Center for Financial Security
UNIVERSITY OF WISCONSIN-MADISON
Retirement & Disability Research Center

Katie Fitzpatrick
M.P.P, Ph.D.

Keisha Solomon
Ph.D.

Health, Health Insurance, and Financial Security

Center for Financial Security

University of
Wisconsin-Madison

1300 Linden Drive
Madison, WI 53706

608-890-0229
cfs@mailplus.wisc.edu
cfs.wisc.edu

The research reported herein was performed in whole or part from research activities performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement and Disability Consortium. The opinions and conclusions expressed are solely those of the author(s) and do not represent the opinions or policy of SSA or any agency of the Federal Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply endorsement, recommendation or favoring by the United States Government or any agency thereof.

Abstract

The recent rise in economic hardship highlights the need to prepare for financial emergencies. Even before the pandemic, many lacked savings for unexpected expenses, retirement, or other goals; many experienced financial problems from poor health, uninsurance, and/or medical expenses. This was especially true for low-income and/or non-white households who, on average, have worse health and less wealth.

This project examines how health insurance affects economic security for those near retirement, defined as individuals aged 45 through 64, but not yet Medicare-eligible. We test if Medicaid improved financial well-being, emergency savings, and retirement preparation before and during the COVID-19 pandemic by using differences in Medicaid eligibility based on state adoptions of the Medicaid expansion contained in the Affordable Care Act (ACA). Using the 2013 through 2019 Survey of Household Economics and Decisionmaking (SHED), we find that Medicaid coverage increased after state expansions of Medicaid, particularly for historically disadvantaged and vulnerable subpopulations. However, we do not find causal evidence that expanded Medicaid access significantly improved financial well-being in several dimensions for households near retirement, either for the population overall or for the specific subpopulations of interest. Examining the pandemic time period with the Census Household Pulse data, we do find that states that expanded Medicaid fared better in terms of financial hardship measures than individuals in states that did not expand Medicaid.

Keywords: Emergency savings, Medicaid, Financial Hardship, Health Insurance
JEL Classification: D14, G5, I13, I38, J26, P46

1. Introduction/ Literature Review

The Patient Protection and Affordable Care Act (ACA) expanded health insurance options and created other changes in the health insurance and healthcare industry. Approximately 35.8 million individuals now have insurance coverage through the ACA, including 16.8 million through state-level Medicaid expansions (Lee et al. 2022). Still, nearly 8.6 percent (28.0 million people) of individuals under age 65 are uninsured, including 9.6 percent of individuals approaching retirement, defined as those aged 45 through 64 (Keisler-Starkey and Bunch 2021). An additional 21.3 percent are underinsured, meaning their health insurance is insufficient to protect them from the financial risk of healthcare expenses (Collins et al. 2020).

Uninsured and underinsured adults – particularly those approaching retirement – are at significant financial risk for medical expenses that affect both their near-term and long-term financial health (Glied et al. 2020; Himmelstein et al. 2019; Collins 2015; Sommers 2020). Medical debt is now the largest debt in collections in the US, and hospital admissions account for an estimated 4 percent of all bankruptcy filings among the non-elderly (Dobkin et al. 2018; Kluender et al. 2021). Approximately 20 percent of adults had unexpected medical bills of between $1,000 and $5,000 in the previous year, and 40 percent of these individuals have unpaid debt from these expenses (Lloro et al. 2022). Out-of-pocket healthcare expenses are a significant financial risk for many households, as only two-thirds of Americans report they could pay an unexpected $400 expense from cash, savings, or a credit card paid off at the next statement (Lloro et al. 2022).

Uninsurance and underinsurance may deter individuals from seeking healthcare because of the out-of-pocket costs they may experience. Inability to access healthcare, particularly for those in poor health, may lead to exiting the labor market before desired, reliance on means-tested programs like Supplemental Security Income (SSI), and inability to keep retirement planning on track (Munnell et al. 2018). This exacerbates existing problems in retirement preparation: 25 percent of the non-retired report they have no retirement savings and a little more than a third feel their savings is on track (Lloro et al. 2020). Issues of uninsurance, underinsurance, and inability to prepare for retirement are particularly salient for lower-income households and racial/ethnic subpopulations who were disproportionately affected by the

pandemic, often experience poorer health, are less likely to be insured, have little savings, and have less wealth than other groups (Gjertson 2016).

Medicaid is an important policy lever to improve well-being and may be critical for those near retirement. Insured individuals – particularly those with adequate insurance to meet their healthcare needs – are less likely to experience medical debt, and rates of forgoing medical treatment due to an inability to pay are higher among the uninsured (Callison and Walker 2021; Canilang et al. 2020). Medicaid provides relatively generous insurance coverage with low or no premiums or cost sharing. A growing body of work explores how insurance, in general, and Medicaid specifically, improves not only self-reported health (Baicker et al. 2013; Courtemanche and Zapata 2014; Finkelstein et al. 2012; Gruber and Sommers 2019), mortality (Goldin et al. 2021; Miller et al. 2021; Sommers et al. 2012), and inability to access care because of cost (Miller and Wherry 2017; Sommers et al. 2017) but also economic outcomes like retirement, financial hardship (Finkelstein et al. 2012; Fitzpatrick and Fitzpatrick 2021; Miller et al. 2021), and debt (Caswell et al. 2017; Hu et al. 2018; Kluender et al. 2021).

Despite the benefits of insurance, prior to the ACA, most lower-income adults without children were ineligible for Medicaid coverage, even if the adults were very low-income. Adults in states choosing not to adopt the Medicaid expansion remain without Medicaid eligibility. Further, in eight states, lower-income adults receiving Supplemental Security Income (SSI) benefits do not have automatic Medicaid eligibility.

This research explores the role of Medicaid in improving the financial well-being of older adults. It examines the role of Medicaid access in self-reported well-being over the 2013 through 2019 period. It then explores how individuals in states with and without Medicaid expansion fared with the COVID-19 pandemic. Whether Medicaid affected the financial health of households near retirement before and during the ongoing COVID-19 pandemic will inform how current and future Social Security beneficiaries, including those with dual income support, will fare once they reach retirement.

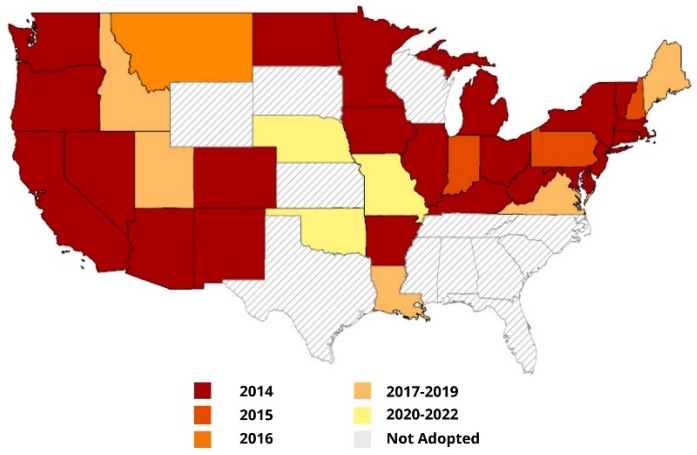
The Medicaid expansion.

The ACA sought to achieve universal health insurance coverage through individual and employer mandates, subsidies to purchase health insurance on newly created state-based insurance exchanges, and an expansion of Medicaid. The ACA also set minimum requirements for health insurance and made other regulatory changes to industry practices. The ACA was

signed into law on March 23, 2010, and the individual mandate, creation of state-based insurance markets, and Medicaid expansion began in 2014. In total, the ACA was the largest health insurance reform since the 1965 creation of Medicare and Medicaid.

The ACA's Medicaid expansion was intended to help individuals at or just above the poverty line (138 percent of federal poverty level (FPL)) gain public health insurance coverage, while households above this range and up to middle-income (400 percent of FPL) could be eligible for progressive subsidies to purchase insurance in the individual market. The 2012 Supreme Court decision in *National Federation of Independent Business v. Sebelius* allowed states to opt out of the expansion. Originally 26 states elected to expand their Medicaid programs; through 2019, an additional nine states implemented an expansion; three more states implemented an expansion during 2020. Figure 1 provides a map of state Medicaid expansions and the years these occurred.

Figure 1. State Medicaid Expansions with Adoption Year



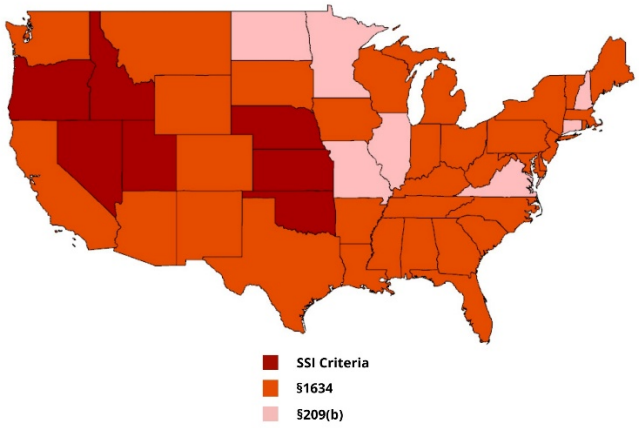
Notes: Medicaid adoption dates from the Kaiser Family Foundation.

A number of studies find that the ACA increased health insurance coverage overall, with the largest increases in health insurance coverage occurring for individuals that were most likely to be uninsured prior to the ACA and eligible for the Medicaid expansion, including minorities, lower-income households, those without a college degree, single, and childless (Buchmueller et al. 2016; Kominski et al. 2017; Long et al. 2014; Smith and Medalia 2015; Courtemanche et al. 2016).

As shown in Figure 1, the ACA's Medicaid expansion increased access to Medicaid for lower-income adults in states that chose the expansion. Before states adopted the Medicaid expansion, lower-income adults without dependent children were typically only eligible for Medicaid coverage if they were receiving SSI due to a work-limiting disability (Burns and Dague 2017; Courtemarche et al. 2017; Wagner 2015). In general, states must provide SSI-recipients Medicaid coverage unless they used more restrictive criteria in their Medicaid program rules prior to 1972 (Colello and Morton 2019).

Thus, with the existing link between Medicaid and Supplemental Security Income (SSI), SSI recipients might have seen little change in their Medicaid eligibility. However, the administrative burdens in receiving Medicaid for SSI recipients varied based on state rules, as shown in Figure 2. Two different policies exist that provide for automatic receipt of Medicaid for SSI recipients: Section 1634 and SSI Criteria States. Section 1634 states refer to Section 1634 of the Social Security Act, which allows states to have SSA make the determination of Medicaid eligibility for the state. In Section 1634 states, an SSI application is also an application for Medicaid, and recertification for SSI is also recertification for Medicaid; Medicaid receipt begins with SSI receipt. In 2019, 35 states (including the District of Columbia) used Section 1634. SSI criteria states use the same eligibility criteria for SSI and Medicaid, but the state determines Medicaid eligibility through a separate Medicaid application. In 2019, eight states used this option. In the remaining eight states, the state Medicaid eligibility and application process is more restrictive than SSI eligibility. These states are referred to as 209(b) states.

Figure 2. State Pathways to Medicaid for SSI Recipients in 2020



Notes: Data on Medicaid and SSI rules from Colello and Morton (2019).

With the Medicaid expansion providing Medicaid access to lower-income adults without requiring SSI receipt, the benefit-cost decision to enroll in SSI changed. After the Medicaid expansion, SSI recipients could maintain health insurance coverage but be lifted from the earnings limits of SSI. Recent work found that the Medicaid expansion was associated with declines in SSI receipt (Hall et al. 2018; Soni et al. 2017).

The Medicaid expansion and households near retirement.

A large and emerging literature establishes the benefits of the ACA's Medicaid expansion on health insurance coverage, access to care, financial hardship, and more (Antonisse et al. 2020; Gruber and Sommers 2019; Nikpay et al. 2020). Much of our understanding of the benefits of Medicaid comes from studies focusing on the overall population. Yet, households with adults near retirement but not yet Medicare-eligible may receive substantial benefits from the Medicaid expansions. Few studies examine this population, but those that do demonstrate that the Medicaid expansion was associated with a 4.4 percentage point decline in self-reported uninsurance and a 12.8 percentage point increase in any Medicaid coverage during the year (Miller et al. 2021).

Relatively generous health insurance coverage like Medicaid can protect households, particularly lower-income households with adults near retirement age who are more likely to be in worse health or have chronic conditions. Individuals who are uninsured or underinsured may have to delay or forgo health care: 9 percent of non-elderly adults delay or go without healthcare because of costs; these rates are greater for those in worse health (16 percent) and the uninsured (30 percent) (Ortaliza et al. 2022). With declines in out-of-pocket spending and medical debt, consumer credit indicators and financial well-being should improve.

Medicaid and the pandemic.

Like other means-tested programs, Medicaid is a counter-cyclical program. Medicaid has been a critical policy tool during the pandemic, particularly with the large drop in employment (Michener 2021). At the beginning of the pandemic, the Center for Medicare and Medicaid Services (CMS) allowed states to have more flexibility in state Medicaid programs through several new policies, including continuous enrollment policies, telehealth, and more (Corallo and Moreno 2022). Nearly every state adopted at least some flexibility in its Medicaid program, regardless of whether they were an expansion state. This flexibility increased Medicaid enrollment, particularly in the 37 states that adopted the Medicaid expansion (Allen and Sommers 2020; Khorrami and Sommers 2021).

2. Data and Methods

Data for this analysis come from two sources: the Survey of Household Economics and Decisionmaking (SHED) and the Census Household Pulse Survey (Pulse). To examine how Medicaid eligibility affected households near retirement over the long-term but before the pandemic, we use SHED data for the period 2013 through 2019. We use two surveys to analyze how Medicaid eligibility affected financial hardship during the COVID-19 pandemic. Our primary survey uses Pulse data covering the period of April 23, 2020, through February 7, 2022. We also examine two COVID-19 supplements conducted in April 2020 and July 2020 that examined how respondents to the 2019 SHED survey fared during the pandemic. In all analyses,

we limit the sample to respondents aged 45 through 64 to focus on the population of households near retirement.

