Enhanced Online Account Functionality Simulified Dominol Forms	Yes	0.52	0.50	0 0		20 20	State enhanced online account functionality
Jurreased Translations on Renewal Forms	Ves	0.2.0	0.40 0.97			20	State increased translations of renewal notices and for forms
CBOs Engaged in Outreach	Yes	0.62	0.49	0	- 	20	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	$\mathbf{Y}_{\mathbf{es}}$	0.78	0.42	0	1	50	State improved system rules to conduct ex parte renewals
Expanded Number of Data Sources	${ m Yes}_{ m voc}$	0.44	0.50	0 0		50	State expanded the number of data sources used in ex parte renewals State channed the himmedur of data sources used in or marke monumly
Changed Data Source Instancity Revised Limits on Age of Data	Yes	0.18	0.39	0 0		50	State changed the limits on the age of data used in ex parte renewals 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
Medicaid Income Eligibility Limit for Parents Medicaid Income Filgibility Limit for	No	1.22	0.42	0.15	2.21 2.15	51 71	(% FPL / 100)
Adults Without Children	0)			$(\% \ {\rm FPL} \ / \ 100)$
Medicaid Expanded Before Feb. 2020 Medicaid Expanded After Mar. 2020	$_{ m Yes}^{ m Yes}$	$0.71 \\ 0.10$		0 0		36 5	
Medicaid Never Expanded	Yes	0.20		0	1	10	
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) \times 1,000,000
Fiscal Aid Per Capita (Thousands of \$)	No	2.83 195.01	0.94 1615 74	1.80 1.28	5.93 11586 77	50	(Total state fiscal aid / 2020 state population) / 1,000 Total state monulation in 2010 / Land area in so miles in 2020
		10.041	EI OTOT			7	דחנמו פומות החהות ווו בחדם / המווח מיכמ ווו היהיה זוו בייביי

 Table 1: Summary Statistics

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

Renewal Notice Sent Early -0.005 Increased Outreach (0.007) Extended Netwal Response Time (0.008) Extended Renewal Response Time (0.005) Observations 49 50 Observations 0.066 0.066 Mean Dep. Var. 0.015 0.061 0.046 R-sq 0.015 0.015 0.046 R-sq 0.015 0.011 0.046	-0.007 (0.006)			-0.176^{*} (0.090)		
Increased Outreach -0.011 Extended Renewal Response Time (0.008) Extended Renewal Response Time (0.005) Observations 49 50 50 Mean Dep. Var. 0.015 0.066 0.066 R-sq (10) (11) (12)				(0000)		
Extended Renewal Response Time -0.012^{*+} (0.005) Observations 49 50 50 Mean Dep. Var. 0.066 0.066 0.066 R-sq (10) (11) (12) Change in Medicaid		-0.004 (0.008)			-0.147 (0.122)	
	*: ($\begin{array}{c} 0.001 \\ (0.006) \end{array}$			-0.134 (0.107)
(10) (11) (12) (12) (12) (12) (12) (12) (12	49 -0.048 0.032	50 -0.048 0.005	50 -0.048 0.000	49 -0.734 0.073	50 -0.734 0.028	50 -0.734 0.015
	(13) [Enrollment]	(14) Per Capita	(15)	(16) Ratio of	(17) Change in M	(18) [edicaid Enrollment
Feb. 2020 to Mar. 2023	Mar. 20	023 to Sep.	2024			
New Ways to Update Contact Information -0.005	-0.001			-0.087		
Enhanced Online Account Functionality (0.000) (0.003)	(700.0)	-0.002		(0.114)	-0.093	
Simplified Renewal Forms 0.008 (0.005)	(-0.006 (0.009)		(++++0)	-0.042 (0.144)
Observations 50	50 -0.048 0.000	50 -0.048 0.001	$50 \\ -0.048 \\ 0.012$	50 -0.734 0.013	50 - 0.734 0.015	50 -0.734 0.002
(19) (20) (21) Change in Medicaid	(22) I Enrollment]	(23) Per Capita	(24)	(25) Ratio of	(26) Change in M	(27) Iedicaid Enrollment
Feb. 2020 to Mar. 2023	Mar. 20	023 to Sep.	2024			
Increased Translations on Renewal Forms 0.005 (0.009)	-0.011 (0.009)			-0.137		
CBOs Engaged in Outreach -0.006 (0.006)		-0.006			-0.194 (0.128)	
MCOs Engaged in Outreach -0.010* (0.005)	* (0.007 (0.007)			-0.013 (0.110)
Observations 50 50 50	50	50	50	50	50	50
Mean Dep. Var. 0.066 0.066 0.066 R-sq 0.005 0.024 0.066	-0.048 0.017	-0.048 0.015	-0.048 0.020	-0.734 0.009	-0.734 0.060	-0.734 0.000

