NBER WORKING PAPER SERIES

PANDEMIC-ERA CHANGES TO MEDICAID ENROLLMENT AND FUNDING: IMPLICATIONS FOR FUTURE POLICY AND RESEARCH

Laura Dague Benjamin D. Ukert

Working Paper 31342 http://www.nber.org/papers/w31342

NATIONAL BUREAU OF ECONOMIC RESEARCH 1050 Massachusetts Avenue Cambridge, MA 02138 June 2023

We are grateful to Jillian Dickens for excellent research assistance. This work was supported in part by the Episcopal Health Foundation; special thanks to Shao-Chee Sim and CJ Hager for helpful conversations. Dague acknowledges additional financial support from the Wisconsin Department of Health Services for contracted program evaluation of a Medicaid 1115 waiver. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2023 by Laura Dague and Benjamin D. Ukert. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Pandemic-Era Changes to Medicaid Enrollment and Funding: Implications for Future Policy and Research Laura Dague and Benjamin D. Ukert NBER Working Paper No. 31342 June 2023 JEL No. H7,I13,I18,I38

ABSTRACT

The COVID-19 related public health emergency led to federal legislation that changed the landscape of Medicaid coverage for low-income people in the United States. Beginning in 2020, policy responses led to a surge in Medicaid enrollment due to federal rules preventing Medicaid disenrollment, and total Medicaid enrollment increased more from January 2020-2023 than the net increase in insurance coverage from 2013-2017 following the Affordable Care Act's implementation. As these policies come to an end, it is crucial to understand their implications for the future of Medicaid. This paper provides an overview of Medicaid's enrollment, renewal and funding policies, highlighting how these policies changed during and immediately following the acute phases of the COVID-19 pandemic, describes enrollment increases and their composition, reviews literature relevant to the policy and its unwinding, and identifies key areas for research. By examining this unprecedented period of Medicaid policy, we can inform future policy decisions and optimize safety net programs to be effective in a broad set of circumstances.

Laura Dague Bush School of Government and Public Service Texas A&M University 4220 TAMU College Station, TX 77843 and NBER dague@tamu.edu

Benjamin D. Ukert Department of Health Policy and Management Texas A&M University 212 Adriance Lab Rd College Station, TX 77843 bukert@tamu.edu

INTRODUCTION

Since its creation in 1965, Medicaid has grown enormously in the number of low-income Americans that it provides health care services for, the breadth of services provided, and the tax dollars required to sustain the program. Medicaid covers more individuals than any other health insurance program in the United States and is the largest means-tested program in both spending and enrollment (Donohue et al. 2022). Understanding how state and federal decisions about Medicaid policy impact health care coverage, access, and the larger economy is crucial to guarantee that the program is effective and sustainable.

The landscape of public health insurance coverage in the United States changed significantly with the federal declaration of the public health emergency (PHE) in March 2020. In response to federal incentives at the onset of the PHE, all state Medicaid programs adopted maintenance of eligibility and continuous coverage provisions first specified by the federal Families First Coronavirus Recovery Act (FFCRA, 2020). National enrollment in Medicaid has increased more than 30% or 21 million people from February 2020 to January 2023 (Figure 1) — an increase larger than the total decline in the uninsured three years after ACA implementation.¹ Enrollment growth over this period occurred in every state, ranging from 17% to 77% (Figure 2), and near-universal declines in uninsurance were observed nationally (Keisler-Starkey and Bunch, 2022). The signing of the Consolidated Appropriations Act in December 2022 established the official end of continuous coverage as April 1, 2023 and triggered a year-long "unwinding" process during which states must systematically redetermine eligibility for all current enrollees.

¹There were 13.3 million fewer uninsured individuals in 2017, three years after the implementation of the initial (ACA) Medicaid expansions and Marketplace subsidies, compared to 2013 (Berchick et al. 2018).



Figure 1. Medicaid Enrollment and Uninsurance in the United States, 2017-2023

Notes: Figure shows monthly total Medicaid enrollment (left axis) and quarterly counts of the number uninsured (right axis). Scale is fixed at 5 million on both axis for comparison. Source: Authors' analysis of Medicaid enrollment data from CMS "State Medicaid and CHIP Applications, Eligibility Determinations, and Enrollment Data" from January 2017-January 2023, available at https://www.medicaid.gov/medicaid/national-medicaid-chip-program-information/medicaid-chip-enrollment-data/monthly-medicaid-chip-application-eligibility-determination-and-enrollment-reports-data/index.html Uninsured data from the National Health Interview Survey "Early Release Reports on Health Insurance Coverage," available at https://www.cdc.gov/nchs/nhis/healthinsurancecoverage.htm.

In this policy retrospective, we provide an overview of Medicaid's enrollment, renewal and funding policies, highlighting how these policies changed during and immediately following the acute phases of the COVID-19 pandemic, and describe the unprecedented levels of Medicaid enrollment by beneficiary group. The enormous program growth and the end of the continuous coverage requirement have important implications for the Medicaid-enrolled, health care providers, insurers, and taxpayers. We review the literature relevant to Medicaid enrollment during COVID-19 and to Medicaid redetermination and disenrollment and identify important gaps for future research. This review is valuable because it represents the best knowledge base to understand the coming impact of these policy changes, and provides important contextual information for policymakers, academics, and other stakeholders. Finally, since these major policy changes provide an important opportunity to learn about the impacts of enrollment policy and Medicaid coverage more broadly, we reflect on several important questions that remain essential for future work to engage with.



Figure 2. State Level Medicaid Enrollment Growth During Continuous Coverage

Notes: Figure shows the percentage change in monthly total Medicaid enrollment from March 2020 to January 2023. States that expanded their Medicaid program during this period are highlighted in light green. Source: Authors' analysis of Medicaid enrollment data from CMS "State Medicaid and CHIP Applications, Eligibility Determinations, and Enrollment Data."

We begin with an overview of Medicaid eligibility, redetermination, and funding policies prior to March 2020 and a review of relevant research. We describe how Medicaid policy shifted during the pandemic, provide stylized facts on enrollment, and discuss the fiscal implications of financing changes. We then describe what is known so far about the policy's unwinding. Finally, we propose an agenda of unanswered questions for future research and conclude.

ELIGIBILITY, RENEWAL, AND FUNDING POLICY BEFORE 2020

The Medicaid program was created in 1965 as part of Lyndon B. Johnson's Great Society policies and entitles certain low-income individuals to coverage of payment for their medical care. The program is jointly funded through federal and state governments, a financing structure that originated in pre-existing legislation (Moore and Smith, 2005). While participation by states is voluntary, they are heavily incentivized to participate, and all states have a program that covers at least certain groups of individuals. States design and administer their Medicaid plan within broad federal guidelines on eligibility and services. Medicaid is by far the largest meanstested transfer program in the United States, and an important part of the health care system (Moffitt, 2015). In 2021, Medicaid represented 17% of national health care spending, and it represents a much larger fraction of spending for certain health services, including births and behavioral health services (CRS, 2023). Here, we provide an overview of Medicaid eligibility and enrollment, renewal, and funding policies prior to 2020, as well as a review of relevant research. While previous reviews and histories of Medicaid cover additional ground, such as provider reimbursement (Gruber, 2003; Buchmueller, Ham, and Shore-Sheppard 2015; Bitler and Zavodny, 2017; Currie and Duque, 2019), our primary goal is to provide information that is critical to understanding the major changes that occurred between 2020 and 2023.

Medicaid Eligibility and Enrollment

Medicaid eligibility has historically been based on a combination of household means (income and sometimes assets) and personal characteristics (age, disability, pregnancy, parental status, and citizenship) and has changed significantly over time. Although initially limited to the elderly, blind, those with disabilities, and families eligible for welfare under Aid to Families with Dependent Children (AFDC), federal law eventually broadened eligibility to almost all lowincome children and pregnant women and separated coverage for adults from welfare eligibility. In 1997, the Children's Health Insurance Program (CHIP) began and gave states further options to cover additional low-income children by either expanding their Medicaid programs or through a separate (standalone) CHIP program. The 2010 ACA allowed (and incentivized) states to cover nonelderly adults regardless of disability or parental status, who represented the vast majority of low-income individuals remaining ineligible for public health insurance, although not all states have chosen to do so. As a result of these changes, Medicaid has shifted from a system of largely categorical eligibility to one that is closer to universally means-tested, and now serves a much larger and more diverse population with respect to health care needs than ever before.

Eligibility is subject to federal minimum requirements, but states have considerable flexibility to increase those requirements through state plan amendments, which are formal requests for already allowed program changes to the current agreement on coverage, services, and provider reimbursements between the state and federal government about the state's Medicaid plan. Section 1115 demonstration waivers, which are formal requests to waive certain federal rules with the objective of testing policies consistent with Medicaid program goals, are another way to increase flexibility in coverage, services, and reimbursement. States have additional flexibility through Section 1915 waivers, which typically focus on how care is provided but can be targeted towards particular eligibility groups. States can also choose to administer fully state-funded benefits for particular groups alongside their Medicaid programs; for example, prior to the ACA's eligibility expansion several states had fully state-funded Medicaid-like programs for nonelderly adults (Burns and Dague, 2017). Outside of their formal eligibility criteria and federal rules, states can also vary in how difficult or simple they make it to enroll in their programs, for example, they determine length and method of application. As a result, state programs can look very different on almost all dimensions relevant to understanding program impact.

Coverage take-up, referring to the proportion of eligible individuals who enroll, has long been a salient policy issue in Medicaid. Take-up rates can vary widely by states and eligibility group, with children generally having higher take-up rates than adults (Decker et al., 2022; Roberts et al. 2021; Haley et al. 2018). Because coverage is free or very low cost, there are concerns that low take-up may be privately suboptimal (Baicker et al. 2012). Explanations for low program take-up include lack of awareness, administrative burdens navigating the enrollment process, stigma, and fear of immigration enforcement (Ko and Moffitt, 2022; Currie, 2006). Elements of each have been demonstrated in the literature; for example, stigma around welfare stereotypes is reported, and information gaps and enrollment barriers are prevalent for potential enrollees (Stuber and Bradley, 2005; Stuber and Kronebusch, 2004). Language barriers and immigration concerns can also drive low take-up (Aizer, 2007; Watson, 2014). States have explored options including outreach strategies of varying intensity (Aizer, 2003), autoenrollment of family members (DeLeire et al., 2012; Herd et al. 2013; Rennane and Dick, 2023), and using data from other agencies to identify and qualify potential enrollees (Blavin et al. 2014) to increase take-up rates. Behavioral nudges have been shown to be important (Wright et al., 2017; Baicker et al. 2012). The federal government has also incentivized reductions of administrative burden, and state reductions in administrative burden are correlated with higher enrollment (Fox, Stazyk, and Feng, 2020). In addition, the ACA's new income counting methodology, based on modified adjusted gross income (MAGI) simplified the process of calculating eligibility. Evidence suggests that elimination of asset tests, expansion of continuous coverage, extending benefits to parents, and administrative simplification can all contribute to

increased take-up. Bansak and Raphael (2007) suggest that these types of policy differences may explain about 25% of the variation in take-up rates across states.

In contrast, crowd-out of private insurance is often simultaneously a concern, as it can make expansions more expensive than planned and reduce successful targeting of the program towards the uninsured. Seminal work using 1987-1992 data on expansions to children found that for every two children added to Medicaid, one gave up private coverage (Cutler & Gruber, 1997). A full review of this large literature is out of scope (for excellent reviews see CBO, 2007; Gruber, 2003; Blewett and Call 2007; Gruber and Simon; 2008), but we summarize several conclusions from it here.

First, at least some crowd-out generally does exist, and it tends to be larger among higher income groups because they are more likely to have access to employer sponsored insurance (including those newly eligible for many of the studied expansions). Second, exact estimates vary by dataset and specification and tend to range between 20-60%. Multiple discussions of appropriate methodology exist (e.g. De La Mata, 2012; Koch, 2013; Ham, Ozbeklik, and Shore-Sheppard, 2014; Borusyak and Hull, 2021). Third, panel data that looks at coverage transitions tends to find that direct transitions are small. For example, Wooldridge et al.'s (2003) evaluation of several state CHIP programs find only 4-6% of children had dropped coverage in the months prior to their application, and Dague et al. (2014) show that between 4 and 18 percent of new Medicaid enrollees (both children and parents) likely dropped coverage at the time of enrollment. More recently, Dague, Burns, and Friedsam (2022) showed that a maximum of 8% of new enrollees in a program for childless adults below the poverty line were likely enrolled in private insurance prior to taking up Medicaid. Finally, policies like waiting periods can reduce crowd-

out (although findings are not universal), but also reduce take-up (LoSasso and Buchmueller, 2004; Banksak and Raphael 2007; Gruber and Simon, 2008).