Survey of household economics and decision making (SHED).

The SHED is an annual survey sponsored by the Board of Governors of the Federal Reserve System. First conducted in 2013, the goal of the SHED is to measure household economic well-being and identify risks to household finances. The SHED sample originates from the GfK Knowledge Panel, a national representation sample of US adults. The SHED is conducted online and includes questions related to insurance coverage, consumer debt, financial hardship, and savings, as well as detailed demographic and household characteristics. The SHED data allow for the analysis of health insurance coverage, out-of-pocket medical spending, consumer debt, financial hardship, retirement preparation, and receipt of benefits administered by the Social Security Administration.

The SHED included two supplements during the COVID-19 public health crisis. Drawn from the sample of 2019 SHED respondents and fielded in April 2020 and July 2020, these supplements ask a limited set of questions on financial hardship. They do not ask respondents about their current health insurance, so we focus on state policy decisions to expand Medicaid.

We merge SHED data with macroeconomic labor market data from the Bureau of Labor Statistics (BLS), data on state Medicaid expansions from the Kaiser Family Foundation (KFF), and state rules regarding Medicaid eligibility for SSI recipients from the Congressional Research Service. For the SHED COVID-19 supplement data, we merge this with data on COVID-19 cases and deaths compiled by Johns Hopkins University's Center for Systems Science and Engineering available on GitHub.

Summary statistics.

In Table 1, we present the the demographic characteristics of the sample, and Table 2 shows the economic characteristics of the sample. In terms of the age composition, 18 percent of the sample is 45-49, 23 percent is aged 50-54, 30 percent is aged 55-59, and 29 percent is 60-64. In terms of race/ethnicity, nearly three-quarters of the sample is headed by a white non-Hispanic household, 11 percent of respondents are Black, non-Hispanic persons, and 11 percent of

respondents are Hispanic persons. The average household size is 2.4 persons, and approximately half of the respondents are female.

Table 1. Household Demographic Characteristics, SHED 2013-2019

	Overall Sample	Expansion State	Non-Expansion State	Difference	
	(1)	(2)	(3)	(4)	
Household Respondent Age 45-49	0.180	0.180	0.170	0.010	
	(0.380)	(0.382)	(0.376)		
Household Respondent Age 50-54	0.230	0.230	0.230	0.000	
	(0.423)	(0.423)	(0.423)		
Household Respondent Age 55-59	0.300	0.300	0.300	0.000	
	(0.458)	(0.457)	(0.459)		
Household Respondent Age 60-64	0.290	0.290	0.300	-0.010	
	(0.455)	(0.454)	(0.456)		
Household Respondent Married	0.620	0.620	0.610	0.010	
	(0.486)	(0.486)	(0.487)		
Household Size	2.410	2.420	2.380	0.040	
	(1.308)	(1.314)	(1.293)		
Number of Children in Household	0.320	0.320	0.320	0.000	
	(0.765)	(0.756)	(0.783)		
Number of Children in Household, for Households with Children	1.620	1.610	1.630	-0.020	
	(0.916)	(0.881)	(0.988)		
Number of Adults in Household	2.080	2.100	2.060	0.040	
	(0.946)	(0.966)	(0.902)		
Female Household Respondent	0.490	0.480	0.510	-0.030	***
	(0.500)	(0.500)	(0.500)		
Hispanic Household Respondent	0.110	0.100	0.130	-0.030	
	(0.310)	(0.298)	(0.332)		
White, Non-Hispanic Household Respondent	0.720	0.740	0.680	0.060	
	(0.450)	(0.440)	(0.468)		
Black, Non-Hispanic Household Respondent	0.110	0.090	0.150	-0.060	**
	(0.309)	(0.285)	(0.353)		
Other Non-Hispanic Household Respondent	0.070	0.080	0.050	0.030	
	(0.251)	(0.264)	(0.219)		
Observations	26,169	17,915	8,254		

Note: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients are from the Congressional Research Service. Asterisks denote differences of sample means, with standard errors clustered by state, across Medicaid Expansion (Column 2) and Non-Expansion States (Column 3) as follows *** p<0.01, ** p<0.05, * p<0.1.

Next, we turn to Table 2 with the economic characteristics of the sample, including the educational attainment and labor supply. Approximately 5 percent of the sample has less than a high school degree, 27 percent has a high school or GED degree, 32 percent has some college but less than a four-year degree, and 36 percent has a college degree or more. A majority of the sample is currently working, either for an employer (59 percent) or is self-employed (9 percent). The remaining portion of the sample is currently retired (14 percent), not-working (5 percent), or currently unemployed (4 percent).

Table 2. Household Economic and State Characteristics, SHED 2013-2019

	Overall Sample	Expansion State	Non-Expansion State	Difference	
	(1)	(2)	(3)	(4)	
Household Respondent has less than HS Education	0.050	0.050	0.060	-0.010	*
	(0.226)	(0.217)	(0.244)		
Household Respondent has a HS or GED Education	0.270	0.270	0.270	0.000	
	(0.442)	(0.441)	(0.445)		
Household Respondent has Some College No Degree	0.320	0.320	0.330	-0.010	
	(0.468)	(0.467)	(0.470)		
Household Respondent has a Bachelor's degree or higher	0.360	0.360	0.340	0.020	
	(0.479)	(0.481)	(0.473)		
Household Respondent Currently Working as Paid Employee	0.590	0.600	0.570	0.030	**
	(0.492)	(0.490)	(0.496)		
Household Respondent Currently Working as Self-Employed	0.090	0.090	0.100	-0.010	
	(0.291)	(0.290)	(0.295)		
Household Respondent Currently Retired	0.140	0.130	0.150	-0.020	**
	(0.345)	(0.340)	(0.356)		
Household Respondent Currently Not Working, Disabled	0.090	0.090	0.100	-0.010	*
	(0.288)	(0.282)	(0.302)		
Household Respondent Currently Unemployed	0.040	0.040	0.040	0.000	
	(0.192)	(0.193)	(0.189)		
Household Respondent Currently Not Working for Other Reasons	0.050	0.050	0.050	0.000	
	(0.215)	(0.214)	(0.219)		
Observations	26,169	17,915	8,254		

Note: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients are from the Congressional Research Service. Asterisks denote differences of sample means, with standard errors clustered by state, across Medicaid Expansion (Column 2) and Non-Expansion States (Column 3) as follows *** p<0.01, ** p<0.05, * p<0.1.

Respondents in states that implemented a Medicaid expansion by 2020 have relatively similar characteristics to those in states that did not implement a Medicaid expansion by 2020, with the exception of households with female respondents (3.0 percentage point difference, $p<0.01$), households with Black, non-Hispanic respondents (6.0 percentage point difference, $p=0.02$), respondents with less than a high school education (1.0 percentage point difference, $p=0.07$), working respondents (3.0 percentage point difference, $p=0.03$), retired respondents (2.0 percentage point difference, $p=0.05$), disabled respondents (1.5 percentage point difference, $p=0.09$), and differences in state unemployment rates (0.45 percentage point difference, $p=0.02$).

We consider several outcomes, included in Table 3. First, we present any health insurance. Overall, 87.7 percent of the sample reports health insurance coverage, with insurance coverage rates 6.3 percentage points ($p<0.001$) higher in states that expanded coverage by 2020. Medicaid coverage, available in the SHED from 2013-2018, is approximately 13.5 percent of the sample and 4.8 percentage points ($p<0.001$) greater in states that ever expanded. Reports of Medicaid or Medicare coverage, available over the entire period, include 19.0 percent of the sample, which is 3.6 percentage points ($p<0.001$) greater in states that expanded Medicaid.

Reducing unexpected medical expenses and medical debt are key mechanisms that show insurance can improve financial well-being. The SHED has a continuous measure of out-of-pocket expenses for the 2015-2017 period and a variable indicating the range of out-of-pocket expenses in 2018 and 2019. Therefore, we create a time series of out-of-pocket spending with three dichotomous variables: no unexpected out-of-pocket expenses, $1-$499 out-of-pocket expenses, and $500 or more. Overall, 26 percent of the sample reports an unexpected out-of-pocket major medical expense that was not completely paid for by insurance during the past 12 months. These reports are steady over time but slightly higher in states that did not adopt the Medicaid expansion. Some of these unexpected expenses were quite large. Of those with unexpected out-of-pocket major medical expenses, only 17.7 percent had expenses of less than $500.

Out-of-pocket medical expenses can lead to consumer debt. Approximately half of the sample households report credit card debt, but only a quarter of households report that their credit card debt has increased over the previous twelve months. Less than one-quarter are not confident they would be approved for non-mortgage credit if they were to apply. None of these outcomes are statistically significantly different across expansion and non-expansion states.

Table 3. Health Insurance and Medical Expenses Outcomes, SHED 2013-2019

	Overall Sample	Expansion State	Non-Expansion State
	(1)	(2)	(3)
Any Health Insurance	0.870	0.880	0.820
	(0.341)	(0.319)	(0.380)
Medicare or Medicaid Coverage	0.180	0.190	0.160
	(0.388)	(0.396)	(0.368)
Medicaid Coverage	0.130	0.150	0.100
	(0.341)	(0.357)	(0.302)
No Unexpected Out-of-Pocket Major Medical Expenses During Past 12 Months. 2015+	0.750	0.770	0.730
	(0.431)	(0.424)	(0.446)
$1 - $499 Unexpected Out-of-Pocket Major Medical Expenses During Past 12 Months.	0.040	0.040	0.050
	(0.205)	(0.196)	(0.225)
$500 or More Unexpected Out-of-Pocket Medical Expenses	0.200	0.190	0.220
	(0.402)	(0.396)	(0.415)
Credit Card Debt	0.500	0.480	0.540
	(0.500)	(0.500)	(0.499)
More Credit Card Debt over the Previous 12 Months	0.250	0.250	0.250
	(0.435)	(0.435)	(0.434)
Not Confident that would be Approved for Non-mortgage Credit or Loan	0.170	0.160	0.190
	(0.376)	(0.367)	(0.394)
Observations	26,169	17,915	8,254

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Asterisks denote differences of sample means, with standard errors clustered by state, across Medicaid Expansion (Column 2) and Non-Expansion States (Column 3) as follows *** p<0.01, ** p<0.05, * p<0.1. Not all outcomes studied available in all years.

We also examine other outcomes resulting from medical expenses in Table 4. A key outcome we study is financial hardship, captured by several variables: self-reports of struggling financially, inability to pay bills, delays or avoidance of healthcare because of costs, and emergency savings. Financial hardship is relatively widespread. Approximately 30 percent of households report they are currently struggling financially, and these reports are three percentage points higher in states that did not expand Medicaid. Many households – 28 percent – are unable to access healthcare due to costs, with non-expansions about five percentage points more likely. This financial hardship inhibits emergency savings. Approximately half of households report

emergency savings, although only 42 percent could cover three months of spending if they lost their main source of income. These rates are greater in non-expansion states.

Finally, we explore retirement preparation, application for any program, borrowing from retirement savings, and low retirement savings. Approximately 20 percent of households report no non-Social Security sources of retirement, and 45 percent have less than $50,000 in retirement savings. Approximately one-quarter of households receive any program from Social Security, although just 7 percent receive SSI.

Table 4. Financial Hardship, Emergency Savings, and Retirement Outcomes, SHED 2013-2019

	Overall Sample	Expansion State	Non-Expansion State
	(1)	(2)	(3)
Currently Struggling Financially	0.300	0.290	0.330
	(0.460)	(0.455)	(0.469)
Cannot Pay All Bills in Full This Month	0.180	0.180	0.190
	(0.387)	(0.383)	(0.395)
Couldn't Get Health Care Because of the Cost	0.280	0.260	0.330
	(0.448)	(0.436)	(0.469)
Supplemental Nutrition Assistance Program (SNAP or food stamps) In the past 12	0.090	0.080	0.100
	(0.284)	(0.277)	(0.297)
Set Aside Funds to Cover 3 Months in Case of Emergencies	0.530	0.540	0.490
	(0.499)	(0.498)	(0.500)
Could Cover Expenses for 3 Months if Lost Main Source of Income	0.420	0.440	0.390
	(0.494)	(0.496)	(0.487)
No Reported Non-Social Security Sources of Retirement Savings	0.180	0.170	0.220
	(0.387)	(0.374)	(0.413)
In Last 12 Months Have You Borrowed From or Cashed Out Any Retirement Savings	0.110	0.100	0.120
	(0.312)	(0.304)	(0.327)
Total Amount of Retirement Savings Less than $50,000	0.450	0.430	0.490
	(0.497)	(0.495)	(0.500)
Any Social Security Program	0.240	0.232	0.269
	(0.429)	(0.422)	(0.443)
SSI Receipt	0.070	0.068	0.074
	(0.255)	(0.252)	(0.263)
Observations	26,169	17,915	8,254

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Asterisks denote differences of sample means, with standard errors clustered by state, across Medicaid Expansion (Column 2) and Non-Expansion States (Column 3) as follows *** p<0.01, ** p<0.05, * p<0.1. Not all outcomes studied available in all years.

Census household pulse survey.

The Census Household Pulse Survey (Pulse) data is an experimental data source developed by the Census Bureau to obtain current, nationally representative data on US households' social and economic well-being during the pandemic. The Pulse was introduced in April 2020, and the questions asked of respondents varied over time within each Pulse "phase." Phase 1 was fielded between April 23 and July 21, 2020; Phase 2 was fielded between August 19 and October 26, 2020; Phase 3 was fielded between October 28 and March 29, 2021; Phase 3.1 was fielded between April 14 and July 5, 2021; Phase 3.2 was fielded between July 21 and October 11, 2021; Phase 3.3 was fielded between December 1, 2021, and February 7, 2022; and Phase 3.4 was fielded between March 2 and May 9, 2022.