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

	(1)	(2)	(3)	(4) Change in N	(5) Aedicaid E	(6) Inrollment	(7) Per Capit.	a (8)	(6)	(10)	(11) Ratic	(12) of Chang	(13) e in Medic	(14) aid Enroll	(15) ment
		Feb. 2	2020 to Ma	r. 2023			Mar. 2	023 to Sep	. 2024						
Adopted Waiver Flexibilities	-0.005 (0.012)					0.009 (0.010)					$\begin{array}{c} 0.066 \\ (0.123) \end{array}$				
Improved System Rules		(0.009)					0.003 (0.007)					0.115 (0.110)			
Expanded Number of Data Sources			-0.001 (0.005)					-0.003 (0.007)					-0.081 (0.110)		
Changed Data Source Hierarchy				0.002 (0.006)					-0.007 (0.007)					-0.074 (0.104)	
Revised Limits on Age of Data					0.001 (0.006)					-0.011 (0.008)					-0.202 (0.129)
Observations Mean Dep. Var. R-sq	$50 \\ 0.066 \\ 0.008$	$50 \\ 0.066 \\ 0.036$	$50 \\ 0.066 \\ 0.000$	$50 \\ 0.066 \\ 0.001$	$50 \\ 0.066 \\ 0.000$	$50 \\ -0.048 \\ 0.021$	50 - 0.048 0.002	50 -0.048 0.003	$50 \\ -0.048 \\ 0.016$	50 - 0.048 0.035	50 -0.734 0.004	50 - 0.734 0.015	50 - 0.734 0.011	50 -0.734 0.007	50 -0.734 0.041
Notes: This table _I per capita. Column the continuous cov show the relationsl enrollment per cap ratio of the outcom	bresents th as 1 to 5 sl erage prov uip betwee: ita in Mar ita in colum	e estimate: how the as ision ende n the proc ch 2023, v ans 6 to 10	s from eque ssociation b id, and the edure and - when the co 0 to the ou	ation 1 of th between the state's enr the differen ontinuous c tcome in co	are associat ex parte 1 ollment p ice betwee oournis 1	ion betwee renewal pr- er capita i n the state rovision er	in states' e. Deedure an In February P's enrollme ided. Colu	x parte rer d the diffe $^{\prime}$ 2020, wh ent per cat mns 11 to	tewal proce rence betw en the con bita in Sep 15 show t	edures and feen the st dinuous co tember 20 the relatio	l changes i ate's enrol overage pru 24, the lat nship betw (0/1) Th	n their Me Iment per ovision wa est month veen the e	dicaid and capita in A s enacted. in our dat xplanatory	CHIP enrc Aarch 2024 Columns (a, and the variable a	llment l, when 6 to 10 state's and the

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	(1) Change in Medicaid E	(2) Enrollment Per Capita	(3) Ratio of Change in
	Feb. 2020 to Mar. 2023	Mar. 2023 to Sep. 2024	Medicaid Enrollment
Policy	-0.014	-0.012	-0.427*
Index	(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

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

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 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 atter's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the policy index and the atter's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the policy index and the atter's enrollment per capita in Column 1. The policy index variable and outcomes are further described and summarized in Table 1.

	Table 5:	The Rel.	ationship) Betwee	n Baseli	ine Medi	icaid Ge	merosit	y and N	Iedicaic	l Enroll	ment Ch	lange		
	(1)	(2)	(3) Ch	(4) ange in Mec	(5) dicaid Enre	(6) ollment Per	. Capita	(8)	(6)	(10)	(11) Ra	(12) tio of Chan	(13) ge in Medica	(14) aid Enrollm	(15) ent
		Feb. 2	020 to Mar.	2023			Mar. 20)23 to Sep	. 2024						
Income Limit (Adults With Children) (Adults W/out Children)	$\begin{array}{c} 0.014^{***} \\ (0.004) \end{array}$	0.013^{***} (0.003)				0.001 (0.005)	0.001 (0.004)				0.213^{**} (0.081)	0.197^{***} (0.065)			
Medicaid Expanded Ever			0.017***					0.002					0.271***		
Before Feb. 2020 After Mar. 2020			(0.004)	0.016^{***} (0.004)	0.028 (0.020)			(900.0)	-0.002 (0.005)	0.025 (0.020)			(160.0)	0.195^{**} (0.084)	0.821^{***} (0.259)
Observations Mean Dep. Var R-sq	51 . 0.066 0.093	$51 \\ 0.066 \\ 0.135$	$51 \\ 0.066 \\ 0.129$	$rac{46}{0.066}$	$15 \\ 0.066 \\ 0.228$	51 -0.048 0.000	$51 \\ -0.048 \\ 0.001$	51 -0.048 0.001	46 -0.048 0.001	$15 \\ -0.048 \\ 0.185$	51-0.734 0.053	51-0.734 0.078	$51 \\ -0.734 \\ 0.079$	46 -0.734 0.072	15 -0.734 0.560
Notes: This t _i and CHIP eur if the income l include states the relationshi did not expan include all stat show the assoc ended, and the explanatory v ⁱ in March 2023 columns 6 to 1	which presents ollment per c. which is 138% which expand p between Mu ded Medicaid ces, separated iation betwee z state's enrol uriable and th , when the cc 0 to the outcc	the estimates apita. Income ded Medicaid ded Medicaid by Septembu- by whether c in the explana liment per ca the difference l intinuous cov ome in colum	s from equate e limits are ϵ in or before usion after Fi er 2024. Th or they ϵ atory variab pita in Febr between the erage provisions 1 to 5. <i>l</i>	ion 1 of the continuous : iderlying th afterlying thus ? February 202 e data unde sypanded M le and the d uary 2020, state's entre state's entre state's entre afterly explanat All explanat	s relationsh and are cor e estimates 0200 and st 0 and Med 0 and Med n math in the edicaid by when the columns 1 ory variabl	ip between astructed as is of the rela ates that d icaid erroll icaid erroll estimates c September etween the continuous (c capita in % ll to 15 sho les and outd	the generate's the state's the state's the state's the state's though the id not explored the relation of the relation of the relation state's ennerage p September ow the relation of the rel	sity of sta s income l stween Me anded Mec anded Mec de states v ionship be ollment po rovision w trovision w tionship t further de	ates' baseli aimit as a γ dicaid exp licaid by S which expa atween of Γ expansion expansion as enacted latest mon between th scribed an	me Medice 6 of the Fe deptember ideptember Medicaid e status van status van tharch 20 chumu th in our e explanat d summar	uid prograu deral Pové ore Februs 2024. The icaid in or xpansion, iables are 224, when 224, when 224, when 224, or 10 s 6 data, and ory variah	ns and chan rrty level div data under after March, and overall, and categorical (the continue how the rels the state's le on the ra	iges in their rided by 100 I Medicaid e lying the est $1 \ge 2020$ and $s \ge 12020$ and $s \ge 12020$ and $s \ge 12020$ and $s \ge 12020$ and $s \ge 12020$ metric entry the entry is the set of the set of the of the set	Medicaid (ex. 1.38 nrollment cimates of tainates of ta	