Despite challenges in take-up and concerns about crowd-out, historical Medicaid eligibility expansions have clearly led to increased access to health insurance and health care for low income and disabled individuals. Prior reviews exist of many of these coverage expansions, including for children (Howell and Kenney, 2012), and pregnant women (Howell, 2001). One of the most prominent changes was the ACA Medicaid expansion, which was the broadest expansion and one of the most studied (e.g. Aslim et al., 2022; Barkowski et al., 2020; Bullinger, 2021; Courtemanche et al., 2017; 2018a; 2018b; 2019a; 2019b; 2020; 2021; Giannouchos et al., 2022; Hoodin et al., 2022; Dodini, 2023; Kaestner et al., 2017; Maclean and Saloner, 2019; McInerney et al., 2021; Miller et al., 2021; Simon et al., 2017; Vogler, 2020). Expansions have increased insurance coverage, reduced churn, and improved healthcare access and health, as has been substantially reviewed elsewhere (French et al., 2016; Mazurenko et al., 2018; Gruber and Sommers, 2019; Allen & Sommers, 2019; Soni et al., 2020).

Studies of reductions in eligibility have been less prevalent. However, there is no reason to assume that Medicaid disenrollment will have a symmetric opposite effect when compared to expansions – because of either informational differences or sudden loss of access to ongoing treatment. Reductions in eligibility have sometimes occurred unexpectedly due to unanticipated state budget shortfalls and led to disenrollment of relatively large proportions of beneficiaries. These disenrollments may reflect the best knowledge base from which we can learn how Medicaid disenrollment as part of the unwinding may affect beneficiaries in the future.

A growing literature documents the impacts on insurance coverage, financial distress, labor supply, utilization of healthcare, and self-reported health after disenrollment from public coverage. Medicaid disenrollment policies took place in Tennessee, where more than 170,000 or about 4% of the non-elderly adult beneficiaries abruptly lost Medicaid coverage in 2005, Missouri, where more than 150,000 beneficiaries lost coverage in 2005 after reductions in Medicaid eligibility levels, Wisconsin, where more than 44,000 adults with incomes over the poverty line lost coverage in 2014, and Arkansas, after the introduction of a Medicaid work requirement in 2018 where more than 17,000 people were disenrolled. Other work has examined disenrollment following migrant exclusion from coverage in Hawaii (Halliday et al. 2020).

The Tennessee Medicaid disenrollment immediately led to an increase in uninsurance among those previously covered (Tarazi et al., 2017; DeLeire, 2019; Tello-Trillo, 2021). Garthwaite et al. (2014) find that individuals responded by increasing labor supply to gain employer sponsored health insurance, with point estimates implying that more than 36% of the disenrolled gained employer health coverage in the year following the disenrollment. However, findings from DeLeire (2019) and Ham and Ueda (2021) suggest these results are not robust to the use of other datasets and may not support this conclusion. In Missouri, during a period of large contraction in Medicaid eligibility for parents, children, and disabled beneficiaries, the nonelderly uninsurance rate increased by 1.7 percent (Zuckerman et al. 2009). In Wisconsin, which may provide the best comparison given the availability of Marketplace coverage and similar income eligibility levels, less than one third of those who lost eligibility could be confirmed as enrolled in commercial coverage and nearly 20% had returned to Medicaid within two years. Uninsurance in other non-expansion states among parents declined by four percentage points more during this time (Dague et al. 2022). Finally, Arkansas introduced a work requirement (80 hours of work per month) in 2018 for Medicaid beneficiaries 30 to 49 years of age that disenrolled those not reporting and those not working the require hours automatically

disenrolled. Evidence suggests this increased the uninsurance rate by up to 7 percentage points for low-income adults (Sommers et al. 2019; Chen 2020).

An immediate challenge for those disenrolled from Medicaid is the affordability of healthcare, especially for those with chronic diseases, and the financial shock for individuals who experience an unexpected acute care need. Several studies have previously documented the financial hardship for those who received care without insurance (Dobkin et al., 2018; Miller et al., 2021). Bullinger and Tello-Trillo (2021) show that parents with custody of children were 16% less likely to receive child support income and that child support income decreased by 20 percent after the sudden Tennessee disenrollment. Argys and colleagues find that the Tennessee disenrollment resulted in a 2.78 point decline in credit risk score and increased other measures of debt delinquencies. Garthwaite et al. (2018) report that the disenrollment increased uncompensated care for hospitals, suggesting that each additional uninsured person cost the hospital \$800 per year. Similar to the findings in Tennessee, financial distress increased in Missouri as credit card borrowing and debt in third-party collections increased (Bailey et al. 2021). Survey work in Arkansas by Sommers et al. (2020) suggests that the disenrolled had problems paying off medical debt, delayed care because of cost, and had foregone taking medications because of cost.

Previous work has documented that individuals reduce use of care when exposed to cost sharing, which is not usually present in Medicaid. Tarazi et al. (2017) show that individuals seem to retain their primary care doctor after the Tennessee disenrollment, however, they report an increase in the share of individuals reporting the inability to see a doctor in the past year due to cost. More recent evidence from DeLeire (2019) displays reductions in doctor visits and dental visits, and Tello-Trillo (2021) reports lower preventative care take up. In terms of hospital

utilization, Heavrin et al. (2011) show that the number of emergency departments visits decreased for those on Medicaid after the Tennessee disenrollment took place, while the number of uninsured ED visits increased but keeping overall ED visits the same. Emerson (2012) displays that the number of total ambulatory case sensitive ER visits increased in one Tennessee county, while Ghosh and Simon (2015) do not find evidence of this when reviewing all of Tennessee. Tello-Trillo (2021) displays that the share of self-paid ED visits increased to 30%. Ghosh and Simon (2015) find a large increase in the share of uninsured hospitalizations after the disenrollment, without observing changes in the total number of hospitalizations, while Garthwaite et al. (2018) and DeLeire (2019) observe fewer total hospitalizations and a lower probability of reporting a hospitalization, respectively. Maclean et al. (2023) find that losing insurance also decreased substance use disorder-related hospitalizations by 15%, while mental health disorder hospitalizations declined by 4%. While no change in total hospitalizations was found in Missouri, payer mix in hospital-based care shifted, with a larger share of uninsured ED visits and the number of Medicaid covered ED visits decreased. As a result, uncompensated care provided by hospitals increased (Zuckerman et al. 2009; Garthwaite et al. 2018).

Losing health insurance could create stress and have immediate impacts on subjective health, in addition to the potential effects of reduced access to care; however, few studies have documented how health status changes. Evidence from Tennessee suggests that individuals are less likely to report excellent or very good health (DeLeire, 2019), and Tello-Trillo (2021) displays increases in the probability of reporting that individuals are incapacitated due to a health issue.

Overall, we conclude that the literature on losing health insurance coverage does not demonstrate anything substantively different from the literature on gaining health insurance coverage. This is in line with Tello-Trillo (2021) who finds symmetries in effects in the Tennessee disenrollment when compared to the literature on the Affordable Care Acts Medicaid expansion. This may be in part due to relatively frequent loss and gain of insurance due to churning (discussed further below), making the large-scale coverage losses mainly unusual in their breadth rather than for their individual experience of sudden insurance loss. Furthermore, these studies generally estimate the effect of insurance in an intent-to-treat framework and do not provide tests focused on those who might specifically be differentially impacted by a coverage loss rather than a gain (for example, individuals could have pent-up demand for coverage in an expansion, but not with a loss), which may contribute to their symmetry with the literature on gaining coverage.

However, the applicability of the disenrollment literature to the unwinding of the PHE is constrained for one major reason. In many of the previous large Medicaid disenrollment events the ACA Marketplaces did not exist. They represent a safety net that increases insurance access, coverage, and reduces coverage gaps, especially in 2023 and later, given the elevated generous subsidies for most low income individuals that will most likely have them qualify for a free health plan (Dague and Ukert 2022). As such, the findings described in the literature may overstate the degree of coverage and access loss than we might currently expect.

Medicaid Renewals and Redeterminations

The federal government requires states to review eligibility once every 12 months for enrollees with MAGI based eligibility and at least every 12 months for non-MAGI (generally but not exclusively the aged/disabled population), in a process that is typically called redetermination, recertification, or renewal. Beneficiaries are also supposed to notify states when

changes in circumstances could lead to changes in eligibility group or may affect cost sharing, or a reduction in benefits to trigger an eligibility review.

Federal regulators have placed broad requirements on the Medicaid renewal process to reduce "churning", which is defined as disenrollment followed by re-enrollment within a short period of time. Churning is a concern for policymakers and advocates due to its administrative costs and potential delays in care for patients, although Medicaid coverage can be considered implicit to some degree, since up to three months of retroactive coverage is allowed under federal law.² Broadly, churning would be problematic if gaps affect individual use of acute care; if not, active enrollment may be less important. There is very little evidence on this in the literature. Churning also creates administrative costs, with estimates suggesting costs of \$400 to \$600 per one churning person in 2015 dollars (Swartz et al. 2015; Sugar et al. 2021). Some who experience churning may have a short period of ineligibility, or they may be continuously eligible. ASPE has defined administrative churning, in particular, as the temporary loss of coverage despite ongoing eligibility (ASPE 2022), although this type of churning is extremely difficult to measure since eligibility is generally uncertain for those who are not enrolled. MACPAC has shown that the national rate of churning, defined as disenrolling and reenrolling within 12 months, was 8% in 2018, and that this was negatively associated with state 12 month eligibility policies, automated renewals, and not conducting mid-year checks for changes in circumstances (MACPAC, 2021). Ku and Platt (2022), defining churning as a break between two periods of enrollment in 2016, find churning of between 0.6 to 8 percent, with the lowest rates for elderly and disabled beneficiaries and the highest for children in CHIP, and also find that state eligibility policies are associated with more stability.

² Some states have obtained waivers of this provision (Musumeci and Rudowitz, 2017).

Redeterminations are structured into two separate operational processes. First, the ACA requires states agencies to perform an ex parte renewal (also called administrative renewal) that does not require direct contact with beneficiaries, if possible. States are to review available electronic state and federal data sources to determine eligibility (including financial information from, for example, SNAP or WIC programs, quarterly wage reports or IRS data, and residency or citizenship information). If an agency cannot verify eligibility, then they are required to contact individuals by sending a prepopulated renewal form at least 30 days prior to the end of coverage. If a beneficiary is no longer eligible, agencies are required to screen whether the beneficiary may be eligible for a different Medicaid category. If a determination of coverage in a different eligibility group requires additional documentation, then the agency is required to request information from the beneficiary to complete the determination. During this process, the agency is not allowed to end a beneficiary's coverage until a beneficiary is found to be ineligible in all Medicaid groups or the beneficiary did not respond in a timely manner. Second, if ex parte renewal is not possible, agencies will directly move to contact individuals by mail to request a response to the renewal form.

Idiosyncratic differences in states enrollment and renewal program capabilities can lead to substantially different experiences for beneficiaries during renewals. Furthermore, states may check more frequently for other changes in circumstances even for MAGI groups, and many do; for example, using some of the same data sources used for ex parte renewals to identify disqualifying increases in income. There are shorter minimum notice requirements for these checks (ten days) relative to annual renewals (30 days). Some states have implemented requirements for face-to-face interviews (for categorically eligible individuals), have complicated enrollment and renewal processes (such as requiring separate applications for each

family member), and limit the length of enrollment that do not require a renewal to less than 12 months (Kronebusch and Elbel 2004; Moynihan et al. 2016).

Legislation during the great recession and the Affordable Care Act (ACA) simplified the renewal process for eligibility determinations, requiring states to allow individuals to apply online or over the phone for coverage, and placed several requirements on states to streamline enrollment, such as the development of comprehensive eligibility determination systems. Moreover, over two thirds of states allow individuals to create online accounts to manage their coverage (which can include features such as the opportunity to upload documents and report changes), while many remaining states only accept renewals over mail or phone.

Although most recent changes have been to facilitate renewals, several states have also increased the administrative burden of renewal on applicants (Heinrich et al., 2022; Wu and Meyer, 2022). Recent work by Arbogast et al. (2022) outlines that recent declines in child Medicaid coverage between 2017 and 2018 can be attributed to federal guidelines that led states to implement tougher Medicaid program eligibility standards with increased administrative burden. These policy changes impacted especially children in Hispanic households, those with non-citizen parents, and those where parents had lower educational attainment households.