We merge Pulse data with data on the COVID-19 epidemic over time (cases, hospitalizations, and mortality) available from Johns Hopkins University Center for Systems Science and Engineering, as well as state-level data on total cases and deaths by July 2022 from the *New York Times* to examine what states had the most extreme cases or deaths by July 2022. To control for macroeconomic conditions, we also merge data on weekly Unemployment Insurance (U.I.) claims from the Bureau of Labor Statistics (BLS). The outcomes we consider in the Pulse are insurance coverage, financial hardship, emergency savings, and applications for programs administered by the Social Security Administration (SSA) or Medicare.

Summary statistics.

In Table 5, we begin with the demographic characteristics of Pulse households before showing the household economic characteristics and outcome variables. Regarding the age composition, 23 percent of the sample is 45-49, 24 percent is 50-54, 25 percent is 55-59, and 27 percent is 60-64. In terms of race/ethnicity, nearly three-quarters of the sample is headed by a white non-Hispanic household, 8 percent of respondents are Black, non-Hispanic persons, and 9 percent of respondents are Hispanic persons. The average household size is 2.8 persons; approximately 60 percent of the respondents are female, and about 60 percent are married.

Table 5. Demographic Characteristics of Respondents in the Pulse Survey

	Overall Sample	Expansion State	Non-Expansion State
Household Respondent Age 45-49	0.233	0.233	0.232
	(0.422)	(0.423)	(0.422)
Household Respondent Age 50-54	0.243	0.243	0.242
	(0.429)	(0.429)	(0.429)
Household Respondent Age 55-59	0.253	0.253	0.253
	(0.434)	(0.434)	(0.435)
Household Respondent Age 60-64	0.272	0.272	0.273
	(0.445)	(0.445)	(0.445)
Household Size	2.790	2.800	2.750
	(1.462)	(1.470)	(1.437)
Number of Adults in Household	2.250	2.256	2.225
	(1.060)	(1.070)	(1.029)
Number of Children in Household	0.539	0.544	0.525
	(0.923)	(0.926)	(0.913)
Female Household Respondent	0.605	0.602	0.613
	(0.489)	(0.489)	(0.487)
Household Respondent Married	0.620	0.621	0.626
	(0.485)	(0.485)	(0.484)
White Non-Hispanic Household Respondent	0.744	0.755	0.716
	(0.436)	(0.430)	(0.451)
Black Non-Hispanic Household Respondent	0.083	0.069	0.122
	(0.276)	(0.253)	(0.328)
Other Non-Hispanic Household Respondent	0.083	0.090	0.063
	(0.276)	(0.286)	(0.243)
Hispanic Household Respondent	0.089	0.086	0.099
	(0.285)	(0.280)	(0.298)
	(0.170)	(0.168)	(0.177)
Observations	1,291,810	939,365	352,445

Notes: Authors' analysis of data tabulated from Census Household Pulse data for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service.

In terms of economic characteristics in Table 6, approximately 2 percent of the sample have less than a high school degree, 12 percent have a high school or GED degree, 32 percent have some college but less than a four-year degree, and 57 percent have a college degree or more. A majority of the sample is currently working, either for an employer (59 percent) or is self-employed (9 percent). The remaining portion of the sample is currently retired (8 percent), not in the labor force (14 percent), or currently unemployed (7 percent).

Table 6. Economic Characteristics of Respondents in the Pulse Survey

	Overall Sample	Expansion State	Non-Expansion State
Household Respondent has less than H.S. Education	0.022	0.021	0.023
	(0.145)	(0.143)	(0.151)
Household Respondent has a H.S. or GED Education	0.124	0.122	0.128
	(0.329)	(0.327)	(0.334)
Household Respondent has Some College No Degree	0.327	0.322	0.342
	(0.469)	(0.467)	(0.474)
Household Respondent has a Bachelor's degree or higher	0.527	0.535	0.506
	(0.499)	(0.499)	(0.500)
Currently Working for Employer	0.589	0.593	0.577
	(0.492)	(0.491)	(0.494)
Self-Employed	0.086	0.085	0.089
	(0.280)	(0.279)	(0.284)
Retired	0.080	0.078	0.086
	(0.272)	(0.269)	(0.280)
Disabled	0.037	0.036	0.040
	(0.189)	(0.187)	(0.197)
Unemployed	0.072	0.073	0.070
	(0.259)	(0.260)	(0.255)
Out of the Labor Force for Other Reasons	0.137	0.136	0.142
	(0.344)	(0.342)	(0.349)
Cumulative COVID-19 cases by Pulse Week	491,995.9	352559.1	864178.4
	(739677.2)	(488968.4)	(1085773)
Observations	1,291,810	939,365	352,445

Notes: Authors' analysis of data tabulated from Census Household Pulse data for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service.

Table 7 presents outcomes of the sample. In terms of insurance outcomes, the majority of the sample (94 percent) has health insurance coverage, with 13 percent of the respondents reporting Medicaid insurance coverage. Regarding the economic hardship outcomes, about one-third of the respondents has difficulty paying usual expenses, 7 percent have insufficient food, 3 percent recently applied for SSA benefits, and 12 percent currently receive any SSA benefits.

Table 7. Outcomes of Respondents in the Pulse Survey

	Overall Sample	Expansion State	Non-Expansion State
Any Health Insurance	0.940	0.950	0.910
	(0.241)	(0.220)	(0.287)
Medicaid Insurance	0.130	0.140	0.080
	(0.332)	(0.348)	(0.278)
Difficulty Paying Usual Expenses	0.300	0.290	0.320
	(0.457)	(0.452)	(0.467)
Food Insufficiency	0.070	0.060	0.080
	(0.249)	(0.243)	(0.265)
Applied for any SSA Benefits Recently	0.030	0.030	0.030
	(0.170)	(0.168)	(0.177)
Currently Receiving any SSA Benefits	0.120	0.110	0.130
	(0.324)	(0.319)	(0.338)
Observations	1,291,810	939,365	352,445

Notes: Authors' analysis of data tabulated from Census Household Pulse data for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service.

Empirical strategy.

Our empirical strategy examines changes in our outcomes of interest in Medicaid expansion states relative to states that did not expand Medicaid. For our longitudinal analysis using SHED data, we will further be able to further compare expansion states before and after the implementation of the ACA Medicaid expansion to create a difference-in-difference analysis. We estimate:

$$Y_{hst} = \beta_0 + \beta_1 Expansion_{st} + \gamma_t + \theta_s + \delta' X_{hst} + \varepsilon_{hst}$$

where *Expansion* indicates whether household *h* that resides in state *s* at time *t* has expanded Medicaid. Specific outcomes considered include health insurance coverage, out-of-pocket medical spending, consumer debt, financial hardship, retirement savings, and receipt of benefits administered by the Social Security Administration. We include a vector of controls for other household characteristics, including age cohort (aged 50-54, aged 55-59, and aged 60-64, with respondents aged 45-49 serving as the omitted group), race/ethnicity (Hispanic respondents, Black non-Hispanic respondents, and other non-Hispanic respondents, with white respondents serving as the omitted group), employment status (self-employed respondents, retired respondents, disabled respondents, unemployed respondents, and respondents out of the labor

force for other reasons; working for an employer is the omitted group). We include time-varying state characteristics — the state unemployment rate, political affiliation of the Governor, state poverty rate, maximum refundable state Earned Income Tax Credit (EITC) benefit for a household with two dependents, and state minimum wage — in addition to state and time fixed effects. To examine heterogeneous effects by state policies providing categorical eligibility to Medicaid for SSI recipients – either Section 1634 states or SSI Criteria states – in some specifications, we interact categorical eligibility for Medicaid for SSI recipients with our difference-in-difference variable to arrive at a triple difference specification.

Standard errors are clustered at the state level. We account for recent methodological advances in the difference-in-differences literature, as well as conduct event studies to examine how the outcomes of interest evolve with the implementation of the ACA (Goodman-Bacon 2021; Callaway and Sant'Anna 2021).

For our analysis of the pandemic period using the Pulse, state-time variation in Medicaid expansions does not exist. Instead, we estimate the differences between Medicaid expansion and non-expansion states on these outcomes with the following regression:

$$Y_{hst} = \beta_0 + \beta_1 Expansion_s + \gamma_t + \theta_s + \delta' X_{hst} + \varepsilon_{hst}$$

where the variables remain the same as before, but we also include controls for the COVID-19 severity during the Pulse week or SHED supplement observation. All estimates are regression-adjusted differences in the outcomes with standard errors clustered at the state level.

3. Results

We begin with differences in Medicaid to estimate how access affects health insurance coverage, out-of-pocket spending, financial hardship, and retirement preparation. For the long-term analysis using the SHED, we present both tables and graphs of our estimates for ease of interpretation. For the analysis using the Pulse, we show regression-based differences in the outcomes of interest.

Health insurance coverage.

The first set of outcomes we consider is related to health insurance coverage: any health insurance coverage, Medicare or Medicaid coverage, and Medicaid coverage. Difference-in-difference estimates, triple difference estimates, and event studies are included in Table 8. Among the sample overall, we estimate a 3.4 percentage point increase in health insurance coverage as the result of the expansion, a 4.9 percentage point increase in Medicaid or Medicare coverage, and a 6.0 percentage point increase in Medicaid coverage. The increase in health insurance coverage is consistent with other estimates of the population overall (Long et al. 2014; Smith and Medalia 2015; Courtemanche et al. 2016) but slightly smaller than an older population studied by Miller et al. (2021). The smaller increase in health insurance coverage than in public insurance indicates that there was some crowd-out of private insurance coverage by the Medicaid expansion (Sommers et al. 2014). For all outcomes, the triple difference estimates show that there is no important or statistically significant change in insurance coverage for individuals in states that expanded Medicaid and provide categorical eligibility for SSI recipients.

Among various subpopulations of interest (results shown in Appendix A and Appendix B), respondents with less than a four-year college degree show similar effects as the full sample, and non-white respondents have larger effects than the full sample. The estimates in all samples suggest crowd-out is occurring. For example, among households headed by non-white adults, there is no change in overall health insurance, but there is an 8.1 to 11.3 percentage point increase in public coverage. Interestingly, those in fair or poor health demonstrate no statistically significant change in health insurance, and adults receiving benefits from SSA have a statistically significant 6.9 percentage point *decline* in health insurance with the Medicaid expansion, although positive (but statistically insignificant) increases in Medicaid coverage. Like the main results, there is no evidence that Medicaid coverage increased in individuals in states that expanded Medicaid and provided categorical eligibility for SSI recipients.

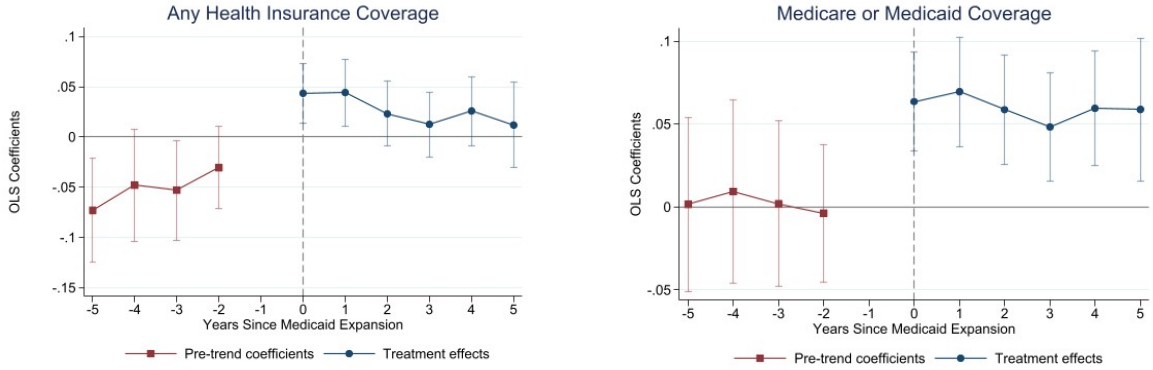
Table 8. Effect of the Medicaid Expansion on Health Insurance Coverage Among Households Near Retirement: Difference-in-Difference Estimates and Event Studies

	Any Health Insurance	Any Medicare or Medicaid	Any Medicaid
	(1)	(2)	(3)
Difference-in-Differences			
Expansion x Post	0.0324***	0.0540***	0.0685***
	(0.0117)	(0.0117)	(0.0124)
Difference-in-Difference-in-Difference			
Expansion x Post	0.0375	0.0480	0.0658**
	(0.0292)	(0.0296)	(0.0288)
Expansion x Post x SSI	-0.00549	0.00655	0.00308
Categorical Eligibility	(0.0293)	(0.0297)	(0.0291)
Event Study Model			
Year 5	0.0120	0.0587***	
	(0.0216)	(0.0219)	
Year 4	0.0256	0.0594***	0.0612***
	(0.0174)	(0.0176)	(0.0197)
Year 3	0.0125	0.0482***	0.0432**
	(0.0165)	(0.0167)	(0.0169)
Year 2	0.0231	0.0586***	0.0626***
	(0.0165)	(0.0167)	(0.0167)
Year 1	0.0440***	0.0694***	0.0839***
	(0.0169)	(0.0169)	(0.0165)
Year 0	0.0436***	0.0636***	0.0894***
	(0.0150)	(0.0152)	(0.0158)
Year - 1 (omitted)			
Year - 2	-0.0307	-0.00368	-0.0343
	(0.0209)	(0.0212)	(0.0223)
Year - 3	-0.0530**	0.00201	-0.0549*
	(0.0253)	(0.0256)	(0.0287)
Year - 4	-0.0481*	0.00935	-0.0412
	(0.0284)	(0.0283)	(0.0285)
Year - 5	-0.0729***	0.00159	
	(0.0266)	(0.0268)	
Observations	21,734	22,130	16,991
State FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Years Available	2013-2019	2013-2019	2013-2018

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Due to lack of time variation in SSI categorical eligibility, the triple difference estimates omit state fixed effects. Asterisks denote differences of sample means, with standard errors clustered by state, across Medicaid Expansion (Column 2) and Non-Expansion States (Column 3) as follows *** p<0.01, ** p<0.05, * p<0.1.