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

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

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 variable and outcomes are further described and summarized in Table 1.

	(1) Federal Aid	(2)	(3) Change	(4) in Medicaid I	(5) Enrollment	(6) Fer Capita	a (7)	(8) R	(9) atio of Char	(10) 1ge in
	Per Capita	Feb.	2020 to M	ar. 2023	Mar	. 2023 to S	ep. 2024	Me	dicaid Enro	llment
	(USD thousands)	OLS	IV 2SLS	Red. Form	SIO	IV 2SLS	Red. Form	SIO	IV 2SLS	Red. Form
Federal Aid Per Capita (USD Thousands) Congressional Reps	0.945^{***}	-0.002 (0.002)	-0.003 (0.002)	-0.003	0.003 (0.003)	0.002 (0.003)	0.002	0.034 (0.046)	0.012 (0.054)	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 Mean Dep. Var.	196.4 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 ¹ The outcome in columns 2 ¹ enrollment per capita in Feb per capita in September 20 outcome in columns 8 to 10 between the instrument, the 7 and 10 present the reduce 4 of the relationship betwee: without using an instrument	the estimates of the relation 4 is the difference be ruary 2020, when the co 24, the latest month in is the ratio of the outco state's congressional re d form relationship bet n fiscal aid and medicai tal variables strategy. T	tionship be tween the st ntinuous con our data, a ome in colum presentative ween the ins d enrollmen he fiscal aid	tween federal ate's enrollm <i>e</i> rage provisi and the state' ms 5 to 7 to s per million trument and t change. Co l and congres	fiscal aid receivent per capita i on was enacted. s enrollment pe the outcome in t residents, and t the outcome di lumns 2, 5 and sional represent	ved by state n March 20. The outcor The outcor tr capita in columns 2 to the independ rectly. Colu 8 provide th ation variab	s and change 24, when the ne in columns March 2023, 5 4. Column tent variable mms 3, 6 and les as well as	s in their Medic continuous cove 5 to 7 is the diff when the contin when the contin 1 presents the fi of interest name 9 present the fiscal the outcomes a	aid and CH arage provisi ference betw nuous coverr rst stage rela ely federal a inal IV 2SLS aid and enr are further d	IP enrollment on ended, and een the state? age provision ationship fron id per capita. 5 estimates fro ollment using escribed and	per capita. 1 the state's s enrollment ended. The n equation 3 Columns 4, om equation equation 1, summarized

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	(1)	(2)	('3)
	Change in Medicaid I	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	$0.154 \\ (0.111)$
Expanded	(0.006)	(0.006)	
Trump Vote	0.018	-0.070^{*}	-0.771
Share	(0.037)	(0.037)	(0.512)
Congressional Reps	-0.005	$0.002 \\ (0.004)$	-0.020
(Per Million)	(0.003)		(0.064)
Population Density	$< 0.000 \ (< 0.000)$	$< 0.000 \ (< 0.000)$	< 0.000 (0.0001)
Observations Mean Dep. Var. R-sq	$49 \\ 0.066 \\ 0.198$	$49 \\ -0.048 \\ 0.095$	$49 \\ -0.734 \\ 0.140$

Table 8: The Relationship Between Overall Unwinding Policy Generosity, BaselineMedicaid Generosity, 2016 Trump Vote Share and Federal Aid and Medicaid EnrollmentChange

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 state's enrollment per capita in March 2023, when the continuous coverage provision ended. Column 3 shows the relationship between the variables 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.