Compared to the effects of Medicaid enrollment and disenrollment, interruptions in coverage due to Medicaid redeterminations are relatively understudied. Yet recent work demonstrates that low-income people with insurance through Medicaid have a 20% chance of losing coverage during the next two years, creating substantive uncertainty in insurance coverage (Einav and Finkelstein, 2023). Uninsurance spells are associated with reduced access to care, even when they are short – although this relationship is not necessarily causal (Abdus 2014). Disruption in coverage has also been associated with overall increased medical spending,

suggesting that re-enrollees obtain high-cost hospital care that could have been avoided had they received continuous outpatient care, including preventive care (Hall et al. 2008; Bindman 2008).

Redetermination timing reflects a balancing of considerations between continuity of insurance enrollment and program integrity, ensuring that resources are used towards those as intended by the establishing legislation, which may be important for long-term program success if there are public perceptions of potential eligibility fraud by beneficiaries. Although moral hazard in the form of strategic labor supply in response to longer eligibility periods is theoretically possible, Pei (2017) shows that it is unlikely to be relevant. In addition, as states have increasingly moved to using managed care organizations (MCOs) for delivery of services, inaccuracy in eligibility (for example, maintaining someone who has moved out of state) implies ongoing costs in a way that it would not have in a fee for service environment, and MCOs are generally not incentivized to identify the ineligible. We do not generally know how often redeterminations are successful or, if they are not successful, the relative proportions that are due to eligibility vs. other frictions, and how these relative proportions might depend on the redetermination frequency.

Because coverage can be implicit, coverage losses and gains could also be a strategic choice, whether formally or informally (for example, beneficiaries could enroll with a provider's help when coverage is needed, but otherwise be inattentive to enrollment status). Finkelstein, Mahoney, and Notowidigdo (2018) note that measures of low-income adults' willingness to pay for health insurance are substantially below its costs. Dague (2014) provides evidence that a substantial fraction disenroll when required to pay small premiums. Koetting (2016), in a study describing redeterminations in Illinois, shows that more than 80% of cancelled enrollments were due to failure to return required information and more than one third of those who lost coverage

were reinstated after providing additional information. This may be in part due to beneficiaries' viewpoints that Medicaid is a mechanism for reimbursing health care services when they are sick (due to, for example, retroactive and presumptive eligibility policies), rather than coverage they need to maintain. Additional research on redeterminations and the degree to which coverage is implicit would be an important input into better identifying processes that target the ineligible while avoiding unnecessary costs for the eligible.

To provide a sense of the usual scale of disenvolument and coverage loss at redeterminations, we look at data from the 2019 Statistical Enrollment Data System (SEDS) that provides information on the unduplicated number of children enrolled in CHIP and Medicaid in a federal fiscal year, and monthly Medicaid enrollment reports. Arbogast et al. (2022) utilized the annual unduplicated enrollment reports in conjunction with the monthly Medicaid enrollment report to calculate the annual child Medicaid disenrollment rate (which they define as churn). We follow this method to estimate the disenrollment rate by subtracting child Medicaid/CHIP enrollment at the end of the federal fiscal year (September) from the unduplicated Medicaid/CHIP enrollment in the same federal fiscal year, and then divide by the number of unduplicated enrollees. This measure provides a snapshot of how many children who enrolled were retained by the end of the federal fiscal year. We show the state variation in this disenrollment rate in Figure 3. The average unweighted national disenrollment rate was 20%, but it varied substantially from state to state, with the District of Columbia having the lowest churn rate (6%) and Nevada having the highest (39%). Although not displayed, the latest available data (2020) suggest a sharp decrease in the disenrollment rate to an average of 13%. However, the disenrollment rate cannot distinguish between individuals who voluntarily disenrolled, those who did not respond during the redetermination process, and those who were found to be ineligible.

As an alternative, we also tabulate state Medicaid/CHIP reports which detail the number of children in the CHIP and Medicaid programs who were enrolled, eligible, screened, and retained after redetermination. Among the 27 states that reported data in 2019, 68% of child Medicaid/CHIP enrollees were eligible for redetermination in 2019 and almost all children eligible for redetermination were screened (87%). We create a redetermination disenrollment rate by subtracting the number of retained Medicaid and CHIP enrollees from the number of children screened for redetermination in a federal fiscal year and then divide by the number of screened Medicaid children in the fiscal year. This rate provides us with an estimate of the number of children who lost coverage among those who were screened for redetermination. We estimate a national redetermination disenrollment rate of 10%. The state rate is displayed in orange alongside the disenrollment rates in Figure 3. Here, the District of Columbia had the lowest disenrollment rate (5%) and Mississippi had the highest (31%). The two rates have a weak positive correlation coefficient of 0.19, suggesting that they measure different phenomena.

In summary, we do not generally know much about state redetermination processes and how they translate to changes in enrollment. Neither do we have a good understanding of how often redeterminations are successful for people aiming to remain covered, and the causes for disenrollment during the redetermination process. Understanding the causes of disenrollment is important to be able to describe the most impactful administrative barriers on enrollment, to isolate the share of eligible beneficiaries who are unable to enroll, to identify churn rates due temporary ineligibility, and to identify policies and pathways to minimize the loss of coverage for those eligible. Currently, we only know that stringent redetermination policies reduce total Medicaid enrollment. State specific experiences regarding the redetermination process described in Koetting (2016) and Heinrich et al. (2022) for Illinois and Tennessee, respectively, provide

firsthand evidence on the administrative burden, but may not be generalizable to all Medicaid

eligibility groups and states.



Figure 3. State Child Medicaid/CHIP Disenrollment and Redetermination Disenrollment Rates

Notes: Disenrollment rate is calculated by subtracting child Medicaid/CHIP enrollment at the end of the federal fiscal year (September) from the unduplicated Medicaid/CHIP enrollment in the same federal fiscal year, and then divide by the number of unduplicated enrollees. The redetermination disenrollment rate is calculated based on the number of screened children who were disenrolled compared to all screened children for redetermination. Specific rates are available in the Appendix.

Source: Statistical Enrollment Data System (SEDS) information on the number of unduplicated children enrolled in CHIP and Medicaid in the 2019 federal fiscal year and the September 2019 Medicaid enrollment reports were used to calculate the disenrollment rate. 2019 State annual Medicaid and CHIP report data describing the number of screened, disenrolled, and retained children in a federal fiscal year. Reports can be downloaded from the website (https://www.medicaid.gov/chip/reports-evaluations/index.html).

Medicaid Funding Policy

Medicaid has been jointly financed between the federal and state governments since its inception in 1965. States receive a matching grant from the federal government to help finance their individual state programs that depends on a three-year running average of state per capita income. The majority of the matching grant for health care services under Medicaid is calculated at a rate called the Federal Medical Assistance Percentage or FMAP, which in standard times has a maximum of 83% for the lowest income states and a minimum of 50% in higher income states.

This rate applies to existing eligibility groups, such as children, people with disabilities, and pregnant women. ACA Medicaid expansions are currently financed at a higher rate of 90% and CHIP is financed under an "enhanced" FMAP or E-FMAP that is calculated by reducing the state share of the regular FMAP by 30 percent, although other special rates often apply. Administrative activities under Medicaid generally are matched at a lower rate.

One can think of the matching rate as the "sticker price" for anyone newly enrolling in Medicaid. For every dollar a state puts up, the federal government matches that dollar FMAP/(1-FMAP), so an FMAP of, for example, 60% would mean that every state dollar brings 0.6/0.4 = \$1.50 in federal spending. Matching grants tend to incentivize targeted spending on the matched program since they reduce the effective price of additional spending on the program. Whether federal grant money in general just replaces (crowds out) state and local money or is mostly used where it is targeted (the flypaper effect) is the subject of a large literature in public finance (e.g. Hines and Thaler, 1995). States have historically been responsive to changes in federal grant parameters in Medicaid (Baicker, 2005(a); Baicker, 2005(b)), although have been notably less willing to participate under the relatively generous terms of the ACA Medicaid funding formula. Bundorf and Kessler (2022) provide the only recent estimate of the elasticity of Medicaid spending and find that spending on existing enrollees is responsive to the after-FMAP price.

Medicaid is countercyclical, so increased enrollment due to job losses comes at the same time as decreased state tax revenue, and all states have balanced budget requirements that limit their flexibility during downturns. The fact that matching rates are lagged, and cannot respond to sudden economic crises, has been cited as a weakness of this funding formula (Patrick and Davis, 2013; O'Mahen and Petersen, 2021). States can target optional coverage for cuts during times of economic crisis, and there is some evidence of this occurring, for example, for dental

benefits (Decker & Lipton, 2015) and reports of other cost-reducing actions including reductions in provider payments, enrollment caps, and premium increases in response to prior recessions (GAO, 2011).

Most states use MCOs to administer health insurance to the majority of their beneficiaries. Although evidence is mixed on whether MCO contracts reduce spending, they do allow states to better predict spending by making capitated payments to plans, which is important given the balanced budget constraints that states face (Duggan and Hayford, 2013; Perez, 2017) and as MCOs continue to grow in prevalence. This means that as health spending changes, the state is not always the residual claimant on savings or expenses.

MEDICAID POLICY DURING THE PANDEMIC ERA

In March 2020, the FFCRA increased the federal share of Medicaid funding to states from January 1, 2020 through the last day of the calendar quarter in which the PHE would end (undefined at the time), on the condition that states maintain existing eligibility standards and not disenroll new or existing Medicaid beneficiaries. While a voluntary policy, the fiscal incentives were strong and all states participated; the financing side is discussed further below. The PHE was renewed numerous times and states were told they would receive at least 60 days notice of any change in its end date (Blum et al. 2022). This continued until late 2022, when continuous Medicaid enrollment was separated from the end of the PHE as part of the Consolidated Appropriations Act, which defined a 14 month period for states to reevaluate eligibility for all beneficiaries beginning April 1, 2023 (H.R. 2617, 2022).³

³ The end of the PHE itself was announced in February 2023 as May 11, 2023 (HHS, 2023).

These temporary continuous coverage policies (also referred to as maintenance of enrollment (MOE), continuous eligibility, or continuous enrollment) meant that from March 18, 2020 through at least March 31, 2023, no Medicaid members were subject to negative eligibility redeterminations or disenrollments, regardless of whether life changes might normally have rendered them ineligible.⁴ Members normally would need to complete annual eligibility renewals, report changes in income and other circumstances, and otherwise respond to income verification requests, all of which can result in ending or disrupting coverage even for the eligible. The only ways for beneficiaries to lose coverage were by specific request, by moving out of state, or in death. All unintentional churning would have stopped entirely during the continuous coverage period.

This means that while new enrollees were subject to the usual eligibility screening processes upon application, existing beneficiaries were exempt. If someone initially qualified due to low income after losing a job they were guaranteed ongoing coverage, even if they subsequently got a new job at a higher income. Similarly, someone whose categorical eligibility for benefits depended on, for example, their age or pregnancy would normally lose eligibility if they turned 19 or their fixed post-partum eligibility period ended. Under the continuous coverage provision their enrollment was guaranteed through at least April 1, 2023 (although the end date was not knowable to anyone at the time of initial enrollment except new enrollees in January-March 2023).

FFCRA also prohibited states from restricting eligibility and enrollment beyond policies already in place as of January 2020. This meant that states were unable to implement even previously approved waiver policies such as premiums, work requirements, and new paperwork.

⁴ Some states have formally separate programs under the Children's Health Insurance Program (CHIP), and continuous coverage policies did not apply to CHIP, but did apply to joint (integrated) Medicaid/CHIP programs.

This prohibition expires January 1, 2024. States could expand eligibility. New financial incentives for the ACA Medicaid expansion were created under the 2021 American Rescue Plan Act by increasing the base FMAP rate by 5 percentage points for two years for states newly choosing to expand, more than covering the direct state costs of expansion without considering budget offsets (H.R.1319, 2021). Five states chose to expand Medicaid under ACA authority between 2020 and 2023 (Nebraska, North Carolina, Missouri, Oklahoma, and South Dakota; KFF, 2023(b)).

Insurance Coverage during the Pandemic

Projections in the early days of the COVID-10 crisis suggested major health insurance coverage losses associated with the sudden spikes in unemployment (Banthin et al. 2020; Garfield et al. 2020; Garrett and Gangopadhyaya 2020; Golberstein et al. 2020), but these did not materialize. Bundorf et al. (2021) use the Census Bureau's Household Pulse Survey and show that while ESI declined throughout 2020 following the initial spike in unemployment, public coverage increased to offset the declines and as a result health insurance coverage rates were only slightly declining in the spring and mainly stable in late 2020.