Figures from the event study, shown in Figure 3, demonstrate that any changes in health insurance coverage occur with implementation of the expansion. Consistent with the difference-in-difference estimates, the response for any health insurance is less than the effects for any public health insurance.

Figure 3. Effect of the ACA Medicaid Expansion on Health Insurance Coverage of Households Near Retirement

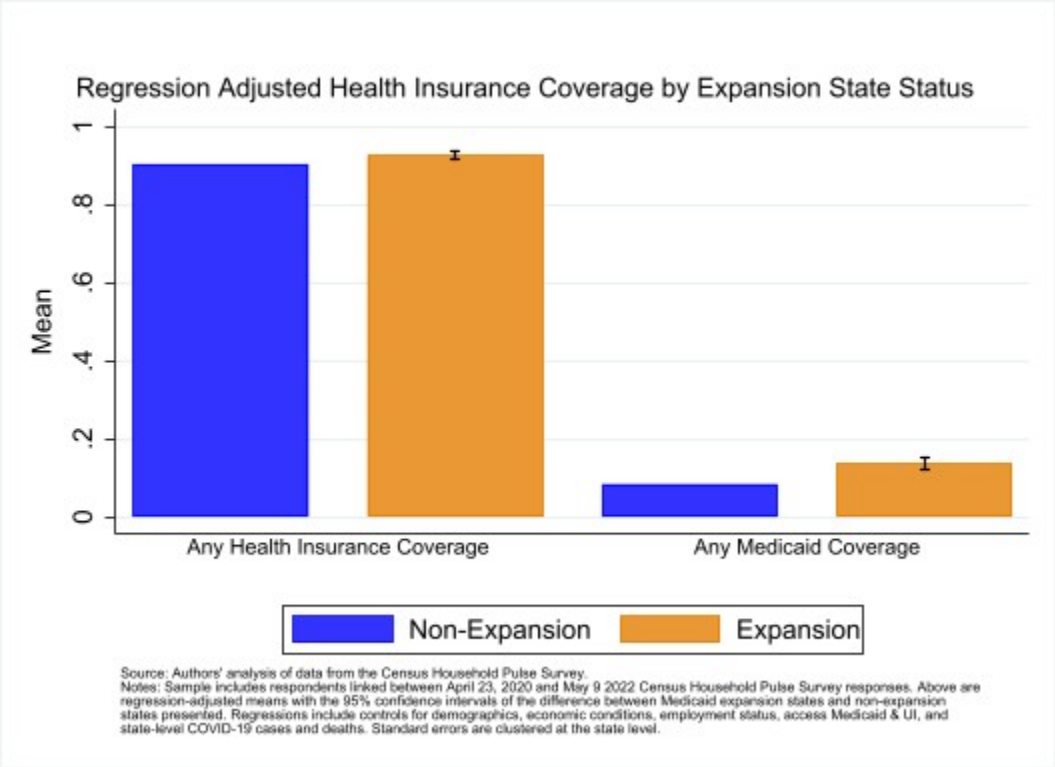


Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Estimates of event studies with 95% confidence intervals.

During the pandemic.

Analysis of the Pulse data in Figure 4 shows similar-sized effects as estimates from the SHED. After the Medicaid expansion, adults aged 45 through 64 in states that expanded Medicaid before the pandemic are 3.9 percentage points more likely to report having health insurance and 6.2 percentage points more likely to report receiving Medicaid coverage, holding demographic and economic characteristics constant. In each subsample – non-white respondents, respondents in poor health, respondents with less than a college degree, and SSI recipients – state Medicaid expansions relate to larger differences in health insurance coverage and Medicaid among adults in Medicaid expansion states. Appendix C provides the full results.

Figure 4. Health Insurance Differences by Medicaid Expansion Status



Notes: Authors' analysis of Pulse Data tabulated from for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service.

Out-of-pocket medical spending and consumer debt.

Medicaid coverage has been linked to lower out-of-pocket healthcare costs in both premiums (Abramowitz 2020) and nonpremium out-of-pocket spending (Abramowitz 2020; Blavin et al. 2018; Gotanda et al. 2020). Reduced out-of-pocket spending is one channel that could improve household finances due to the link between medical bills and financial hardship and medical debt (Finkelstein et al. 2012; Himmelstein et al. 2009; Hu et al. 2018; Kluender et al. 2021; Miller et al. 2021). While an indicator for any unexpected out-of-pocket major medical expenses is available in all years, the amount of spending is only available in 2015 and afterward.

Table 9. Unexpected Out-of-Pocket Medical Expenses During the Past 12 Months, SHED

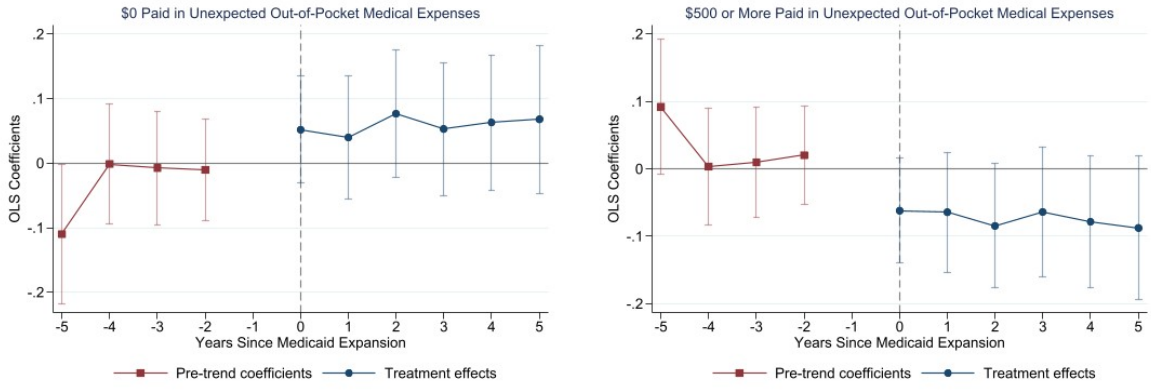
	Unexpected Out-of-Pocket Major Medical Expenses During Past 12 Months	No Unexpected Out-of-Pocket Major Medical Expenses During Past 12 Months. 2015+	$1 - $499 Unexpected Out-of-Pocket Major Medical Expenses During Past 12 Months	$500 or More in Unexpected Out-of-Pocket Major Medical Expenses During Past 12 Months
	(1)	(2)	(3)	(4)
Difference-in-Differences Model				
Expansion x Post	-0.00548	0.0163	0.0105	-0.0268
	(0.0163)	(0.0264)	(0.0127)	(0.0245)
Difference-in-Difference-in-Difference Model				
Expansion x Post	0.0301	0.0354	-0.00917	-0.0263
	(0.0411)	(0.0244)	(0.0117)	(0.0227)
Expansion x Post x SSI	-0.0388	-0.00917	0.00649	0.00268
Categorical Eligibility	(0.0412)	(0.0253)	(0.0121)	(0.0235)
Event Study Model				
Year 5	-0.00751	0.0688	0.0197	-0.0885
	(0.0303)	(0.0585)	(0.0281)	(0.0544)
Year 4	-0.00579	0.0630	0.0165	-0.0795
	(0.0245)	(0.0533)	(0.0256)	(0.0495)
Year 3	-0.000620	0.0526	0.0122	-0.0647
	(0.0232)	(0.0524)	(0.0252)	(0.0488)
Year 2	-0.0364	0.0761	0.00899	-0.0851*
	(0.0231)	(0.0506)	(0.0243)	(0.0470)
Year 1	-0.00352	0.0396	0.0253	-0.0649
	(0.0234)	(0.0491)	(0.0236)	(0.0456)
Year 0	-0.0130	0.0510	0.0104	-0.0613
	(0.0210)	(0.0423)	(0.0203)	(0.0393)
Year - 1 (omitted)				
Year - 2	0.0315	-0.0105	-0.00914	0.0197
	(0.0293)	(0.0403)	(0.0194)	(0.0375)
Year - 3	-0.0416	-0.00861	-0.00219	0.0108
	(0.0354)	(0.0448)	(0.0215)	(0.0416)
Year - 4	-0.0259	-0.00420	-0.00162	0.00582
	(0.0393)	(0.0477)	(0.0229)	(0.0444)
Year -5	0.0310	-0.113**	0.0187	0.0941*
	(0.0372)	(0.0550)	(0.0264)	(0.0511)
Observations	21,934	17,979	17,979	17,979
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Years Available	2013-2019	2015-2019	2015-2019	2015-2019

Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Due to lack of time variation in SSI categorical eligibility, the triple difference estimates omit state fixed effects. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Table 9 presents estimates related to unexpected out-of-pocket major medical expenses. Among the entire sample, there is no significant effect of state Medicaid expansions on reports of any unexpected out-of-pocket major medical expenses. For the shorter period, which only statistically identifies the effect of the Medicaid expansion on states that expanded after 2015, there are small but insignificant increases in households having $0 in unexpected out-of-pocket expenses in the past 12 months and small but insignificant decreases in households having $500 or more of unexpected out-of-pocket medical expenses. Medical debt, only available from 2015 through 2019 and asked of those with any unexpected out-of-pocket major medical expenses in the previous 12 months, shows small but insignificant declines due to the Medicaid expansion. The triple difference estimates again do not provide evidence that individuals subject to the Medicaid expansion living in states with categorical eligibility for SSI recipients experienced differential changes in out-of-pocket medical expenses.

The graphical presentation of the event studies in Figure 5 highlights the direction of the point estimates but also their large confidence intervals. It suggests that while there is no change in unexpected out-of-pocket expenses over time, the distribution of out-of-pocket medical expenses changes with the Medicaid expansion. Point estimates of no money spent on unexpected out-of-pocket medical expenses are higher after the ACA, and point estimates of $500 or more in unexpected out-of-pocket medical expenses are lower after the ACA.

Figure 5. Effect of Medicaid Expansion on No Unexpected Out-of-Pocket Medical Expenses and $500 or More in Out-of-Pocket Medical Expenses



Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Subsamples of respondents with low educational attainment, non-white individuals, individuals in fair or poor health, recipients of any SSA-administered program, and insured individuals show similar results. The lack of significant declines in medical debt may relate to trends in private insurance markets where cost sharing has increased in recent years, as well as small premiums and co-payments in Medicaid, which relate to declines in Medicaid take-up, inability to care for healthcare due to cost, and out-of-pocket spending (Antonisse 2020; Cliff et al. 2021).

As described earlier, medical bills are a contributor to financial fragility and debt. The results in Table 10 examine credit card debt as well as confidence in being approved for a credit card today. Point estimates are insignificant but suggest reductions in unpaid credit card debt and fewer households that report they had more credit card debt than more than 12 months ago. There is no change in confidence of being approved if applied for a credit card today.

Table 10. Effect of Medicaid on Medical Debt, Credit Card Debt, and Credit Confidence

	Current Medical Debt, if had any Unexpected Out-of-Pocket Major Medical Expenses During Past 12 months	Credit Card Debt, for Those With a Credit Card	More Credit Card Debt over the Previous 12 Months	Not Confident that Would be Approved for Non-mortgage Credit or Loan
	(1)	(2)	(3)	(4)
Difference-in-Difference Model				
Expansion x Post	-0.00818	-0.0254	-0.0772	0.00195
	(0.0552)	(0.0466)	(0.0612)	(0.0149)
Difference-in-Difference-in-Differences Model				
Expansion x Post	-0.0720	-0.0352	-0.0592	0.0299
	(0.0491)	(0.0324)	(0.0397)	(0.0352)
Expansion x Post x SSI Categorical Eligibility	0.0509	0.0108	0.0549	-0.0304
	(0.0510)	(0.0335)	(0.0411)	(0.0348)
Event Study Model				
Year 5	0.0583	-0.00687	-0.0109	0.0201
	(0.120)	(0.0993)	(0.124)	(0.0275)
Year 4	0.00547	0.0390	-0.0171	0.00728
	(0.110)	(0.0937)	(0.117)	(0.0227)
Year 3	0.0310	0.0393	-0.00955	0.0101
	(0.108)	(0.0907)	(0.114)	(0.0216)
Year 2	0.0382	0.0294	-0.0171	0.0135
	(0.104)	(0.0870)	(0.109)	(0.0213)
Year 1	-0.0195	0.107	-0.108	-0.0139
	(0.100)	(0.0874)	(0.109)	(0.0212)
Year 0	-0.0104	0.00652	-0.0617	-0.0310
	(0.0886)	(0.0544)	(0.0735)	(0.0258)
Year - 1 (omitted)				
Year - 2	0.0661	0.108**	0.0349	0.00707
	(0.0823)	(0.0508)	(0.0678)	(0.0259)
Year - 3	0.181*	0.105*	-0.0373	-0.00710
	(0.0924)	(0.0580)	(0.0763)	(0.0324)
Year - 4	0.00241	0.109	-0.0466	0.00886
	(0.100)	(0.0762)	(0.0996)	(0.0339)
Year -5	0.0412	0.157*	-0.0764	0.000146
	(0.109)	(0.0823)	(0.104)	(0.0358)
Observations	4,839	13,594	6,883	18,755
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Years Available	All	All	All	All

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Due to lack of time variation in SSI categorical eligibility, the triple difference estimates omit state fixed effects. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Financial difficulties and emergency savings.

A large body of literature establishes that Medicaid protects households from extreme financial difficulties like bankruptcy as well as reduces the probability of smaller financial difficulties like unpaid bills. Our first measures of financial hardship reflect self-reports of financial struggle and inability to pay bills in full this month. Self-reports of financial struggles indicate the respondent is finding it difficult to get by or is just getting by rather than living comfortably.

In Table 11, we present the difference-in-difference, triple difference, and event study estimates for financial difficulties. Columns 1 and 2 include self-reports of general hardship (self-reports of financial struggles and self-reports of being unable to pay all bills). The difference-in-difference point estimate for difficulty struggling financially provides suggestive evidence that financial hardship is *increasing,* although estimates are not statistically significant; the point estimate for self-reports of not being able to pay bills this month is negative.

These two indicators do not reflect health-specific spending. We explore the inability to pay for healthcare due to cost, specifically in Column 3 of Table 11. Reduced spending on any healthcare includes prescription drugs, doctor visits, mental healthcare, dental care, specialist healthcare, and follow-up healthcare because of the cost. Medicaid, in general, provides generous coverage with relatively little cost sharing, and coverage should directly affect the affordability of many of these elements of healthcare. However, event study estimates contradictorily show *increased* reductions in healthcare spending with state Medicaid expansion. The difference-in-differences is positive and statistically significant, although individual point estimates are not.

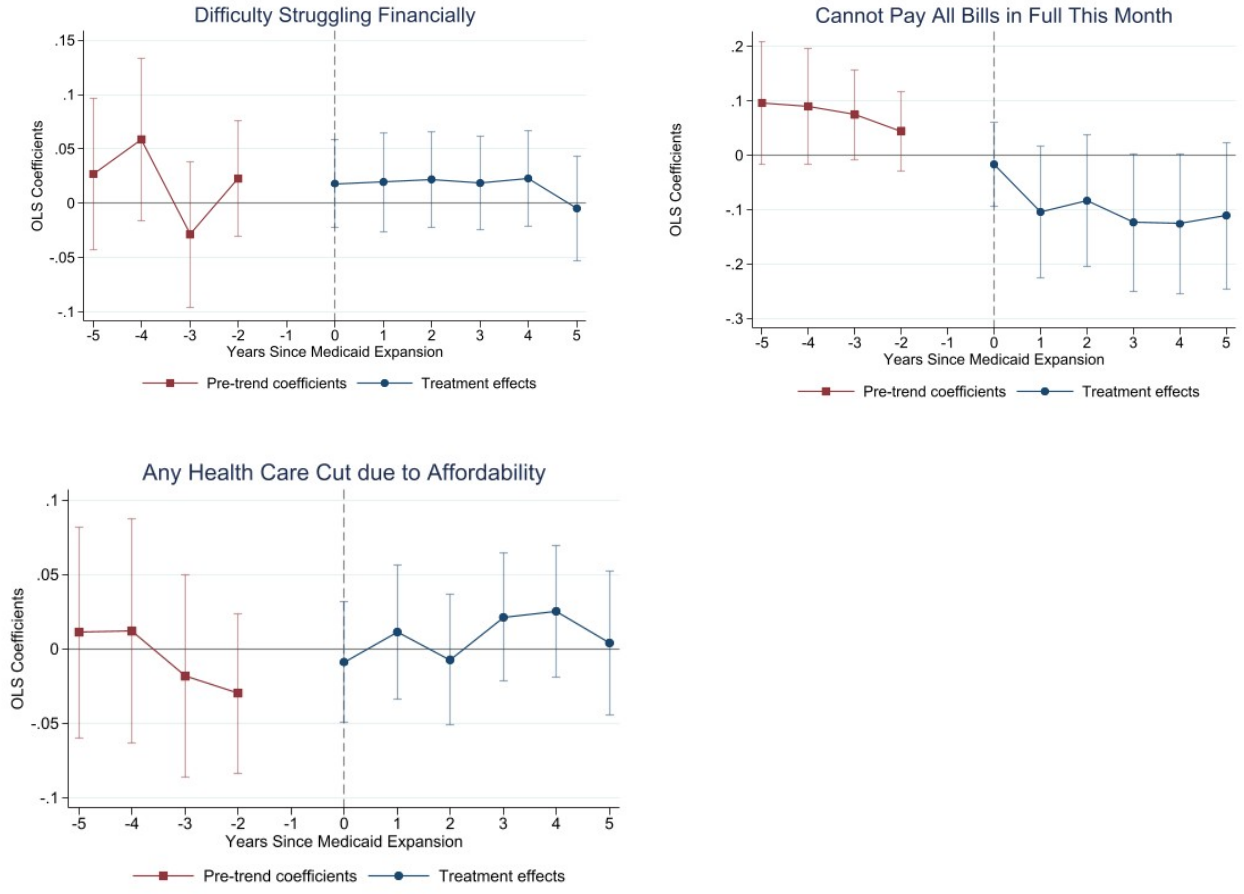
Table 11. Financial Hardship and the Medicaid Expansion, SHED Estimates

	Struggling Financially	Can't Pay Bills	Cut Any Health Care	Emergency Savings	Cover 3 Months	Cover $400 with Cash
	(1)	(2)	(3)	(4)	(5)	(6)
Difference-in-Difference Model						
				-0.0151	-0.0261	
Expansion State x Post	0.0191	-0.0512	0.0235			-0.00983
	(0.0162)	(0.0341)	(0.0162)	(0.0196)	(0.0253)	(0.0184)
Difference-in-Difference-in-Differences Model						
Expansion x Post	-0.0154	-0.00530	0.0147	-0.0427	0.0144	-0.0278
	(0.0410)	(0.0233)	(0.0409)	(0.0612)	(0.0600)	(0.0443)
Expansion x Post x SSI	0.0376	0.00334	0.00965	0.0294	-0.0445	0.0196
Categorical Eligibility	(0.0411)	(0.0240)	(0.0410)	(0.0618)	(0.0598)	(0.0438)
Event Study Model						
Year 5	0.00626	-0.0985	0.0274	0.0233	0.00167	-0.0285
	(0.0301)	(0.0708)	(0.0301)	(0.0355)	(0.0462)	(0.0344)
Year 4	0.0334	-0.130*	0.0413*	0.0103	-0.0340	-0.0166
	(0.0243)	(0.0668)	(0.0243)	(0.0293)	(0.0375)	(0.0282)
Year 3	0.0172	-0.128**	0.0336	-0.00630	-0.0141	-0.0115
	-0.023	(0.0646)	(0.0230)	(0.0280)	(0.0352)	(0.0267)
Year 2	0.0246	-0.0887	0.00158	0.00211	-0.0580*	-0.000869
	(0.0230)	(0.0620)	(0.0230)	(0.0277)	(0.0352)	(0.0263)
Year 1	0.0230	-0.104*	0.0133	-0.0168	0.00618	-0.0210
	(0.0232)	(0.0623)	(0.0232)	(0.0279)	(0.0353)	(0.0262)
Year 0	0.0119	-0.0107	-0.00936	-0.00384	-0.0335	-0.0127
	(0.0209)	(0.0397)	(0.0209)	(0.0249)	(0.0321)	(0.0324)
Year - 1 (omitted)						
Year - 2	0.0433	0.0465	-0.0270	-0.0542	0.00339	-0.0184
	(0.0292)	(0.0373)	(0.0292)	(0.0348)	(0.0441)	(0.0328)
Year - 3	-0.0142	0.0799*	-0.0149	-0.00882	-0.0840	-0.0391
	(0.0352)	(0.0420)	(0.0352)	(0.0391)	(0.0543)	(0.0410)
Year - 4	0.0707*	0.0939*	0.0126	-0.0770*	-0.0276	-0.00977
	(0.0389)	(0.0542)	(0.0389)	(0.0435)	(0.0589)	(0.0430)
Year -5	0.0385	0.105*	0.00988	-0.0459	-0.103*	-0.0518
	(0.0369)	(0.0586)	(0.0369)	(0.0419)	(0.0575)	(0.0449)
Observations	22,129	15,941	21,853	21,181	10,686	19,755
R-squared	0.115	0.068	0.076	0.122	0.114	0.156
State FE	Yes	Yes	Yes	Yes	Yes	YES
Year FE	Yes	Yes	Yes	Yes	Yes	YES
Controls	Yes	Yes	Yes	Yes	Yes	YES

Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Due to lack of time variation in SSI categorical eligibility, the triple difference estimates omit state fixed effects. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Graphical evidence from event studies in Figure 6 demonstrates that self-reports of financial struggles do not significantly decrease after Medicaid expansion, inability to pay all bills in full this month, or reducing health care due to affordability shows no significant change after the expansion. The direction of the point estimates for an inability to pay all bills in full this is suggestive that financial constraints may be reduced after the Medicaid expansion, but estimates are imprecise.

Figure 6: Financial Hardship and the Medicaid Expansion, SHED Data

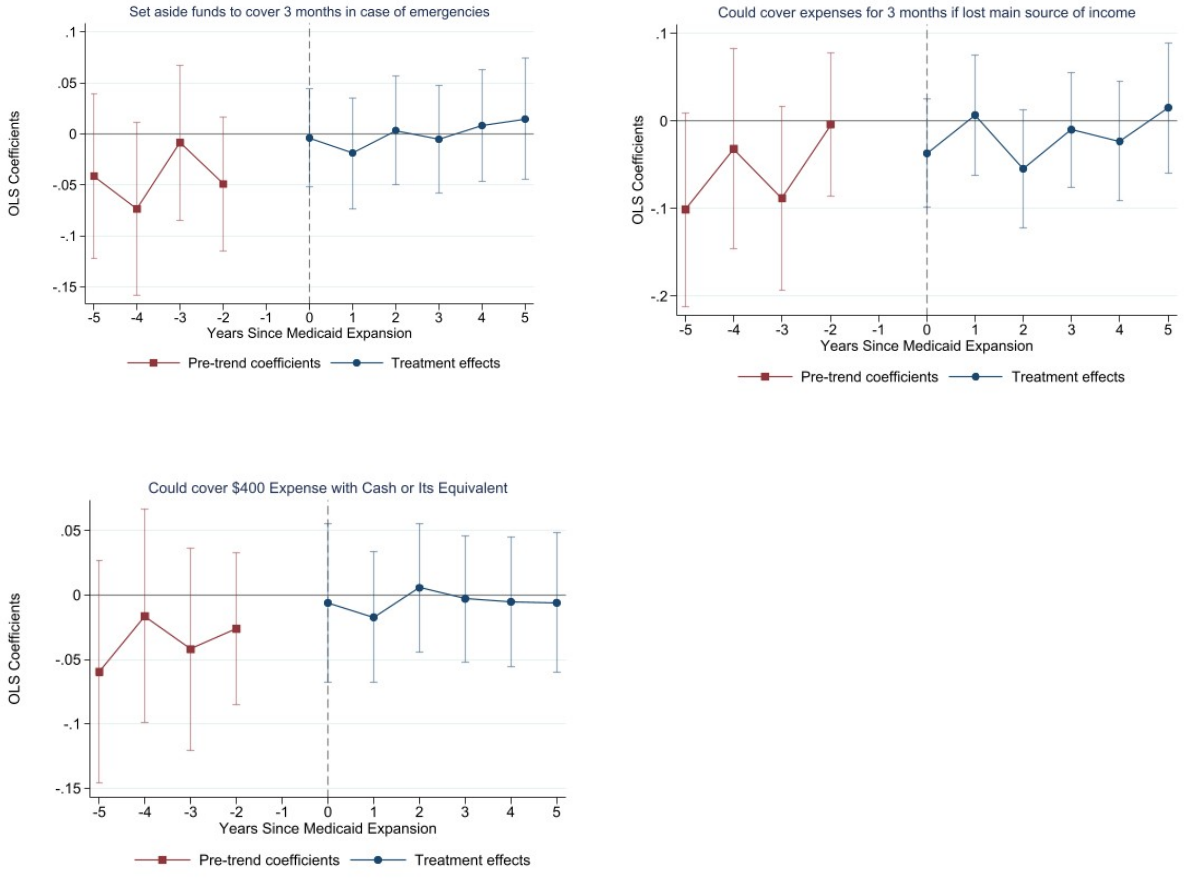


Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Estimates from event studies plotted with 95% confidence intervals.

We also explore emergency savings behavior to understand if Medicaid allows households to create a financial cushion for unexpected expenses in Columns 4 through 6 of Table 11. Because emergency savings does not have a well-agreed upon definition, we

investigate three definitions of emergency savings: whether the household set aside funds to cover three months in case of emergencies, reporting the respondent could cover expenses for at least three months if they were to lose their main source of income, and whether the household could pay a $400 unexpected expense with cash or its equivalent. The difference-in-difference estimates suggest there are lower rates of emergency savings related to state Medicaid expansions, although estimates are not statistically significant. Figure 7 presents the event studies graphically. The direction of the estimates for the emergency savings outcomes could reflect reduced precautionary savings in the event of a large medical expense. Or, it could suggest declines in financial well-being.