Much of the early literature was interested in whether coverage losses were larger in states that expanded Medicaid under the ACA. Figueroa et al. (2021), found some declines in insurance and access to care compared to 2018-2019 in a 2020 survey of low-income adults in four southern states, but not statistically different declines for expansion and nonexpansion states. Benitez (2022) compares changes in health insurance coverage among employed working age adults in the CPS following a job loss in 2020 in ACA expansion states compared to nonexpansion states, finding that increases in uninsurance were lower and increases in Medicaid enrollment were higher in expansion states despite mostly similar losses in employer-sponsored

insurance coverage. In similar work using Census Pulse data, Benitez and Dubay (2022) draw the same conclusion. Khorrami and Sommers (2021) find that increases in Medicaid enrollment were slightly, but not dramatically, higher in expansion states through September 2020. Rakus and Soni (2022) examine insurance coverage, health behaviors, and self-reported health by state Medicaid expansion status comparing pre-pandemic trends to March-December 2020 in the BRFSS. They did not find differences in insurance coverage by expansion status but did find that adults in expansion states had relatively higher reported health and more positive health behaviors. Auty et al. (2023), also using the BRFSS, find a decline in the uninsurance rate during 2020 that was larger in Medicaid expansion states.

These papers generally do not consider the role of the continuous coverage policy in their results; in states that had expanded Medicaid prior to the pandemic, a larger portion of the population was already covered by Medicaid and so potentially subject to FFCRA. Furthermore, the differences in health insurance enrollment cannot generally be causally attributed to Medicaid expansion as Medicaid expansion states may have had different policy responses to the pandemic than non-expansion states in ways that bias the comparisons. Regardless, even interpreted descriptively these studies make clear that Medicaid played an important safety net role during 2020.

Very few existing studies, to date, have examined the continuous coverage provisions of the FFCRA directly. In an early paper, Dague et al. (2022) used Wisconsin administrative data on Medicaid enrollment linked to unemployment wage reports to establish how much of early increases in enrollment were likely due to MOE policy relative to the large shocks in unemployment. They develop a model of prior new enrollment, re-enrollment, and exit on data prior to 2020 and project different expectations of enrollment through 2020 with and without the

role of employment shocks (aggregate and individual). They show that most ongoing higherthan-average enrollment was due to MOE, and when decomposing the excess retention, show that 70% was among enrollees who would likely have remained disenrolled 6 months later, suggestive of ineligibility rather than churning as the major explanation for typical disenrollment. Sun et al. (2022) also find that most of the increase in enrollment was due to reduced disenrollment in a study that uses data from 6 unnamed states in a similar time period, although they are not able to look directly at the role of employment.

Frenier et al. (2020) describe changes in Medicaid enrollment in a subset of states in mid-2020, and show that Medicaid enrollment growth was not correlated with job losses. Jacobs and Moriya (2023) show that Medicaid coverage was much more stable nationally from 2019-2020, tracking individuals over time in the MEPS, compared to from 2018-2019; this was particularly true for part time workers. Khorrami and Sommers (2021) show that changes in Medicaid enrollment were *negatively* associated with the change in the unemployment rate. Shafer et al. (2021) find that while immediately prior to COVID, the correlation between unemployment and Medicaid enrollment in North Carolina was positive, it was zero from March to August 2020, although there was a still a positive correlation in the most socially vulnerable counties.

The Increase in Medicaid Enrollment

Figure 2 shows the percentage change in enrollment by state from March 2020 to January 2023, which ranges from 17% to 77%; excluding states that expanded Medicaid during this era, it ranges from 17% to 58%. Figure 4 displays the monthly enrollment in Medicaid through October 2020 by eligibility group and illustrates that enrollment growth was concentrated among children and adults and was not prevalent among those with disabilities or the aged.



Figure 4. Monthly National Enrollment in Medicaid by Eligibility Group, 2016-2020

Notes: Figure shows total U.S. Medicaid enrollment from January 2016-December 2020 by eligibility groups as defined by CMS; children are counted on the right axis. Scale is fixed at 5 million on both axis for comparison. Pregnancy eligibility categories are not separately reported. Source: Authors' calculations from aggregate TMSIS data (Major Eligibility Group Information for Medicaid and CHIP Beneficiaries by Month).

Medicaid enrollment has generally been countercyclical, with rising enrollment during higher waves of unemployment; this can occur both because individuals remain on the program longer and because of new applicants. Figure 5 shows the number of Medicaid applications and initial claims for unemployment by month. During the pandemic period, unemployment spiked. Figure 5 displays that the period of growth in enrollment coincided with a small spike in applications during the onset of the COVID-19 pandemic in 2020, although far from the scale of new unemployment claims, but applications then tapered off and remained consistently lower than the prior average. New applicants and enrollees during this era were likely disproportionately those who were newly eligible for Medicaid since repeated applications by those temporarily losing eligibility were no longer necessary.



Figure 5. Number of Medicaid Applications and Initial Unemployment Claims

Notes: Figure shows total number of Medicaid applications and initial unemployment claims from January 2018-January 2023.

There are several factors that could contribute to variation in enrollment growth rates by state and eligibility group. Growth should be higher in states and groups that had higher churn rates prior to the MOE, since continuous enrollment would apply to more individuals. State experiences of the economic recession are a likely contributor; for example, declines in different industries, slower recoveries, and some eligibility groups' enrollment may depend more on economic circumstances. One puzzle is why growth and applications continued at a fairly steady rate even through the end of 2022 when the economy was strong by many measures and one might expect that if most churning was short-term, it should have leveled off. Ultimately,

Source: Authors' calculations from aggregate CMS data (State Medicaid and CHIP Applications, Eligibility Determinations, and Enrollment Data) and FRED (not seasonally adjusted).

understanding the determinants of enrollment growth is an important empirical question for researchers to consider.

Medicaid Financing during the Pandemic and FFCRA Era

In return for implementing continuous coverage and other maintenance of eligibility requirements in Medicaid during the PHE, states received a 6.2 percentage point increase in their baseline FMAP rate. FMAP increases are recognized as a form of fiscal relief to states (Chodorow-Reich et al., 2012). This increased funding was originally set to expire at the end of the quarter in which the PHE ended, but the same legislation that separated continuous coverage from the PHE also provided a more gradual phase-down of the extra funding.

Because the FMAP is already in place and can be quickly distributed through existing quarterly payment systems, it is a mechanism the federal government can easily use to increase aid to states. The COVID-19 recession was distinct from prior downturns in that Medicaid programs faced potentially larger and uncertain increases in medical expenditures as direct effects of the pandemic, in addition to the typical enrollment increases seen in times of recession. In addition, because routine medical care was substantially disrupted for an extended period, many providers of health care services experienced financial distress. Policies to help states maintain Medicaid coverage, including temporary boosts to state FMAPs, have been implemented previously, but have never previously included a continuous coverage requirement (Mitchell, 2020). Broadly speaking, maintenance of effort requirements on eligibility policy such as requiring states not implement more stringent eligibility policies than they already have in place have been part of prior temporary FMAP boosts, and are intended to mitigate crowd-out. To discuss the fiscal implications, we define some notation to fix ideas.⁵ Let X_{st} be Medicaid enrollment at period *t* in state *s*, let C_{st} be the per enrollee, per period cost of coverage, and define S_{st} as the state's share of spending at time *t* (equal to *1-FMAP_{st}*). Total state spending on non-administrative expenses at a given time would then be $X_{st} * C_{st} * S_{st}$. We can then divide the marginal state Medicaid dollars under the MOE policy into a *windfall*: the additional dollars from the 6.2 percentage point FMAP bump that the state is gaining, and a *commitment*: the additional dollars the state must spend because of increased enrollment in order to comply with policy. Define X_{st}^0 as baseline Medicaid enrollment for state *s* at time *t*; this is what enrollment would have been in the absence of the MOE (a counterfactual) and define X_{st}^{MOE} as the marginal enrollment induced by MOE policy. The windfall is the difference in the state's baseline and MOE responsibilities: $.062 * X_{st}^0 * C_{st}$. The commitment is the state's share of the costs for the marginal enrollment: ($S_{st} - .062$) * $X_{st}^{MOE} * C_{st}$. Figure 6 illustrates these conceptually as shares of enrollment, comparing enrollment across policy regimes; scaling by the per-enrollee, per period cost of coverage yields the total dollars.

⁵ We briefly introduce this concept in Dague and Ukert (2022) and provide some estimates of the windfall vs. commitment in Texas in that piece.





Notes: Figure illustrates the state and federal shares of Medicaid enrollment at the usual rate assuming a baseline enrollment level X⁰ compared to under the MOE policy. Illustration scale has FMAP of 60% with a 10% increase in enrollment.

Several things are notable about the windfall and the commitment just from this simple illustration. First, all else equal, for states with a smaller FMAP and therefore larger state share, the windfall will be the same but the commitment is higher in dollar terms. Second, states with a larger counterfactual Medicaid enrollment will have a larger windfall. Third, states with a larger MOE increase will have a larger commitment. Finally, we can extend the implications to eligibility groups. Because states spend quite different amounts on their different eligibility groups (with aged/disabled categories generally being the most expensive, and children generally being the least), both the initial composition and the composition of the MOE enrollment will affect the size of states' windfall and commitment, with most states cross-subsidizing the increased enrollment among children and nonelderly adults with windfall from the aged/disabled, where enrollment growth was slower. These observations outline how the FMAP bump could be relatively more or less generous to states.

It is also worth considering whether these dimensions of generosity align with the goals of the additional funding. For example, while states with smaller FMAPs have higher historical incomes, this may not necessarily have been a good predictor of their pandemic-related (or current) economic circumstances. States with higher Medicaid enrollment could be states in higher need due to higher populations in poverty or richer states that elected to make their programs more generous voluntarily, and thus may be more or less at risk of otherwise making cuts. States with a larger MOE increase could be states hit disproportionately hard by the pandemic or states that previously required frequent recertification and hence had a high degree of population churn. These are, broadly speaking, unanswered empirical questions.

Under some circumstances the commitment could exceed the windfall, which would be a potential concern particularly for states with a smaller FMAP, small counterfactual Medicaid enrollment, and large MOE increase, or when:

(1)
$$.062 * X_{st}^{0} * C_{st} < (S_{st} - .062) * X_{st}^{MOE} * C_{st}$$

In order to calculate this more precisely, one would consider indexing by eligibility groups and summing across groups to get the total size of the windfall and commitment per state. In the vast majority of states, excess windfall on the aged and disabled eligibility categories, which are the most costly and experienced the least growth due to MOE, will be cross-subsidizing excess commitment in the nonelderly adult and child eligibility groups. Not that it is possible that X_{st}^{MOE} is dependent on X_{st}^{0} . Indeed, we would expect this to be true if the main driver of enrollment were churning.

Under the assumption that the cost of coverage is the same for the marginal MOE enrollees as for the baseline population, one can (trivially) show that windfall will be less than commitment when $\frac{.062}{S_{st}-.062} < \frac{X_{st}^{MOE}}{X_{st}^0}$ or in words, when the ratio of marginal enrollment to

baseline enrollment is higher than the ratio of the fee bump to the reduced state share. Of course, marginal MOE enrollees may be less (or more) expensive than baseline enrollees. For example, if churn is driven by need so that people tend to de-prioritize coverage when they are healthier and enroll when they are less healthy, we would expect MOE enrollees to have a lower cost of coverage. On the other hand, if health shocks were driving new enrollment disproportionately during the pandemic or there was a cost-correlated shift in the demographic distribution of enrollees (for example, age), the average cost of coverage for marginal MOE enrollees could be higher than baseline. Wright et al. (2021) offer evidence that new North Carolina Medicaid enrollees during the pandemic used less care on average. In addition, as noted above, most additional enrollment has occurred in the non-aged, non-disabled eligibility categories. These findings suggest the more likely scenario that MOE enrollees are less expensive on average.

Clemens, Ippolito, & Veuger (2021) provide an initial examination of the potential fiscal impacts of the FFCRA's Medicaid provisions. They find that the early enhanced FMAP funds were roughly equal to the overall expected Medicaid spending growth due to the continuous coverage provision. However, the fixed allocation of enhanced FMAP funds for all states has led to a misallocation of funds, as states with the largest baseline enrollment/spending received the largest benefits, while states with the largest growth in enrollment did not experience the largest increase in enhanced FMAP funds; this is because the formula was tied to the windfall.

Understanding the impacts and incidence of this spending will be an important subject of future research. Prior work on transfers during the Great Recession suggests that increases in the FMAP during that time increased employment, with \$100,000 in marginal funds resulting in nearly 4 job-years (Chodorow-Reich et al. 2012). However, over time, because of the length of time that the provision was in place, many states may have run up against the margin where the

commitment began to exceed the windfall. Some state legislatures were losing patience with the ongoing public health emergency, as it was unclear when the PHE would end. This major uncertainty makes it hard to project expected windfalls and commitments during state budgetary planning and may have required states to allocate additional funds for higher Medicaid expenditures than previously anticipated. A further factor is the role of MCO contracts, since the ultimate incidence of the dollars (and whether they were an effective fiscal transfer to states) depends on whether they were mostly passed through to MCOs; the degree to which the ultimate incidence was to MCOs, providers, or states will depend on things like how much health care utilization shifted and whether states had and used clawback provisions in their contracts and other flexibilities granted by CMS to recover savings from lower than expected health expenditures.