Figure 7. Emergency Savings and Medicaid Expansion, SHED data

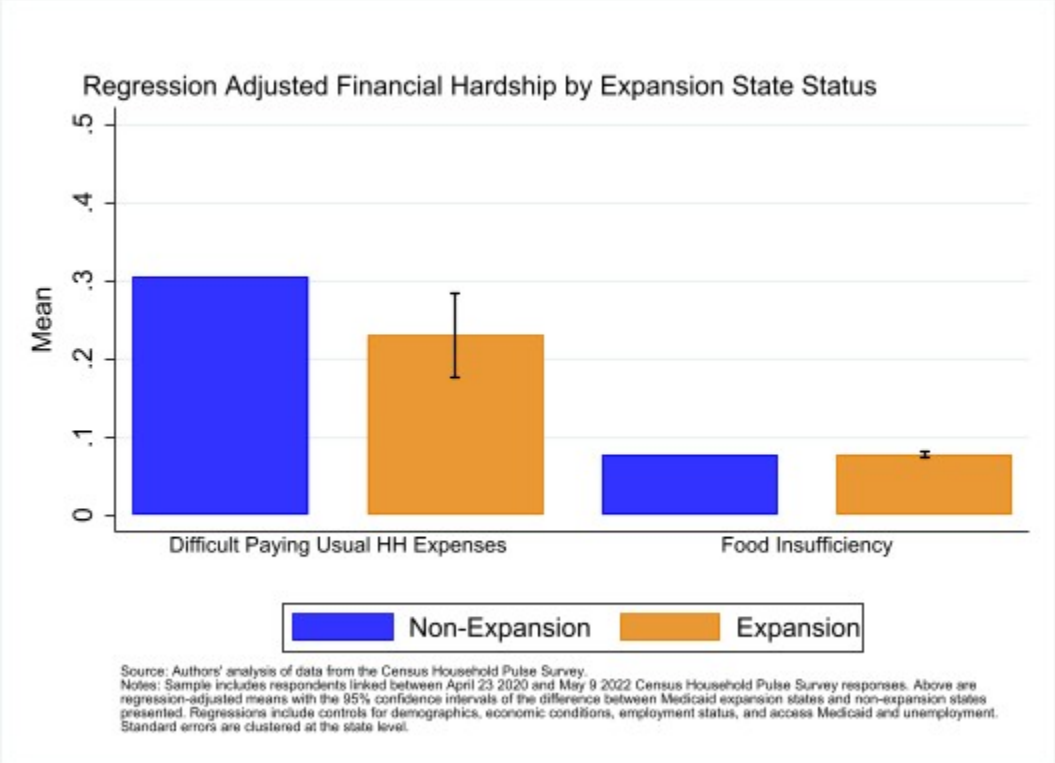


Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Estimates from event studies plotted with 95% confidence intervals.

Experiences of financial hardship during the pandemic.

During the pandemic, it was well documented that financial hardship increased. Figure 8 shows differences in financial hardship by state Medicaid expansions with estimates from the Pulse, while Figures 9 and 10 show estimates from the SHED supplements. The Pulse queries respondents about difficulty paying using household expense and food insufficiency. In non-expansion states, households are significantly more likely to report difficulty paying using household expenses. However, rates of food insufficiency are not significantly different across expansion and non-expansion states. Full results for subsamples of interest are shown in Appendix D.

Figure 8. Financial Hardship and Medicaid Expansion States, Pulse

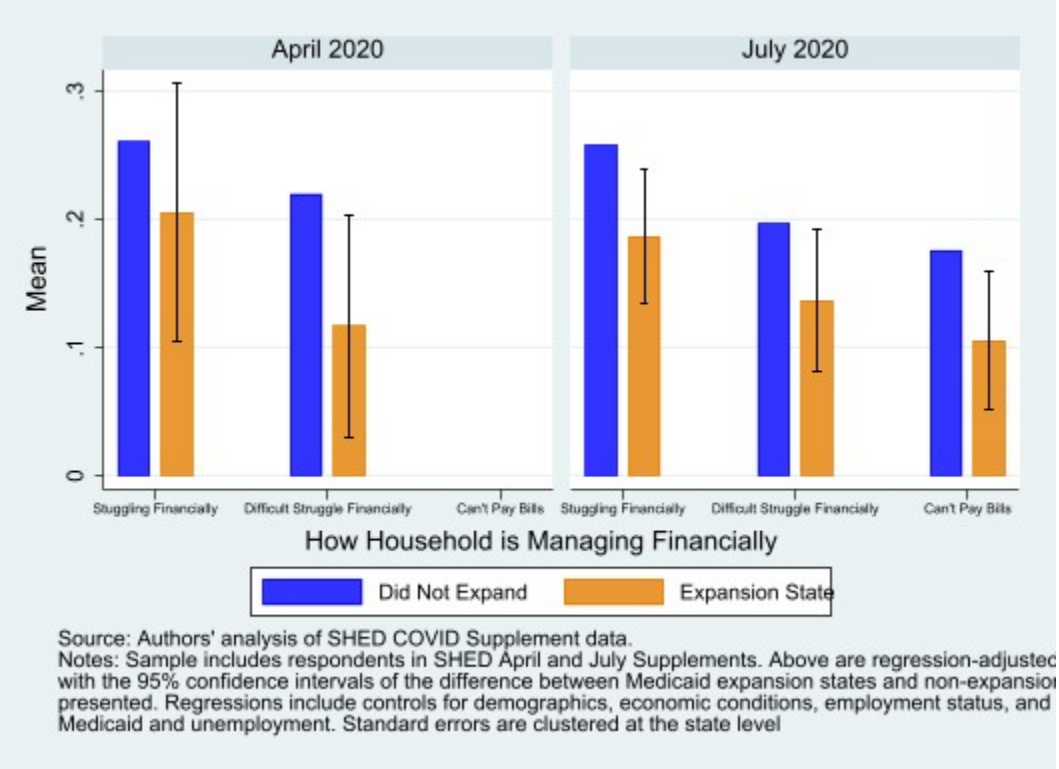


Notes: Authors' analysis of Pulse Data tabulated from respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Data on COVID-19 severity comes from Johns Hopkins University.

The SHED supplement asks additional questions about financial hardship as well as emergency savings. Financial hardship in the SHED supplement includes self-reports of struggling financially, including difficult financial struggles, as well as self-reports in the July

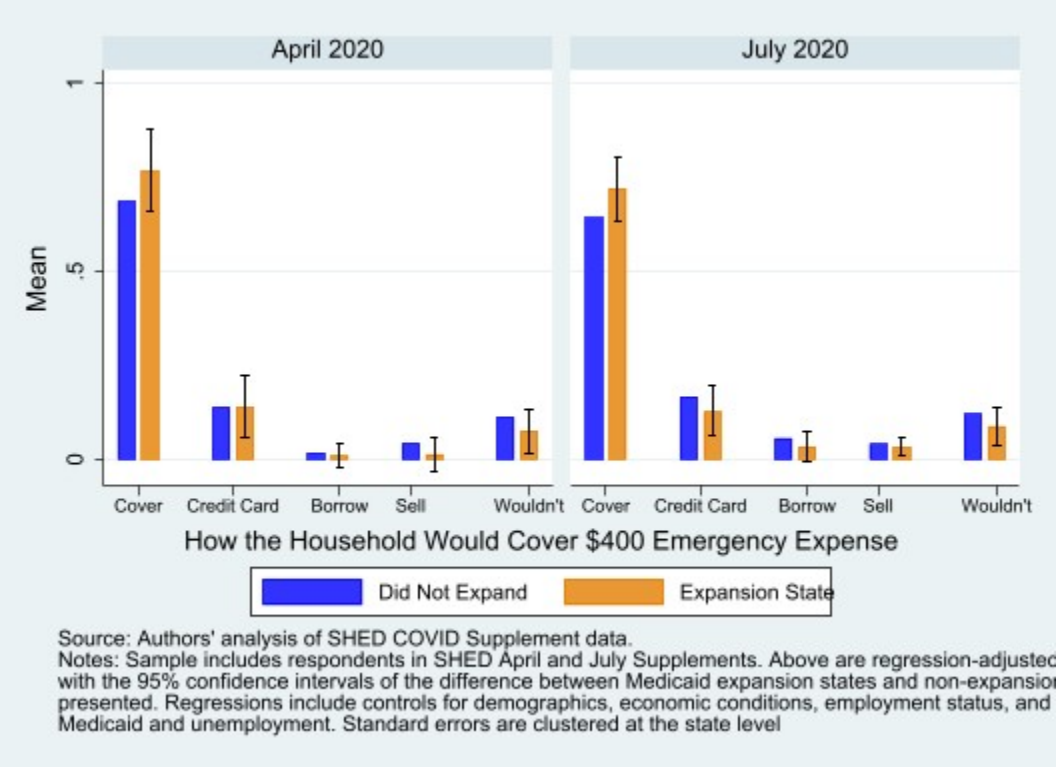
2020 supplement that respondents couldn't pay their bills. These are shown in Figure 9. Point estimates for households in states that did not expand all demonstrate worse ability to financially manage than in states that did expand. Small sample sizes in the April 2020 supplement prevent these point estimates from being statistically significant, but questions about financial hardship in July 2020 all show that households in states that did not expand were significantly worse off than in states that did expand.

Figure 9. Financial Hardship and Medicaid Expansion States, SHED Supplement



Consistent with reduced financial hardship, Figure 10 shows that in both the April and July supplement, households in expansion states were much more likely to be able to cover an unexpected $400 expense with cash, compared to households in non-expansion states. However, due to small sample sizes the means are only significantly different in July 2020. Importantly, more households in non-expansion states report that they wouldn't be able to cover an unexpected $400 expense, although the point estimates are not statistically significantly different.

Figure 10. Emergency Savings and Medicaid Expansion States, SHED Supplement



Retirement, disability, and application of social security benefits.

Decisions to stay in the labor force until the desired retirement age are important for household financial goals; becoming too disabled to work due to health-related reasons or relying on Social Security benefits earlier than anticipated can negatively affect quality of life. The next set of estimates explores these issues.

Estimates for retirement, claiming disability, or applying for Social Security-administered benefits suggest that while adults near retirement in states that expanded Medicaid prior to the pandemic experienced high rates of financial hardship, these rates were still significantly lower rates than for adults in those in states that did not expand. Given that the longitudinal analysis does not find any significant differences in financial hardship, it may be that state policies during the pandemic that helped households meet their needs are correlated with Medicaid expansion decisions. This explanation would be consistent with Medicaid expansion states having fewer per capita COVID-19 cases and deaths. But, because there are no significant differences in Medicaid expansion status in the source of income households reported using in the past week to meet their spending needs, the magnitude of the difference in financial hardship between Medicaid expansion states and non-expansion states is likely more than in COVID-19 severity.

Table 12. Retirement, Social Security Application, and Medicaid Expansion, SHED Data

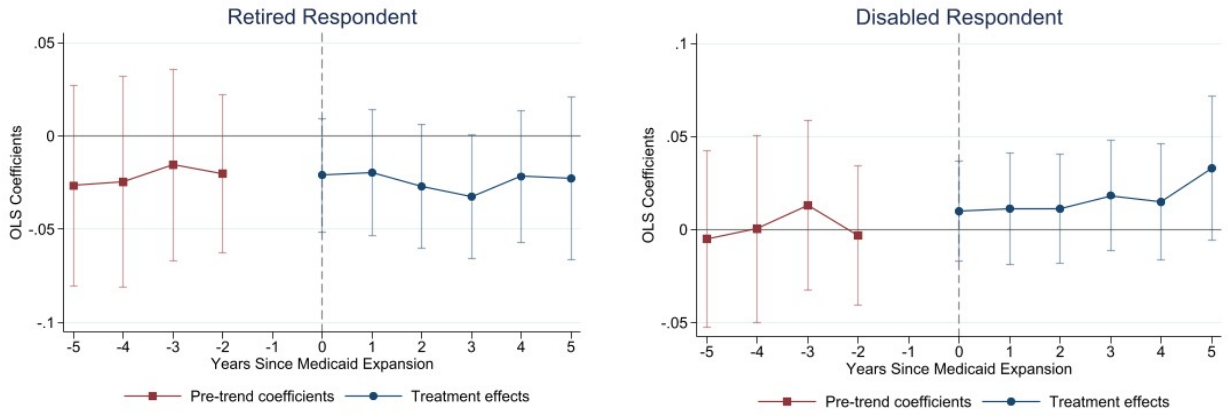
	Retired	Work Limiting Disability	Applied to Social Security Retirement, Disability, or SSI in the Past 12 Months	Applied to SSI in the past 12 Months
	(1)	(2)	(3)	(4)
Difference-in-Difference Methods				
Expansion x Post	-0.0168	0.00635	-0.00769	-0.00343
	(0.0119)	(0.0106)	(0.0244)	(0.0220)
Difference-in-Difference-in-Difference Methods				
Expansion x Post	-0.0103	0.0426	-0.0578**	-0.0359*
	(0.0302)	(0.0268)	(0.0228)	(0.0198)
Expansion x Post x SSI Categorical Eligibility	-0.00713	-0.0396	0.0667***	0.0377*
	(0.0303)	(0.0269)	(0.0236)	(0.0204)
Event Study Methods				
Year 5	-0.0228	0.0328*		
	(0.0223)	(0.0198)		
Year 4	-0.0217	0.0147		
	(0.0180)	(0.0159)		
Year 3	-0.0325*	0.0184	0.00624	
	(0.0170)	(0.0151)	(0.0147)	
Year 2	-0.0271	0.0112	0.0124	-0.0163
	(0.0170)	(0.0151)	(0.0156)	(0.0125)
Year 1	-0.0196	0.0113	0.0134	-0.00442
	(0.0172)	(0.0153)	(0.0182)	(0.0125)
Year 0	-0.0210	0.00975	0.0223	0.00232
	(0.0155)	(0.0137)	(0.0263)	(0.0236)
Year - 1 (Omitted)				
Year - 2	-0.0201	-0.00309	-0.000485	-0.0480
	(0.0216)	(0.0192)	(0.0347)	(0.0665)
Year - 3	-0.0155	0.0130	0.0168	
	(0.0261)	(0.0231)	(0.0371)	
Year - 4	-0.0247	0.000336		
	(0.0288)	(0.0256)		
Year - 5	-0.0267	-0.00489		
	(0.0273)	(0.0242)		
Observations	22,168	22,168	15,454	8,040
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Years Available	2013-2019	2013-2019	2015-2019	2015-2017

Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Due to lack of time variation in SSI categorical eligibility, the triple difference estimates omit state fixed effects. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

The availability of Medicaid could be important for those who want to leave the labor force but are in need of health insurance coverage. We examine reports of being retired or having a work-limiting disability related to the Medicaid expansion in Table 12 by removing the employment variables from the set of controls. Difference-in-difference estimates for being retired or having a work-limiting disability are insignificant. But, these estimates tend to be negative for the decision to retire and small and positive but insignificant for reporting a work-limiting disability.

Plotting the event study results in Figure 11 also suggests some declines in individuals retiring. But the post-Medicaid trend in having a work-limiting disability is flat, indicating that having greater access to healthcare because of the Medicaid expansion did not lead to increased diagnosis of a work-limiting disability.