2023-2024: THE "UNWINDING" OF CONTINUOUS COVERAGE

Beginning April 1, 2023, states were permitted to again resume Medicaid terminations, and were required by CMS to initiate renewals of all beneficiaries within 12 months and completing them within 14 months, a process that has become known as the "Unwinding" (CMS, 2023a). Not all states began their process on April 1, and it has not occurred as a large one-time disenrollment event, but rather most states plan to stagger disenrollment over many months, with most using all 14 months and a few initially planning to be finished by December.

How quickly Medicaid beneficiaries will be redetermined depends on states' level of preparation and process organization. The redetermination process will be especially challenging to state agencies as they are confronted with an unprecedented level of Medicaid beneficiaries. As noted above, Medicaid caseloads have risen by more than 30 percent, and as much as 77 percent in some states. CMS provided guidelines to states prior to April 1 on how states could prepare for the redetermination process, and states were required to develop operational plans (CMS 2021). Suggestions included that states with archaic operational procedures conform to guidelines for ex parte renewals initiated under the ACA by increasing the number and types of data sources used for renewal, expanding avenues for beneficiaries to submit documentation, and many more process improvement metrics. This avenue seems especially promising as only 18 states process more than 50% of renewals ex parte (Tolbert 2023). To regulate compliance with the enrollment and redetermination process, CMS requires states to submit monthly reports of the renewal process (CMS Reporting 2022).

The 6.2 percentage point increase in the FMAP was phased out beginning April 1, 2023. From April 1-June 30, 2023, the enhanced FMAP declines to 5 percentage points, from July 1-Spetember 30, 2023 it will be 2.5 percentage points, from October 1-December 31, 2023 it will be 1.5 percentage points, and it will fully expire January 1, 2024, so long as states comply with certain conditions including good faith efforts to contact, update contact information, and maintenance of eligibility standards. States are incentivized by this phase-out structure to prioritize disenrollment of enrollees that are least likely to continue to be eligible, as they will be responsible for the full state share with no offsetting windfall beginning in 2024.

Many states already have process plans in place for renewals (KFF, 2023), which we reviewed and classified. To complete renewals, states have proposed different approaches to categorizing beneficiaries to prioritize. Some states plan to utilize a cohort (or population based) approach that 1) identifies groups of beneficiaries that are most likely no longer eligible (such as pregnant women, children who aged out, and adults without an eligible dependent), and 2) those most likely with changing circumstances (children/adults with MAGI changes or those transitioning to different eligibility group), and 3) those not falling into the first two cohorts.

Some states favor a time or age-based approach, which is based on the beneficiary's renewal month, and other states plan to utilize a hybrid of both the cohort and time approach. For example, Texas chose a three-tiered cohort approach that identifies those most likely to be ineligible (women who delivered), those most likely to qualify for a different eligibility group (Medicaid children, who may be eligible for CHIP), and those most likely to remain eligible, e.g. people with disabilities (Texas Health and Human Services 2023). States can also develop their own approaches and some states, like Georgia, have chosen an approach intended to minimize improper terminations, mitigate churn, and provides a smooth transition for those qualifying for a Marketplace health plan (Department of Human Services Georgia). The latest data available displays that as of April 21, 2023, 47 states and D.C. had a publicly available plan on how to address the unwinding (CCF, 2023). Appendix Table 2 displays our classification of the approach for each state.

States have reported to CMS when they anticipate starting outreach to beneficiaries and timelines for the first expected terminations of coverage. Most states will start the redetermination process in April, but 18 states initiated renewal processing in February and March. Progress in renewal and termination rates will vary from state to state. For example, Texas expects that 2.7 million Medicaid beneficiaries out of 5.8 million currently covered will lose coverage (or nearly 45%), with losses concentrated among children and women whose coverage was tied to pregnancy. Losses may be especially large because many beneficiaries will not qualify for the same or a different benefit category, especially in non-expansion states.

Because of the volume of redeterminations to process and the length of time since renewals have been required, reaching beneficiaries and staff capacity to process applications and renewals are concerns. States signal they have taken steps to update beneficiaries' contact information to increase response rates and plan on boosting staff and authorizing overtime. Most state Medicaid websites encourage beneficiaries to make sure that their information is up to date. Mail notifications are the standard practice when ex parte renewal is not possible or used, and 35 states report plans to contact beneficiaries by phone, text, and email, if mail is returned without a forwarding address (KFF, 2023). Some states have already done more than others, for example, Arkansas set up a new call center to contact beneficiaries to update their contact information, Kansas and Tennessee have PR campaigns to encourage individuals to register online and update their contact information (Wagner and Erzouki, 2022). For non-ex parte redeterminations, which can be expected to be the majority, almost all states plan to follow-up with beneficiaries to remind them to return the form.

While states have focused on streamlining operational processes, renewals will also depend on the willingness of beneficiaries to engage in the process. Historically, beneficiaries have been exposed to challenging and complicated administrative burdens (Fox and Stazyk 2020; Heinrich et al. 2022). Beneficiaries will be confronted with a process that they have not seen in years, and some may have never experienced a redetermination. Completing paperwork, traveling to appointments, and gathering documentation can take more time than states allow. Additionally, most Medicaid beneficiaries are unaware of the unwinding, which may mean that many are unprepared when they are required to provide documentation (Haley et al. 2022). States can connect with beneficiaries to avoid information asymmetries by investing in navigator programs and partnering with community organizations, as well as insurers who manage plans. The federal government has provided \$98.9 million to 59 navigator organizations to help individuals with enrollment in Medicaid, CHIP, and the Marketplace (CMS 2022).

A lack of Marketplace coverage take up can be result of state administrative barriers, where states' transfers of Medicaid applications to Marketplace program do not succeed. CMS has provided guidelines to improve transitions of applications between Medicaid and Marketplace programs, but there is no reason to believe that states have resolved concerns. Causes for this breakdown can relate to IT infrastructure and lack of compatibility of the Medicaid and Marketplace application programs to determine eligibility. For example, different information is typically provided in Medicaid applications compared to those required to determine Marketplace eligibility, and some information required to determine eligibility for exchange subsidies is not recorded as part of the Medicaid application (MACPAC 2022).

Some states are making innovative choices about how to approach this issue. New Mexico is providing information to the ACA Marketplace on who lost Medicaid coverage. The call center responsible for ACA coverage will then attempt to contact those who lose Medicaid and determine eligibility. Further, the financial burden of shifting to the Marketplace is reduced by providing one month's premium for those transitioning from Medicaid (beWell New Mexico 2023). In Pennsylvania, Medicaid enrollees found not to be eligible are transferred to the ACA exchange and will have an automatically created account with information from the Medicaid application, requiring applicants to only select a plan (Norris 2023). To further facilitate exchange enrollment the federal government set up a special enrollment period for those who lose Medicaid coverage which allows them to apply at any point within the unwinding period rather than the usual time-limited window 60 days before or after the loss; state-based Marketplaces vary in their application windows (CMS, 2023b).

Predictions of insurance coverage transitions and losses vary. The Urban Institute analyzed state Medicaid enrollment data finding that 18 million people would lose Medicaid

coverage (or 21%), but only 3.8 million would become uninsured in 2023 as part of the unwinding (Buettgens and Green 2022). Earlier projections from ASPE based on SIPP data and a December 2021 end date suggested that 15 million or 17.4% of enrollees would leave Medicaid/CHIP programs, of which 55% will be disenrolled from Medicaid due to ineligibility and 45% would lose Medicaid coverage despite remaining eligible (ASPE, 2022). Of those losing coverage, half were expected to become uninsured at least temporarily; this is partly due to a lack of take up of Marketplace coverage and partly due to the Medicaid coverage gap in nonexpansion states. In the longer run, Medicaid coverage may remain higher than prior levels for two reasons 1) federal policy changes for children and pregnant women that allow longer coverage periods (12 month eligibility for children beginning January 1, 2024 and 12 months post-partum coverage available without a waiver), and 2) welcome mat or woodwork effects that may predicate permanently higher take-up among eligible individuals (Hamersma et al., 2019).

Some states have unwinding dashboards displaying the progress and projected impact of the redetermination progress (State Health and Value Strategies 2023). For example, in Minnesota about 87,000 individuals were due for renewal in April and 2,000 had their coverage end. Oregon showed that the renewal process had begun for 199,000 beneficiaries, and 142,000 determinations were made (either approval or denial). However, early data must be interpreted with great caution, because, as noted, states are incentivized to prioritize those least likely to continue to be eligible, but in practice are taking different approaches. In addition, a failure to return paperwork resulting in a procedural denial cannot necessarily be interpreted as a failure on the part of the state; if beneficiaries have other coverage or know they are ineligible, they will be unlikely to engage with a renewal form. Our major takeaway is that there will be significant state variation in who becomes uninsured during the unwinding that will be at least in part due to differences in state choices about implementation, and that it is likely to be correlated with other measures of existing generosity and enrollment.

LOOKING TO THE FUTURE: KEY RESEARCH QUESTIONS

What are the impacts of continuous eligibility? Understanding this will require both contextual inputs and creative causal inference strategies. Researchers must establish whether beneficiaries were aware that they had not been disenrolled. Discussions with stakeholders about continuous coverage for pregnant women repeatedly surfaced concerns about whether people knew they were covered (Johnston et al. 2021). We also need to understand how much of the increase in coverage reflected dual eligibility among, for example, individuals or families who had a return to the labor force and obtained employer-sponsored coverage, in which case Medicaid is the payer of last resort.

In considering how continuous eligibility affected health insurance take-up, we should seek to understand why, despite a steadily improving post-2020 economy, we continued to see a fairly constant rate of applications and increases in coverage. This may suggest the population relying on Medicaid coverage due to temporary shocks may be far larger than previously understood. More generally, the relationship between Medicaid and the economy is understudied. For example, it is difficult to find a measure of the elasticity of Medicaid participation with respect to new unemployment claims, and it will be important to understand whether continuous Medicaid coverage has contributed to labor force participation rates. We should also seek to understand how income and family structure fluctuations affect safety net participation among low-income families, in addition to the effects of safety net programs on income, employment, and family formation, which have been more frequently studied.

Finally, we should seek to understand the causal effects of continuous coverage on health care use and health. Some previous evidence suggests that individuals delay care or aim to time care to periods of coverage (though this may not be optimal). The continuous enrollment period provided individuals with certainty of coverage and did not require delaying or timing care to periods of health coverage, providing an excellent opportunity to learn how important continuous coverage is for health care access and disease management. At the same time, it is important to understand if the growth in Medicaid enrollment may have led to delays in appointment availability and treatment of conditions for Medicaid beneficiaries but also potentially for commercial insured individuals. As such, it will be important to understand whether the unwinding will affect appointment availability and the broader demand for health care.

Several states have approved or proposed Section 1115 waivers to provide 12 months of continuous coverage for adults in Medicaid, and while continuous eligibility for children in Medicaid and CHIP is allowed under state plan amendments (and mandated to 12 month periods starting in 2024), some are requesting Section 1115 waiver approval for multi-year continuous eligibility for children (Lee, 2022). Advocates have suggested automatic enrollment at birth and extended continuous coverage (Alker et al. 2020). In order to understand the impacts of such policies, we should try to learn as much as we can from this period.

State methods to prioritize renewals and how closely they adhere to federal recommendations will clearly vary considerably. Systematically tracking states' redetermination processes and prioritizations will be essential for enabling future study of the impacts of unwinding. Because of the uniqueness of state programs, both national studies, which can use

state variation to understand the impacts of policy, but may miss important correlated contextual factors, and state-specific studies, which are context-dependent and possibly harder to generalize but can hold constant many potentially confounding factors, will be valuable.

What are the most effective ways of targeting eligibility redeterminations?

Redeterminations are understudied, and there are numerous relevant questions that could help us better understand how to implement them more effectively, and how to minimize turnover among those continuously eligible while ensuring that the ineligible are screened out. We need a better descriptive understanding of who loses Medicaid coverage at renewal and why. We currently have very little empirical evidence on how often eligible individuals lose coverage due to administrative barriers, and which policies have especially strong negative long-term effects, rather than short-term ineligibility based on means or circumstances. Understanding the relative numbers would help policymakers better calculate tradeoffs between program integrity and administrative burden. If the ratio of those losing coverage due to administrative barriers compared to ineligibility is high, less frequent renewals are likely to be favored.

The characteristics of those who do and do not successfully renew and/or obtain private insurance will be important to monitor. CMS allowed states to use MCOs to help assist with renewals during the unwinding, but MCOs have financial incentives around enrollment tied to their beneficiary pool, and often also operate Marketplace plans. We should study how the risk pools of plans and markets shift when continuous coverage is available, and whether healthier or sicker people are more likely to maintain coverage. We should understand how many individuals are enrolled with help or support from health care providers, who are also financially incentivized to do so. Whether individuals have patterns of high health care use when initially

enrolled, and whether this is coming from strategic behavior or simply relying on providers to tell them when they have lost coverage, is unclear.

Outreach is another important component of conducting redeterminations. The challenge of outreach in the unwinding environment is twofold: first, the sheer scale, and second, the ability to accurately reach people given that it has been so long since current enrollees would have needed to be in contact with the state and contact information may be outdated. Ongoing work uses a randomized controlled trial to understand the effect of personalized navigator outreach on Medicaid application and renewal, which will provide quick and scalable evidence on these issues (Myerson and Dague, 2023). Take-up is a longstanding problem for social welfare programs, and low take-up is sometimes cited as a reason to not further expand programs. However, very little empirical evidence describes effective mechanisms to increase take-up. Further research on how to best reach current and potential beneficiaries, and whether current rules and regulations about contacting individuals through state information systems are impacting states' abilities to maintain connections, could be extremely valuable.

Were the increased Medicaid dollars effective fiscal stimulus? The effects of this policy may influence how we think about public finance more broadly – how the federal government can quickly and effectively support states during recessions when they have large countercyclical programs that are dependent on decreasing tax revenues.

Understanding the incidence of the dollars will be important. State budgets, MCOs, and provider organizations, all have doubtless come to rely on the higher federal matching funds tied to the increases in Medicaid enrollment. Understanding exactly who and how will be important for considering whether using Medicaid as a periodic transfer program for states during

recessions is an effective fiscal stimulus. In particular, the role of managed care needs to be better understood.

Finally, those who work in or follow health policy are unlikely to forget the constant back and forth, and frantic preparation, each time the date of announcement of PHE expiration approached. This created uncertainty for states, and some states believed that continuous coverage was continuing past the point of being productive. Researchers should consider further the optimal length and timing of such policies and their unwinding. Automatic stabilizer policies that do not require an act of Congress and are tied more directly to state economies may be a way of supporting state governments without overspending or causing larger than expected enrollment increases (e.g. Fiedler et al., 2019).

How should researchers treat this period in long run studies that rely on state and time variation? Possibly most practically for those less interested in the specific topic of continuous coverage, a permanent challenge will exist for researchers using data from this time. Researchers must acknowledge and understand this policy's implications when studying the pandemic era, including changes in caseloads and the composition of the population and the relationship between Medicaid and the economy. If assessing patterns across multiple states, researchers must consider what state policy variation might be particularly important to capture.

Not specific to Medicaid, we must also be extremely cautious when interpreting data collected during COVID-19, particularly for 2020. Census recommended that the 2020 American Community Survey and Survey of Income and Program Participation do not meet their statistical quality standards, and collection challenges existed for other surveys as well (Stewart, 2021). Administrative and survey counts can differ in ways that affect the conclusions we make; for example, the Medicaid undercount was systematically related to Medicaid expansion (Boudreaux

et al. 2019). We should look for creative ways to make use of the data that was collected, while being aware of and further studying its limitations. It is unlikely that the PHE era or the unwinding period will provide data consistent with any prior or future period.

CONCLUSION

Recent growth in Medicaid enrollment during the COVID-19 pandemic has highlighted Medicaid's role as a safety net program and the need for researchers and policymakers to further understand the implications of such programs during times of economic hardship. Our review of relevant literature discusses the implications of pandemic-era policy for Medicaid enrollment and state finances. Federal policymakers will need to understand the impacts to evaluate whether such policy is reasonable for future recessions or whether modifications should be made to better suit their goals. State policymakers need to understand the implications for their finances, negotiating with managed care organizations, and managing enrollment and redetermination processes. To prepare for future crises, and to fully capitalize on what can be learned from this unprecedented period in Medicaid's history, we have proposed an array of important research questions that need to be addressed. Just as researchers have spent years understanding the impacts of ACA Medicaid expansions, so should we work to understand the effects of this enormous temporary expansion of eligibility. We hope that this piece will serve as a valuable reference and inspiration for scholars interested in conducting this work.

REFERENCES

- Abdus, S., (2014) Part-year coverage and access to care for nonelderly adults. Medical care: 709-714.
- Aizer, A., (2003). Low take-up in Medicaid: Does outreach matter and for whom?. American Economic Review 93, 238-241.
- Aizer, A., (2007). Public health insurance, program take-up, and child health. *The Review of Economics* and Statistics 89, 400-415.
- Alker, J. C., Kenney, G. M., & Rosenbaum, S. (2020). Children's health insurance coverage: Progress, problems, and priorities for 2021 and beyond. Health Affairs, 39(10), 1743–1751.
- Allen, H., & Sommers, B. D. (2019). Medicaid expansion and health: assessing the evidence after 5 years. Jama, 322(13), 1253-1254.
- Arbogast, I., Chorniy, A., and Currie, J., (2022). Administrative Burdens and Child Medicaid Enrollments. NBER Working Paper No. w30580.
- ASPE. (2022). Unwinding the Medicaid Continuous Enrollment Provision: Projected Enrollment Effects and Policy Approaches." Issue Brief HP-2022-20. Accessed March 16, 2023. https://aspe.hhs.gov/reports/unwinding-medicaid-continuous-enrollment-provision.
- Auty, S.G., Aswani, M. S., Wahbi, R. N., and Griffith, K. N. (2023). Changes in Health Care Access by Race, Income, and Medicaid Expansion During the COVID-19 Pandemic. Medical Care 61, no. 1: 45-49.
- Aslim, E. G., Mungan, M. C., Navarro, C. I., and Yu, H. (2022). The effect of public health insurance on criminal recidivism. Journal of Policy Analysis and Management 41, no. 1: 45-91.
- Baicker, K. 2005(a). Extensive or intensive generosity? The price and income effects of federal grants. Review of Economics and Statistics 87, no. 2: 371-384.
- Baicker, K. 2005(b). The spillover effects of state spending. Journal of public economics 89, no. 2-3: 529-544.
- Baicker, K., Congdon, W. J., & Mullainathan, S. (2012). Health insurance coverage and take-up: Lessons from behavioral economics. Milbank Quarterly, 90, 107–134.
- Bailey, J., Blascak, N. and Mikhed, V. (2021). Missouri's Medicaid Contraction and Consumer Financial Outcomes. Mimeo.
- Banthin, J, Simpson, M., Buettgens, M., Wang, R., and Blumberg, L. J., (2020). Changes in Health Insurance Coverage Due to the COVID-19 Recession: Preliminary Estimates Using Microsimulation. Washington, DC: Urban Institute.
- Barkowski, S., McLaughlin, J. S., and Ray, A. (2020). A reevaluation of the effects of state and ACA dependent coverage mandates on health insurance coverage. Journal of Policy Analysis and Management 39, no. 3 (2020): 629-663.
- Benitez, J. (2022). Comparison of Unemployment-Related Health Insurance Coverage Changes in Medicaid Expansion vs Nonexpansion States During the COVID-19 Pandemic. JAMA Health Forum 3 (6): e221632.
- Be Well New Mexico beWellnm Board Meeting Accessed May 1, 2023. https://www.bewellnm.com/wp-content/uploads/2023/01/1.27.23-Board-Presentation-Final.pdf
- Bindman A., Chattopadhyay, A., and Auerback G., (2008). Medicaid re-enrollment policies and children's risk of hospitalizations for ambulatory care sensitive conditions. Med Care; 46 (10): 1049 54,
- Blavin, F., Kenney, G. M., and Huntress, M. (2014). The effects of express lane eligibility on Medicaid and CHIP enrollment among children. Health Services Research 49, no. 4: 1268-1289.

- Blum, J., Blackford, C., Moody-Williams, J. (2022). Centers for Medicare & Medicaid Services. Creating a roadmap for the end of the COVID-19 public health emergency. Accessed March 16, 2022. https://www.cms.gov/blog/creating-roadmap-end-covid-19-public-health-emergency
- Borusyak, K., Hull, P., (2020). Non-random exposure to exogenous shocks: Theory and applications. No. w27845. National Bureau of Economic Research.
- Boudreaux, M., Noon, J. M., Fried, B., & Pascale, J. (2019). Medicaid expansion and the Medicaid undercount in the American Community Survey. Health Services Research, 54(6), 1263–1272.
- Buchmueller, T., Ham, J. C., and Shore-Sheppard, L. D. (2015). The medicaid program. Economics of Means-Tested Transfer Programs in the United States, Volume 1: 21-136.
- Buettgens, M., and Green, A. (2022). The Impact of the COVID-19 Public Health Emergency Expiration on All Types of Health Coverage.
- Bullinger, L. R. (2021). Child support and the Affordable Care Act's Medicaid expansions. Journal of Policy Analysis and Management 40, no. 1: 42-77.
- Bullinger, L., and Tello-Trillo, S. (2021).Connecting Medicaid and child support: evidence from the TennCare disenrollment. Review of Economics of the Household 19, no. 3 (2021): 785-812.
- Bundorf, K. M., Gupta, S., and Kim, C. (2021). Trends in US Health Insurance Coverage During the COVID-19 Pandemic. JAMA Health Forum 2 (9): e212487.
- Bundorf, M. K., & Kessler, D. P. (2022). The Responsiveness of Medicaid Spending to the Federal Subsidy. National Tax Journal, 75(4), 661-680.
- Burns, M, and Dague, L. (2017). The effect of expanding Medicaid eligibility on Supplemental Security Income program participation. Journal of Public Economics 149: 20-34.
- Chen, L., and Sommers, B. D. (2020). Work requirements and medicaid disenrollment in Arkansas, Kentucky, Louisiana, and Texas, 2018." *American Journal of Public Health* 110, no. 8: 1208-1210.
- Center for Children and Families. (2023). 50-state unwinding tracker. Georgetown University Health Policy Institute. Accessed 4/21/2023. https://ccf.georgetown.edu/2023/04/01/state-unwindingtracker/
- Centers for Medicare and Medicaid Services. National health expenditure data, table 19: national health expenditures by type of expenditure and program: calendar year 2020. Accessed July 22, 2022. https://www.cms.gov/files/zip/nhe-tables.zip
- Centers for Medicare and Medicaid Services, (2021). Strategies States and the U.S. Territories Can Adopt to Maintain Coverage of Eligible Individuals as They Return to Normal Operations. Accessed March 5, 2023. https://www.medicaid.gov/state-resource-center/downloads/strategiesfor-covrg-of-indiv.pdf
- Centers for Medicare and Medicaid Services, (2022). Biden-Harris Administration Makes Largest Investment Ever in Navigators Ahead of HealthCare.gov Open Enrollment Period. Accessed March 5, 2023. https://www.cms.gov/newsroom/press-releases/biden-harris-administrationmakes-largest-investment-ever-navigators-ahead-healthcaregov-open
- Centers for Medicare and Medicaid Services. (2023a). "SHO# 23-002 RE: Medicaid Continuous Enrollment Condition Changes, Conditions for Receiving the FFCRA Temporary FMAP Increase, Reporting Requirements, and Enforcement Provisions in the Consolidated Appropriations Act, 2023." Available at: https://www.medicaid.gov/federal-policyguidance/downloads/sho23002.pdf
- Centers for Medicare and Medicaid Services. (2023b). Temporary Special Enrollment Period (SEP) for Consumers Losing Medicaid or the Children's Health Insurance Program (CHIP) Coverage Due

to Unwinding of the Medicaid Continuous Enrollment Condition. Available at: https://www.cms.gov/technical-assistance-resources/temp-sep-unwinding-faq.pdf