Figure 11. Event Studies of the Medicaid expansion and Retirement or Work-Limiting Disability, SHED



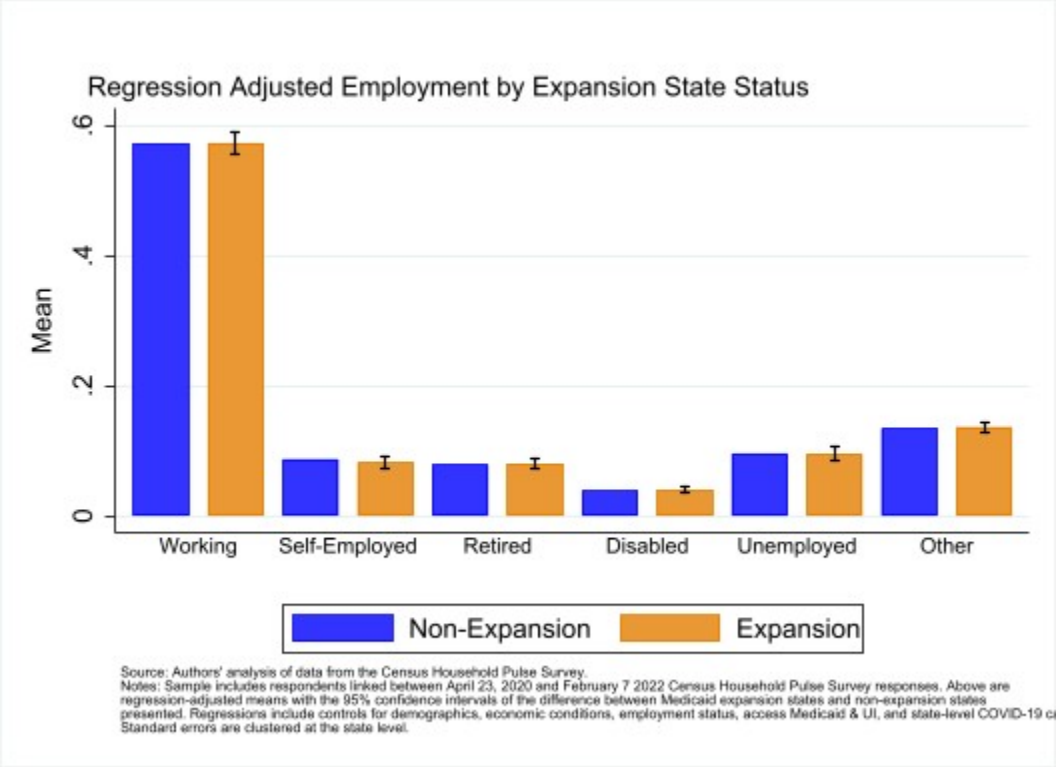
Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Estimates from event studies plotted with 95% confidence intervals.

Subsamples of households with less educational attainment and non-white-headed households show point estimates that are larger in magnitude but still statistically insignificant. Those in fair or poor health have positive point estimates for being retired, larger and negative point estimates for being disabled, and positive point estimates for applying for SSI benefits.

During the pandemic.

Due to the deterioration in the labor market and the unsafe working conditions of low-wage workers during the pandemic, there has been concern about the "Great Resignation" as workers decide to leave the labor market. Additionally, the long-term effects of COVID-19 may have led some to be unable to work. Comparing the labor supply decisions of Pulse respondents in Figure 12 indicates that there is very little difference across Medicaid expansion and non-expansion states in labor supply decisions.

Figure 12. Labor Market Decisions and Medicaid Expansion, Pulse Data

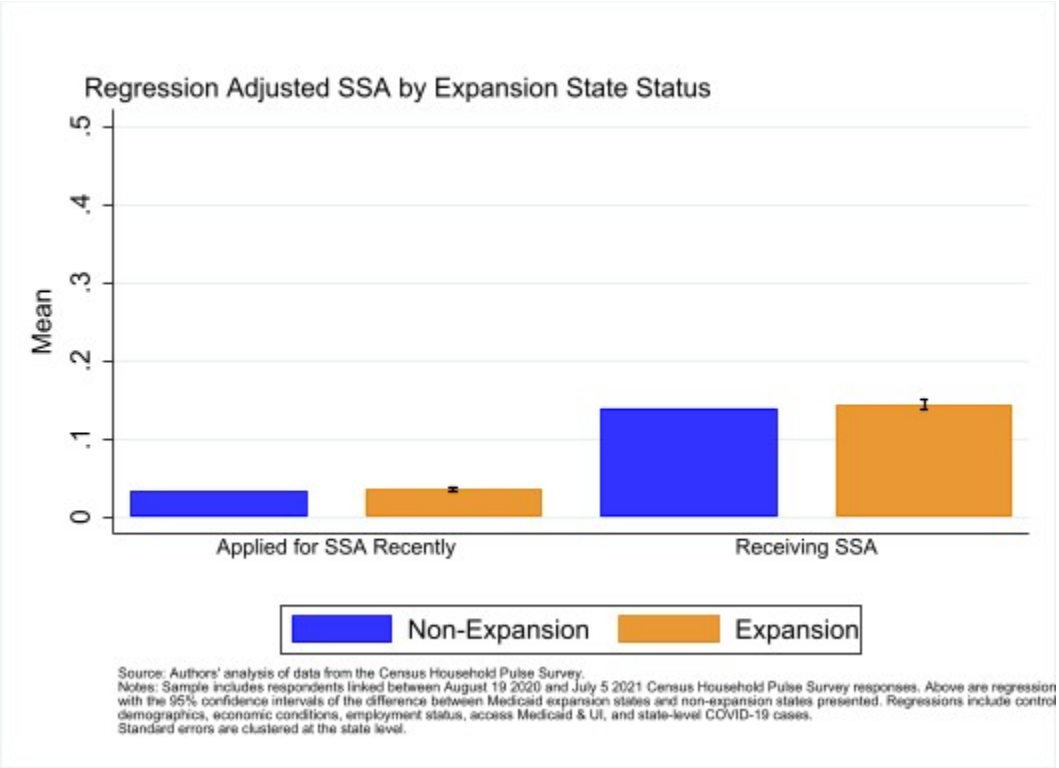


Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service.

During the pandemic, there were also concerns about individuals choosing to apply for Social Security programs. During Phase 2, Phase 3, and Phase 3.1 of the Pulse, decisions to apply for and receipt of any Social Security administered program – Social Security Retirement Benefits, SSDI, and SSI – were queried. The Pulse didn't distinguish between the various programs so we can only estimate the application and receipt of these programs together. Figure

13 shows there is no statistically significant difference in these reports of application or receipt of these programs by access to Medicaid.

Figure 13. Social Security Program Applications and Medicaid Expansion, Pulse



Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service.

Preparation for retirement and savings.

Finally, we explore retirement preparation. The SHED asks a few questions about retirement accounts and retirement preparation, although there are only a handful of questions with an adequate time series for estimates. We chose self-reports of borrowing or cashing out of retirement savings and having less than $50,000 saved for retirement.

In Table 13, we show the difference-in-difference and event study estimates. Both estimates are insignificant. The point estimate for borrowing from retirement is positive but small from the Medicaid expansion. In contrast, the point estimates for having less than $50,000 in retirement savings are negative, suggesting that there may be some increases in retirement savings among those with relatively little retirement savings because of the Medicaid expansion.

Table 13. Retirement Preparation and Medicaid Expansion, SHED Data

	In Last 12 Months Have You Borrowed From or Cashed Out Any Retirement Savings	Total Retirement Savings is Less than $50,000
	(1)	(2)
Difference-in-Difference Methods		
Expansion x Post	0.0122	-0.0150
	(0.0131)	(0.0333)
Difference-in-Difference-in-Difference Methods		
Expansion x Post	0.0162	-0.122***
	(0.0323)	(0.0294)
Expansion x Post x SSI		
Categorical Eligibility	-0.00536	0.113***
Expansion x Post	(0.0321)	(0.0304)
Event Study Methods		
Year 5	0.00388	
	(0.0203)	
Year 4	0.00871	
	(0.0185)	
Year 3	0.0155	-0.0147
	(0.0180)	(0.0190)
Year 2	0.00516	-0.0144
	(0.0183)	(0.0197)
Year 1	0.0149	-0.0174
	(0.0185)	(0.0252)
Year 0	0.0198	-0.0371
	(0.0164)	(0.0357)
Year - 1 (Omitted)		
Year - 2	0.0119	0.0489
	(0.0222)	(0.0451)
Year - 3	0.00354	0.0814*
	(0.0276)	(0.0486)
Year - 4	-0.0101	
	(0.0305)	
Year - 5	0.00255	
	(0.0288)	
Observations	16,793	13,140
State FE	Yes	Yes
Year FE	Yes	Yes
Controls	Yes	Yes
Years Available	2013-2019	2014-2019

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Due to lack of time variation in SSI categorical eligibility, the triple difference estimates omit state fixed effects. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

4. Discussion and Conclusions

The Medicaid expansion was the largest expansion in social policy since the creation of Medicare and Medicaid. Occurring a relatively short time before an unprecedented economic and public health crisis, the pandemic tested Medicaid as a vital safety net program.

Health insurance coverage.

The expansion of Medicaid provided health insurance coverage to millions of older adults. Our estimates suggest that while most adults had new access to Medicaid, the expansion encouraged some older adults to leave private coverage for public coverage. Due to Medicaid's generosity, this should have reduced their exposure to financial risk. Historically marginalized and vulnerable populations also saw large changes in their health insurance coverage, improving their access to healthcare. Adults in states that expanded Medicaid were more likely to be insured during the pandemic.

Medical expenses and financial hardship.

Despite these increases in health insurance coverage, we did not have significant estimates of declines in unexpected out-of-pocket expenses or financial hardship. Many of our results were imprecise and more work is needed to determine if there were no significant changes or if there is omitted variable bias in our estimates that will allow us to better understand how the Medicaid expansion may be protecting the financial well-being of households nearing retirement.

Retirement preparation.

Like the lack of significant findings on out-of-pocket medical expenses and financial hardship, we did not find significant evidence of change in retirement preparation. Our results here are also imprecise and more work is needed to determine if there are significant changes in retirement preparation, application for Social Security administered benefits, and savings with the Medicaid expansion.

References

Abramowitz, J. 2020. "The Effect of ACA State Medicaid Expansions on Medical Out-of-Pocket Expenditures." *Med Care Res Rev* 77(1): 19-33.

Allen, H.L. and B.D Sommers. 2020. "Medicaid and COVID-19: At the Center of Both Health and Economic Crises." *JAMA* 324(2):135-136.

Antonisse, L., R. Garfield, R. Rudowitz, and S. Artiga. 2020. "The effects of Medicaid Expansion under the ACA: updated findings from a literature review." *Kaiser Family Foundation* Report. March 2020.

Baicker, K., S.L Taubman, H.L Allen, M. Bernstein, J.H Gruber, J.P Newhouse, and A.N Finkelstein. 2013. "The Oregon Experiment — Effects of Medicaid on Clinical Outcomes." *New England Journal of Medicine* 368(18): 1713-1722. doi:doi:10.1056/NEJMsa1212321.

Blavin, F., M. Karpman, G.M Kenney, and B.D Sommers. 2018. "Medicaid Versus Marketplace Coverage For Near-Poor Adults: Effects On Out-Of-Pocket Spending And Coverage." *Health Affairs* 37(2): 299-307.

Buchmueller, T. C., Z. Levinson, H.G Levy, and B.L Wolfe. 2016. "Effect of the Affordable Care Act on racial and ethnic disparities in health insurance coverage." *American Journal of Public Health* 106(8): 1416-1421.

Burns, M., & Dague, L. (2017). The effect of expanding Medicaid eligibility on Supplemental Security Income program participation. *Journal of Public Economics*, 149, 20-34.

Callaway, B., & Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, *225*(2), 200-230.

Callison, K., and B. Walker. 2021. "Medicaid Expansion and Medical Debt: Evidence From Louisiana, 2014–2019." *American Journal of Public Health*, 111(8): 1523-1529.

Canilang, S., C. Duchan, K. Kreiss, J. Larrimore, E.A Merry, E. Troland, and M. Zabek. 2020. *Report on the economic well-being of US households in 2019, featuring supplemental data from April 2020* (No. 4724). Board of Governors of the Federal Reserve System (US).

Caswell, K. J., and T.A Waidmann. 2017. "The Affordable Care Act Medicaid Expansions and Personal Finance." *Medical Care Research and Review, Online First* September 16, 2017, doi.org/1077558717725164.

Cliff, B. Q., S. Miller, J.T Kullgren, J.Z Ayanian, and R. Hirth. 2021. *Adverse Selection in Medicaid: Evidence from Discontinuous Program Rules* (No. w28762). National Bureau of Economic Research.

Colello, K.J. and M.R Morton. 2019. *Medicaid Eligibility: Older Adults and Individuals with Disabilities*. Congressional Research Service Report R46111. Available at https://crsreports.congress.gov/product/pdf/R/R46111.

Collins, J.M. "Paying for the Unexpected: Making the Case for a New Generation of Strategies to Boost Emergency Savings, Affording Contingencies, and Liquid Resources for Low-Income Families." In *A Fragile Balance*, 1-15: Springer, 2015.

Collins, S.R., M.Z. Gunja, and G.N. Aboulafia. 2020. "U.S. Health Insurance Coverage in 2020: A Looming Crisis in Affordability." The Commonwealth Fund, New York, NY. https: https://www.commonwealthfund.org/publications/issue-briefs/2020/aug/looming-crisis-health-coverage-2020-biennial

Corallo, B. and S. Moreno, 2022. "Analysis of recent national trends in Medicaid and chip enrollment." KFF. Accessed July 6, 2022. https://www.kff.org/coronavirus-covid-19/issue-brief/analysis-of-recent-national-trends-in-medicaid-and-chip-enrollment/.