- Centers for Medicare and Medicaid Services Reporting. (2022) Medicaid and Children's Health Insurance Program Eligibility and Enrollment Data, Specifications for Reporting During Unwinding www.medicaid.gov/resources-for-states/downloads/unwinding-dataspecifications.pdf
- Clemens, J., Ippolito, B. and Veuger, S. (2021). Medicaid and fiscal federalism during the COVID-19 pandemic. Public Budgeting & Finance 41, no. 4: 94-109.
- Congressional Budget Office. (2007). The State Children's Health Insurance Program. Washington, DC: Congressional Budget Office. Available at: https://www.cbo.gov/sites/default/files/110thcongress-2007-2008/reports/05-10-schip.pdf
- Congressional Research Service. (2023). Medicaid: An Overview, CRS Report R43357. Accessed April 6, 2023. https://crsreports.congress.gov/product/pdf/R/R43357
- Courtemanche, C., Marton, J. Ukert, B. Yelowitz, A. and Zapata, D. (2017). Early impacts of the Affordable Care Act on health insurance coverage in Medicaid expansion and non-expansion states. Journal of Policy Analysis and Management 36, no. 1 (2017): 178-210.
- Courtemanche, C., Marton, J. Ukert, B. Yelowitz, A. and Zapata, D. (2018a) Early effects of the Affordable Care Act on health care access, risky health behaviors, and self-assessed health. Southern Economic Journal 84, no. 3: 660-691.
- Courtemanche, C.,, Marton, J., Ukert, B., Yelowitz, A., and Zapata, D. (2018b). Effects of the Affordable Care Act on health care access and self-assessed health after 3 years. INQUIRY: The Journal of Health Care Organization, Provision, and Financing 55: 0046958018796361.
- Courtemanche, C., Marton, J., Ukert, B., Yelowitz, A., Zapata, D., and Fazlul, I. (2019a). The three-year impact of the Affordable Care Act on disparities in insurance coverage. Health Services Research 54 : 307-316.
- Courtemanche, C., Marton, J. Ukert, B. Yelowitz, A. and Zapata, D. (2019b) Effects of the Affordable Care Act on health behaviors after 3 years. Eastern Economic Journal 45: 7-33.
- Courtemanche, C., Marton, J., Ukert, B., Yelowitz, A., and Zapata, D., (2020). The impact of the Affordable Care Act on health care access and self-assessed health in the Trump Era (2017-2018). Health services research 55: 841-850.
- Courtemanche, C., Fazlul, I., Marton, J., Ukert, B., Yelowitz, A., and Zapata, D. (2021). The Affordable Care Act's coverage impacts in the Trump era. Inquiry: The Journal of Health Care Organization, Provision, and Financing 58: 00469580211042973.
- Currie, J. (2006). The take-up of social benefits. In A. J. Auerbach, D. Card, J. M. Quigley (ed.), Public Policy and the Income Distribution (pp. 80–148). New York, NY: Russell Sage Foundation.
- Currie, J., and Duque, V. (2019). Medicaid: what does it do, and can we do it better?. The ANNALS of the American Academy of Political and Social Science 686, no. 1: 148-179.
- Cutler, D. M., and Gruber, J. (1996). Does public insurance crowd out private insurance?. The Quarterly Journal of Economics 111, no. 2: 391-430.
- Dague, L. (2014). The effect of Medicaid premiums on enrollment: A regression discontinuity approach. Journal of Health Economics, 37, 1-12.
- Dague L, Badaracco N, DeLeire T, Sydnor J, Shell Tilhou A, Friedsam D. (2022). Trends in Medicaid enrollment and disenrollment during the early phase of the COVID-19 pandemic in Wisconsin. JAMA Health Forum.;3(2):e214752.

- Dague, L., and Ukert, B. (2022). What Happens to Texans' Insurance Coverage When Medicaid and Marketplace Pandemic-Era Policies End? Policy report for Episcopal Health Foundation. Available at: https://oaktrust.library.tamu.edu/handle/1969.1/196986
- Decker, S.L., Abdus, S., Lipton, B.J. (2022). Eligibility for and enrollment in Medicaid among nonelderly adults after implementation of the Affordable Care Act. Medical Care Research and Review 79(1): 125-132
- De La Mata, D. (2012). The effect of Medicaid eligibility on coverage, utilization, and children's health. Health economics 21, no. 9: 1061-1079.
- DeLeire, T., Leininger, L., Dague, L., Mok, S. and Friedsa, D. (2012). Wisconsin's experience with Medicaid auto-enrollment: lessons for other states. Medicare & medicaid research review 2, no. 2.
- DeLeire, T. (2019). The Effect of Disenrollment from Medicaid on Employment, Insurance Coverage, and Health and Health Care Utilization☆. In Health and Labor Markets, vol. 47, pp. 155-194. Emerald Publishing Limited.
- Dodini, S. (2023). Insurance Subsidies, the Affordable Care Act, and Financial Stability. Journal of Policy Analysis and Management.
- Donohue, J. M., Cole, E. S., James, C. V., Jarlenski, M., Michener, J. D. and Roberts, E. T., (2020). The US Medicaid program: coverage, financing, reforms, and implications for health equity. JAMA 328, no. 11: 1085-1099.
- Duggan, M., & Hayford, T. (2013). Has the shift to managed care reduced Medicaid expenditures? Evidence from state and local-level mandates. Journal of Policy Analysis and Management, 32(3), 505-535.
- Einav, L., and Finkelstein, A., (2023). The risk of losing health insurance in the United States is large, and remained so after the Affordable Care Act. Proceedings of the National Academy of Sciences 120, no. 18 (2023): e2222100120.
- Emerson, J.S., Hull, P. C., Cain, V. A., Novotny, M., Stanley, R. E., and Levine, R. S. (2012). TennCare disenrollment and avoidable hospital visits in Davidson County, Tennessee. Journal of Health Care for the Poor and Underserved 23, no. 1: 425-445.
- Families First Coronavirus Response Act, H.R.6201 116th Congress Public Law 127 (2019-2020). U.S. Government Publishing Office: Available at: https://www.congress.gov/bill/116thcongress/house-bill/6201/text
- Figueroa, J. F., Khorrami, P., Bhanja, A., Orav, E. J., Epstein, A. M., and Sommers, B. D. (2021). COVID-19–related insurance coverage changes and disparities in access to care among lowincome US adults in 4 southern states. In JAMA health forum, vol. 2, no. 8, pp. e212007e212007. American Medical Association.
- Finkelstein, A., Mahoney, N., & Notowidigdo, M. J. (2018). What does (formal) health insurance do, and for whom?. *Annual Review of Economics*, 10, 261-286.
- Fox, A. M., Stazyk, E. C., and Feng, W. (2020). Administrative easing: Rule reduction and medicaid enrollment. Public Administration Review 80, no. 1: 104-117.
- French, M.T., Homer, J. Gumus, G., and Hickling, L. (2016). Key provisions of the Patient Protection and Affordable Care Act (ACA): a systematic review and presentation of early research findings. Health services research 51, no. 5: 1735-1771.
- Frenier, C., Nikpay, S. S., and Golberstein, E. (2020). COVID-19 Has Increased Medicaid Enrollment, But Short-Term Enrollment Changes Are Unrelated To Job Losses: Study examines influence COVID-19 may have had on Medicaid enrollment covering the period of March 1 through June 1, 2020 for 26 states. Health Affairs 39, no. 10: 1822-1831.

- Garfield, R., Claxton, G., Damico, A. and Levitt, L. (2020). Eligibility for ACA Health Coverage Following Job Loss. San Francisco: Kaiser Family Foundation.
- Garrett, B., and Gangopadhyaya, A. (2020). How the COVID-19 Recession Could Affect Health Insurance Coverage. Washington, DC: Urban Institute.
- Garthwaite, C., Gross, T. Notowidigdo, M. J. (2014). Public health insurance, labor supply, and employment lock. The Quarterly Journal of Economics 129, no. 2 : 653-696.
- Garthwaite, C., Gross, T. and Notowidigdo., M. J. (2018). Hospitals as insurers of last resort. American Economic Journal: *Applied Economics* 10, no. 1: 1-39.
- Georgia Department of Human Services. Medicaid Unwinding. Accessed May 5, 2023. https://dhs.georgia.gov/medicaid-unwinding
- Ghosh, A., and Simon, K. (2015). The effect of medicaid on adult hospitalizations: Evidence from Tennessee's Medicaid contraction. No. w21580. National Bureau of Economic Research.
- Giannouchos, T., Ukert, B. and Andrews, C. (2022). Association of Medicaid Expansion With Emergency Department Visits by Medical Urgency. JAMA Network Open 5, no. 6: e2216913e2216913.
- Golberstein E., Abraham J.M., Blewett L.A., Fried B., Hest R., Lukanen E. (2020). Estimates of the impact of COVID-19 on disruptions and potential loss of employer-sponsored health insurance (ESI). Minneapolis (MN): State Health Access Data Assistance Center. Available at: https://www.shadac.org/sites/default/files/publications/UMN%20COVID-19%20ESI%20loss%20Brief_April%202020.pdf
- Gruber, J. (2003). Medicaid. In Means-Tested Transfer Programs in the United States, ed. R. Moffitt. Chicago and London: University of Chicago Press.
- Gruber, J., and K. Simon. (2008). Crowd-Out 10 Years Later: Have Recent Public Insurance Expansions Crowded Out Private Health Insurance? Journal of Health Economics 27 (2): 20117.
- Gruber, J., and Sommers, B. (2019). The Affordable Care Act's effects on patients, providers, and the economy: what we've learned so far. Journal of Policy Analysis and Management 38, no. 4: 1028-1052.
- Halliday, T., and Akee, R. (2020). The impact of Medicaid on medical utilization in a vulnerable population: Evidence from COFA migrants. Health Economics 29, no. 10: 1231-1250.
- Haley, J.M., Karpman, M., Kenney G. M., and Zuckerman, S. (2022). Most Adults in Medicaid-Enrolled Families Are Unaware of Medicaid Renewals Resuming in the Future.
- Hall A.G., Harman J.S., Zhang J., (2008).Lapses in Medicaid coverage: impact on cost and utilization among individuals with diabetes enrolled in Medicaid . Med Care . 46 (12): 1219 25.
- Hamersma, S., Kim, M. and Timpe, B. (2019). The effect of parental Medicaid expansions on children's health insurance coverage. Contemporary Economic Policy 37, no. 2: 297-311.
- Ham, J. C., Ozbeklik, S. and Shore-Sheppard, L. D. (2014). Estimating heterogeneous takeup and crowd-out responses to existing Medicaid income limits and their nonmarginal expansions. Journal of Human Resources 49, no. 4: 872-905
- Ham, J., and Ueda, K. (2021). The Employment Impact of the Provision of Public Health Insurance: A Further Examination of the Effect of the 2005 TennCare Contraction. Journal of Labor Economics 39, no. S1: S199-S238.
- Haley, J. M., Kenney, G. M., Wang, R., Lynch, V., & Buettgens, M. (2018). Medicaid/CHIP participation reached 93.7 percent among eligible children in 2016. Health Affairs, 37(8), 11941199.

- Heavrin, B. S., Fu, R., Han, J., Storrow, A. B., and Lowe, R. (2011). An evaluation of statewide emergency department utilization following Tennessee Medicaid disenrollment. Academic Emergency Medicine 18, no. 11: 1121-1128.
- Heinrich, C. J., Camacho, S., Henderson, S. C., Hernández, M., and Joshi, E. (2022). Consequences of administrative burden for social safety nets that support the healthy development of children. Journal of Policy Analysis and Management 41, no. 1: 11-44.
- Health and Human Services (HHS). (2023). "Fact Sheet: COVID-19 Public Health Emergency Transition Roadmap." Press Release. February 9, 2023. Accessed March 17, 2023. Available at: https://www.hhs.gov/about/news/2023/02/09/fact-sheet-covid-19-public-health-emergencytransition-roadmap.html.
- Herd P, DeLeire T, Harvey H, Moynihan D. (2013). Shifting Administrative Burden to the State: The Case of Medicaid. Public Adm Rev.73(s1):S69-S81.
- Hoodin, D., Marton, J. and Ukert, B. (2022). Do those with chronic health conditions benefit from the Affordable Care Act Medicaid expansion?. Southern Economic Journal.
- Howell, E. M. (2001). The impact of the Medicaid expansions for pregnant women: a synthesis of the evidence. Medical care research and review 58, no. 1: 3-30.
- Howell, E. M., and Kenney, G. M. (2012). The impact of the Medicaid/CHIP expansions on children: a synthesis of the evidence. Medical Care Research and Review 69, no. 4 : 372-396.
- H.R.2617 117th Congress (2021-2022): Consolidated Appropriations Act, 2023. Legislation. 12/29/2022. December 29, 2022. Available at: https://www.congress.gov/bill/117th-congress/house-bill/2617/text
- H.R.1319 117th Congress (2021-2022): American Rescue Plan Act of 2021." Legislation. 03/11/2021. March 11, 2021. http://www.congress.gov/.
- Jacobs, P. D., and Moriya, A. S. (2023). Changes In Health Coverage During The COVID-19 Pandemic: Study examines changes in US health insurance coverage during the COVID-19 pandemic. Health Affairs 42, no. 5: 721-726.
- Johnston, E., Haley, J., Thomas, T. (2021) "Promoting Continuous Coverage during the Postpartum Period," Urban Institute Research Report. Available at: https://www.urban.org/research/publication/promoting-continuous-coverage-during-postpartumperiod
- Kaestner, R., Garrett, B., Chen, J., Gangopadhyaya, A., & Fleming, C. (2017). Effects of ACA Medicaid expansions on health insurance coverage and labor supply. Journal of Policy Analysis and Management, 36, 608–642.
- Kaiser Family Foundation. (2023a). Medicaid Ex-Parte Renewals. Accessed March 27, 2023. https://www.kff.org/medicaid/state-indicator/medicaid-renewalprocesses/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22 :%22asc%22%7D
- Kaiser Family Foundation. (2023b). Status of State Medicaid Expansion Decisions: Interactive Map. KFF (blog). Accessed March 27, 2023. https://www.kff.org/medicaid/issue-brief/status-of-statemedicaid-expansion-decisions-interactive-map/.
- Keisler-Starkey, K., and Bunch, L. N. (2022). Health insurance coverage in the United States: 2021. Washington, DC: US Census Bureau. Available at: https://www.census.gov/library/publications/2022/demo/p60-278.html
- Khorrami, P., and Sommers, B. D. (2021). Changes in US Medicaid enrollment during the COVID-19 pandemic. JAMA network open 4, no. 5 (2021): e219463-e219463.

- Koch, T. G. (2013). Using RD design to understand heterogeneity in health insurance crowd-out. Journal of Health Economics 32, no. 3: 599-611.
- Koetting, M. (2016). Medicaid contradictions: Adding, subtracting, and redeterminations in Illinois. Journal of Health Politics, Policy and Law 41, no. 2: 225-237.
- Kronebusch, K., and Elbel, B. (2004). Simplifying children's Medicaid and SCHIP. Health Affairs 23, no. 3: 233-246.
- Ku, L., and Platt, I. (2022). "Duration and Continuity of Medicaid Enrollment Before the COVID-19 Pandemic." In JAMA Health Forum, vol. 3, no. 12, pp. e224732-e224732. American Medical Association.
- Lee, R. (2022). More States Move to Expand Continuous Eligibility for Children and Adults in Medicaid. Center For Children and Families (blog). May 24, 2022. Accessed April 19, 2023. https://ccf.georgetown.edu/2022/05/24/more-states-move-to-expand-continuous-eligibility-forchildren-and-adults-in-medicaid/.
- Lo Sasso, A. T., and Buchmueller, T. C. (2004). The effect of the state children's health insurance program on health insurance coverage. Journal of health economics 23, no. 5 : 1059-1082.
- Maclean, J. C., and Saloner, B. (2019). The effect of public insurance expansions on substance use disorder treatment: Evidence from the Affordable Care Act. *Journal of Policy Analysis and Management*, 38, 366–393.
- Maclean, J. C., Tello-Trillo, S. and Webber, D. (2023) Losing insurance and psychiatric hospitalizations. Journal of Economic Behavior & Organization 205: 508-527.
- MACPAC. (2021). An Updated Look at Rates of Churn and Continuous Coverage in Medicaid and CHIP." October 2021. Issue Brief. Accessed March 16, 2023. https://www.macpac.gov/publication/an-updated-look-at-rates-of-churn-and-continuouscoverage-in-medicaid-and-chip-abstract/.
- MACPAC. (2022). Transitions Between Medicaid, CHIP, and Exchange Coverage chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.macpac.gov/wpcontent/uploads/2022/07/Coverage-transitions-issue-brief.pdf
- Mazurenko, O., Balio, C. P., Agarwal, R., Carroll, A. E. and Menachemi, N. (2018). The effects of Medicaid expansion under the ACA: a systematic review. Health Affairs 37, no. 6: 944-950.
- McInerney, M., Mellor, J. M., and Sabik, L. M. (2021). Welcome mats and on-ramps for older adults: The impact of the affordable care act's medicaid expansions on dual enrollment in medicare and medicaid. Journal of Policy Analysis and Management 40, no. 1: 12-41.
- Miller, S., Hu, L., Kaestner, R., Mazumder, B. and Wong, A. (2021). The ACA Medicaid expansion in Michigan and financial health. Journal of Policy Analysis and Management 40, no. 2 : 348-375
- Moffitt, R. A. (2015). Introduction to Economics of Means-Tested Transfer Programs in the United States, Volume 1. In Economics of Means-Tested Transfer Programs in the United States, Volume 1, pp. 1-19. University of Chicago Press.
- Moynihan, D. P., Herd, P. and Ribgy, E. (2016). Policymaking by other means: Do states use administrative barriers to limit access to Medicaid?. Administration & Society 48, no. 4 (2016): 497-524
- Musumeci, M. and Rudowitz, R. (2017). Medicaid Retroactive Coverage Waivers: Implications for Beneficiaries, Providers, and States. KFF Issue Brief. November 10, 2017._Accessed May 7, 2023,_https://www.kff.org/medicaid/issue-brief/medicaid-retroactive-coverage-waiversimplications-for-beneficiaries-providers-and-states/.
- Myerson R. and Dague, L. (2023). Identifying Scalable Strategies to Maintain Coverage As Medicaid Continuous Enrollment Ends. Health Affairs Forefront.

- Myerson, R. Tilipman, N. Feher, A., Li, H., Yin, W., Menashe, I. (2022). Personalized Telephone Outreach Increased Health Insurance Take-Up For Hard-To-Reach Populations, But Challenges Remain. Health Aff (Millwood). ;41(1):129-137.
- Norris, L. (2023). Medicaid eligibility and enrollment in Pennsylvania. Health Insurance Org. Accessed May 12, 2023, from https://www.healthinsurance.org/medicaid/pennsylvania/#unwind
- Pei, Z. (2017). Eligibility recertification and dynamic opt-in incentives in income-tested social programs: Evidence from Medicaid/CHIP. American Economic Journal: Economic Policy, 9(1), 241-276.
- Perez, V. (2018). Effect of privatized managed care on public insurance spending and generosity: Evidence from Medicaid. Health Economics, 27(3), 557-575.
- Rakus, A., and Soni, A. (2022). Association between state Medicaid expansion status and health outcomes during the COVID-19 pandemic. Health Services Research 57, no. 6: 1332-1341.
- Rennane, S., and Dick, D. (2023). Effects of Medicaid Automatic Enrollment on Disparities in Insurance Coverage and Caregiver Burden for Children with Special Health Care Needs. Medical Care Research and Review 80, no. 1: 65-78.
- Roberts, E. T., Glynn, A. Donohue, J. M., and Sabik, L. M. (2021). The relationship between take-up of prescription drug subsidies and Medicaid among low-income Medicare beneficiaries. Journal of General Internal Medicine 36: 2873-2876.
- Rosenbaum, S., Collins, S. R., Musumeci, M. and Somodevilla, A. (2023). Unwinding Continuous Medicaid Enrollment. New England Journal of Medicine .
- Shafer, P.R., Anderson, D. M., Whitaker, R. Wong, C. A., and Wright, B. (2021). Association of unemployment with medicaid enrollment by social vulnerability in North Carolina during COVID-19. Health Affairs 40, no. 9: 1491-1500.
- Shupe, C (2023). Public Health Insurance and Medical Spending: The Incidence of the ACA Medicaid Expansion. Journal of Policy Analysis and Management, 42, 137-165.
- Simon, K., Soni, A., & Cawley, J. (2017). The impact of health insurance on preventive care and health behaviors: Evidence from the first two years of the ACA Medicaid expansions. Journal of Policy Analysis and Management, 36, 390–417.
- Sommers, B. D., Goldman, A. L., Blendon, R. J., Orav, E. J., and Epstein, A. M. (2019). Medicaid work requirements—results from the first year in Arkansas. New England Journal of Medicine 381, no. 11: 1073-1082.
- Sommers, B. D., Chen, L., Blendon, R. J., Orav, E. J., and Epstein, A. M. (2020). Medicaid Work Requirements In Arkansas: Two-Year Impacts On Coverage, Employment, And Affordability Of Care: Study examines the impact of the Arkansas Medicaid work requirement before and after a federal judge put the policy on hold. Health Affairs 39, no. 9: 1522-1530.
- Soni, A., Wherry, L. R., & Simon, K. I. (2020). How Have ACA Insurance Expansions Affected Health Outcomes? Findings From The Literature: A literature review of the Affordable Care Act's effects on health outcomes for non-elderly adults. Health Affairs, 39(3), 371-378.
- Stuber, J., and Kronebusch, K. Stigma and other determinants of participation in TANF and Medicaid. Journal of Policy Analysis and Management 23, no. 3 (2004).: 509-530.
- Stuber, J., and Bradley, E. (2005). Barriers to Medicaid enrollment: who is at risk?. american Journal of Public health 95, no. 2: 292-298.
- Sugar, S., Peters, C., De Lew N., Sommers, B. (2021). Medicaid churning and continuity of care: evidence and policy considerations before and after the COVID-19 pandemic. US Department of Health and Human Services.

- State Health and Value Strategies. State Dashboards to Monitor the Unwinding of the Medicaid Continuous Coverage Requirement. Accessed May 7, 2023. https://www.shvs.org/statedashboards-to-monitor-the-unwinding-of-the-medicaid-continuous-coverage-requirement/
- Stewart, A. (2021). Changes in Federal Surveys Due to and during COVID-19. Minneapolis: State Health. Access Data Assistance Center.
- Sun, R., Staiger, B., Chan, A., Baker, L. C. and Hernandez-Boussard, T. (2022). Changes in Medicaid enrollment during the COVID-19 pandemic across 6 states. Medicine 101, no. 52: e32487.
- Tarazi, W. W., Green, T. L., and Sabik, L. M (2017). "Medicaid disenrollment and disparities in access to care: evidence from Tennessee." Health services research 52, no. 3:1156
- Tello-Trillo, D. S. (2021). Effects of losing public health insurance on preventative care, health, and emergency department use: Evidence from the TennCare disenrollment. Southern Economic Journal 88, no. 1 : 322-366.
- Texas Health and Human Services (2023) Accessed May 2, 2023. www.hhs.texas.gov/sites/default/files/documents/feb-2023-smmcac-agenda-item-5b.pdf
- Tolbert J, 2023. 10 Things to Know About the Unwinding of the Medicaid Continuous Enrollment Provision. KFF. Published April 5, 2023. Accessed May 17, 2023. https://www.kff.org/medicaid/issue-brief/10-things-to-know-about-the-unwinding-of-themedicaid-continuous-enrollment-provision/
- US House of Representatives. Families First Coronavirus Response Act, HR 6201. 116th Congress. 2020. Accessed December 29, 2021. https://www.congress.gov/bill/116th-congress/house-bill/6201/text/pl
- Vogler, J. (2020). Access to healthcare and criminal behavior: Evidence from the ACA Medicaid expansions. Journal of Policy Analysis and Management 39, no. 4: 1166-1213.
- Watson, T. (2014). Inside the refrigerator: Immigration enforcement and chilling effects in Medicaid participation. American Economic Journal: Economic Policy 6, no. 3: 313-338
- Wagner, J, and Erzouki, F., (2022). "Time to Get It Right: State Actions Now Can Preserve Medicaid Coverage When Public Health Emergency Ends." Accessed April 20, 2023. https://www.cbpp.org/research/health/time-to-get-it-right-state-actions-now-can-preservemedicaid-coverage-when-public.
- Wooldridge et al. (2003). Interim Evaluation Report: Congressionally Mandated Evaluation of the State Children's Health Insurance Program. n.d. ASPE. Accessed April 21, 2023. https://aspe.hhs.gov/reports/interim-evaluation-report-congressionally-mandated-evaluationstate-childrens-health-insurance-0.
- Wright, B. J., Garcia-Alexander, G., Weller, M. A., and Baicker, K. (2017). Low-cost behavioral nudges increase Medicaid take-up among eligible residents of Oregon. Health Affairs 36, no. 5: 838-845.
- Wright, B., Anderson, D., Whitaker, R., Shrader, P., Bettger, J. P. Wong, C., and Shafer, P. (2021). Comparing health care use and costs among new Medicaid enrollees before and during the COVID-19 pandemic." BMC Health Services Research 21, no. 1: 1-10.
- Wu, D., and Meyer, B. (2022). Certification and recertification in welfare programs: what happens when automation goes wrong? Mimeo.
- Zuckerman, S., Miller, D. M. and Pape, E. S. (2009). Missouri's 2005 Medicaid Cuts: How Did They Affect Enrollees And Providers? A cautionary tale from the Show-Me State, where deep Medicaid cuts affected both patients and providers but didn't slow spending as much as was hoped. Health Affairs 28.