Courtemanche, C. J., and D. Zapata. 2014. "Does Universal Coverage Improve Health? The Massachusetts Experience." *Journal of Policy Analysis and Management* 33(1), 36-69.

Courtemanche, C., J. Marton, and A. Yelowitz. 2016. "Who Gained Insurance Coverage in 2014, the First Year of Full ACA Implementation?" *Health Econ* 25(6): 778-784. doi:10.1002/hec.3349.

Dobkin, C., A. Finkelstein, R. Kluender, and M.J Notowidigdo. 2018. "Myth and Measurement — The Case of Medical Bankruptcies." *New England Journal of Medicine* 378(12): 1076-1078.

Finkelstein, A., S. Taubman, B. Wright, M. Bernstein, J. Gruber, J.P Newhouse, J. P. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year +." *The Quarterly Journal of Economics* 127(3): 1057-1106

Fitzpatrick, A., and K. Fitzpatrick. 2021. "Health insurance transitions and use of fringe banks: Evidence from the Affordable Care Act." *Contemporary Economic Policy* 39: 557-572. doi:10.1111/coep.12479.

Glied, S. A., S.R Collins, and S. Lin. 2020. "Did The ACA Lower Americans' Financial Barriers To Health Care?" *Health Affairs* 39(3): 379-386. doi:10.1377/hlthaff.2019.01448.

Gjertson, L. 2016. "Emergency Saving and Household Hardship." *Journal of Family and Economic Issues* 37(1): 1-17. doi:10.1007/s10834-014-9434-z.

Goldin, J., I.Z Lurie, and J. McCubbin. 2020. "Health Insurance and Mortality: Experimental Evidence from Taxpayer Outreach." *The Quarterly Journal of Economics* 136(1): 1-49.

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*, 225(2), 254-277.

Gotanda, H., A.K Jha, G.F Kominski, and Y. Tsugawa. 2020. "Out-of-pocket spending and financial burden among low-income adults after Medicaid expansions in the United States: quasi-experimental difference-in-difference study." *BMJ* 368: m40.

Gruber, J., and B.D Sommers. 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(4): 1028-1052.

Hall, J. P., A. Shartzer, N.K Kurth, and K.C Thomas. 2018. "Medicaid Expansion as an Employment Incentive Program for People With Disabilities." *American journal of public health* 108(9): 1235-1237.

Himmelstein, D. U., R.M Lawless, D. Thorne, P. Foohey, and S. Woolhandler. 2019. "Medical Bankruptcy: Still Common Despite the Affordable Care Act." *American journal of public health* 109(3): 431-433. doi:10.2105/ajph.2018.304901.

Himmelstein, D. U., D. Thorne, E. Warren, and S. Woolhandler. 2009. "Medical Bankruptcy in the United States, 2007: Results of a National Study." *The American Journal of Medicine* 122(8): 741-746.

Hu, L., R. Kaestner, B. Mazumder, S. Miller, and A. Wong. 2018. "The effect of the affordable care act Medicaid expansions on financial wellbeing." *Journal of Public Economics* 163: 99-112. doi:https://doi.org/10.1016/j.jpubeco.2018.04.009.

Keisler-Starkey, K. and L.N Bunch. *U.S. Census Bureau Current Population Reports, P60-274, Health Insurance Coverage in the United States: 2020*, U.S. Government Publishing Office, Washington, DC, September 2021. Available at https://www.census.gov/library/publications/2021/demo/p60-274.html

Khorrami, P., and B.D Sommers. 2021. "Changes in US Medicaid enrollment during the COVID-19 pandemic." JAMA 4(5): pp.e219463-e219463.

Kluender, R., N. Mahoney, F. Wong, and W. Yin. 2021. "Medical Debt in the US, 2009-2020." *JAMA* 326(3): 250-256. doi:10.1001/jama.2021.8694.

Kominski, G. F., N.J Nonzee, and A. Sorensen. 2017. "The Affordable Care Act's impacts on access to insurance and health care for low-income populations." *Annual review of public health* 38: 489-505.

Lee, A., Rose C. Chu, C. Peters, and B.D Sommers. 2022. "Health Coverage Changes Under the Affordable Care Act: End of 2021 Update." Assistant Secretary for Planning and Evaluation (ASPE) Issue Brief. Accessed July 12, 2022. https://aspe.hhs.gov/reports/health-coverage-changes-2021-update.

Lloro, A., Merry, E., Brevoort, K., Jones, K.. Larrimore, J., Lockwood, J., Tranfaglia, A., Troland, E., ber, D., & Zabek, M. (2022). *Economic well-being of US households in 2021*

(No. 4724). Board of Governors of the Federal Reserve System (US). Available at https://www.federalreserve.gov/publications/2022-economic-well-being-of-us-households-in-2021-executive-summary.htm

Long, S. K., G.M Kenney, S. Zuckerman, D. Wissoker, A. Shartzer, M. Karpman, and N. Anderson. 2014. "Quicktake: Number of uninsured adults continues to fall under the ACA: Down by 8.0 million in June 2014." *Urban Institute, Health Policy Center, Health Reform Monitoring Survey*.

Michener, J. D. 2021. "Politics, Pandemic, and Racial Justice Through the Lens of Medicaid." *American Journal of Public Health* 111(4): 643-646.

Miller, S., and L.R Wherry, L. R. 2017. "Health and access to care during the first 2 years of the ACA Medicaid expansions." *New England Journal of Medicine* 376(10): 947-956.

Miller, S., N. Johnson, and L.R Wherry. 2021. *Medicaid and mortality: new evidence from linked survey and administrative data* Quarterly Journal of Economics 136(3): 1783-1829.

Miller, S., L. Hu, R. Kaestner, B. Mazumder, and A. Wong. 2021. "The ACA Medicaid Expansion in Michigan and Financial Health." *Journal of Policy Analysis and Management* 40(2): 348-375.

Munnell, A. H., A. Webb, and A. Chen. 2018. "To What Extent Does Socioeconomic Status Lead People to Retire Too Soon?" *The Journal of Retirement* 5(4): 73-85.

Nikpay, S., I. Pungarcher, and A. Frakt. 2020. "An Economic Perspective on the Affordable Care Act: Expectations and Reality." *J Health Polit Policy Law* 45(5): 889-904.

Ortaliza, J., L. Fox, G. Claxton, and K. Amin. 2022. "How Does Cost Affect Access to Care." Peterson-KFF Health System Tracker. https://www.healthsystemtracker.org/chart-collection/cost-affect-access-care/.

Smith, J. C., and C. Medalia. 2015. Health insurance coverage in the United States: 2014. Washington, DC: *US Department of Commerce, Economics and Statistics Administration, Bureau of the Census.*

Sommers, B. D., K. Baicker, and A.M Epstein. 2012. "Mortality and Access to Care among Adults after State Medicaid Expansions." *New England Journal of Medicine* 367: 1025-1034.

Sommers, B.D., G.M. Kenney, and A.M. Epstein. 2014. "New Evidence on the Affordable Care Act: Coverage Impacts of Early Medicaid Expansions." *Health Affairs* 33(1): 78-87.

Sommers, B. D., B. Maylone, R.J Blendon, E.J Orav, and A.M Epstein. 2017. "Three-Year Impacts Of The Affordable Care Act: Improved Medical Care And Health Among Low-Income Adults." *Health Affairs* 36(6): 1119-1128.

Sommers, B. D. 2020. “Health Insurance Coverage: What Comes After The ACA?” *Health Affairs* 39(3): 502-508. doi:10.1377/hlthaff.2019.01416.

Soni, A., M.E Burns, L. Dague, and K.I Simon. 2017. “Medicaid expansion and state trends in Supplemental Security Income program participation.” *Health Affairs* 36(8): 1485-1488.

Wagner, K. L. 2015. Medicaid expansions for the working age disabled: Revisiting the crowd-out of private health insurance. *Journal of Health Economics*, 40, 69-82.

Appendix

Appendix A. Difference-in-Difference and Event Study Estimates for Health Insurance Coverage, Subsamples of Low Educational Attainment and SSA Program Recipients, 2013-2019 SHED

	Any Health Insurance	Medicare or Medicaid	Any Medicaid	Any Health Insurance	Medicare or Medicaid	Any Medicaid
	(1)	(2)	(3)	(4)	(5)	(6)
Difference-in-Differences						
	0.0383**	0.0730***	0.0815***	-0.0693*	-0.0252	0.0431
Expansion x Post	(0.0153)	(0.0156)	(0.0165)	(0.0392)	(0.0493)	(0.0579)
Difference-in-Difference-in-Differences						
	0.0373	0.0836**	0.0753*	-0.00398	-0.01837	0.0520
Expansion x Post	(0.0414)	(0.0423)	(0.0420)	(0.0373)	(0.0476)	(0.0518)
Expansion x Post x SSI Categorical	0.0001	-0.00629	0.0156	0.0370	0.0770	-0.0140
Eligibility	(0.0417)	(0.0426)	(0.0425)	(0.0385)	(0.0491)	(0.0532)
Event Study Model						
Year 5	0.00309	0.0579**		-0.186**	-0.0579	
	(0.0250)	(0.0257)		(0.0884)	(0.113)	
Year 4	0.0381*	0.0785***		-0.144*	-0.0593	
	(0.0224)	(0.0230)		(0.0845)	(0.108)	
Year 3	0.0196	0.0612***	0.0513**	-0.161*	-0.0432	-0.0294
	(0.0216)	(0.0222)	(0.0215)	(0.0827)	(0.105)	(0.143)
Year 2	0.0286	0.0659***	0.0629***	-0.143*	-0.0593	0.00905
	(0.0218)	(0.0224)	(0.0223)	(0.0807)	(0.103)	(0.140)
Year 1	0.0466**	0.0760***	0.0758***	-0.135*	-0.0625	0.00971
	(0.0226)	(0.0230)	(0.0227)	(0.0775)	(0.0992)	(0.135)
Year 0	0.0328	0.0767***	0.0882***	-0.0707	-0.0725	-0.00211
	(0.0200)	(0.0205)	(0.0212)	(0.0702)	(0.0903)	(0.135)
Year – 1 (omitted)						
Year - 2	-0.0156	-0.0162	-0.0241	-0.0352	-0.0125	-0.163*
	(0.0268)	(0.0276)	(0.0283)	(0.0662)	(0.0853)	(0.0918)
Year - 3	-0.0871**	-0.0291	-0.0558	-0.00802	-0.0665	-0.165*
	(0.0343)	(0.0353)	(0.0344)	(0.0715)	(0.0918)	(0.0952)
Year - 4	-0.0570	-0.0109		0.0151	-0.0722	
	(0.0386)	(0.0392)		(0.0743)	(0.0944)	
Year - 5	-0.0856**	-0.0336		-0.0472	0.0160	
	(0.0360)	(0.0369)		(0.0870)	(0.110)	
Observations	13,026	13,243	10,275	4,425	4,508	3,388
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
SHED Years	2013-2019			2015-2019		
Sample	Low Educational Attainment			SSA Program Receipt		

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Due to lack of time variation in SSI categorical eligibility, triple difference estimates omit state fixed effects. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Appendix B. Difference-in-Difference and Event Study Estimates for Health Insurance Coverage, Subsamples of Non-White Households and Households in Fair/Poor Health, 2013-2019 SHED

	Any Health Insurance	Medicare or Medicaid	Any Medicaid	Any Health Insurance	Medicare or Medicaid	Any Medicaid
	(1)	(2)	(3)	(4)	(5)	(6)
Difference-in-Differences						
Expansion x Post	0.0005	0.0812***	0.113***	0.0116	-0.0369	0.0535
	(0.0266)	(0.0263)	(0.0303)	(0.0508)	(0.0563)	(0.0764)
Difference-in-Difference-in-Differences						
Expansion x Post	-0.0119	0.0556	0.0940**	0.0830*	0.0775	0.122**
	(0.0380)	(0.0374)	(0.0424)	(0.0441)	(0.0501)	(0.0579)
Expansion x Post x SSI Categorical Eligibility	0.0638	0.0349	0.00394	0.0228	0.0100	-0.0227
	(0.0393)	(0.0388)	(0.0437)	(0.0463)	(0.0526)	(0.0604)
Event Study Model						
Year 5	-0.0432	0.0532				
	(0.0389)	(0.0386)				
Year 4	-0.0110	0.0585*				
	(0.0357)	(0.0354)				
Year 3	-0.0152	0.0499	0.0389	-0.0752	-0.0900	-0.260
	(0.0362)	(0.0356)	(0.0363)	(0.103)	(0.116)	(0.201)
Year 2	-0.0281	0.0879**	0.0996**	-0.0564	-0.0702	-0.200
	(0.0377)	(0.0374)	(0.0404)	(0.100)	(0.113)	(0.199)
Year 1	0.0272	0.122***	0.167***	-0.0137	-0.0297	-0.167
	(0.0395)	(0.0385)	(0.0405)	(0.0960)	(0.109)	(0.192)
Year 0	-0.0332	0.0734**	0.140***	0.0366	0.0103	-0.210
	(0.0343)	(0.0340)	(0.0376)	(0.0829)	(0.0949)	(0.195)
Year - 1 (omitted)						
Year - 2	-0.0318	-0.0179	-0.0382	0.00235	0.117	0.00932
	(0.0498)	(0.0495)	(0.0525)	(0.0780)	(0.0894)	(0.103)
Year - 3	-0.168***	-0.0644	-0.0796	-0.102	0.123	-0.0174
	(0.0575)	(0.0571)	(0.0559)	(0.0781)	(0.0888)	(0.108)
Year - 4	-0.132**	-0.0102				
	(0.0667)	(0.0652)				
Year - 5	-0.173***	-0.0668				
	(0.0650)	(0.0644)				
Observations	5,918	6,133	4,503	3006	3,006	2,325
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
SHED Years	2013-2019			2015-2019		
Sample	Non-White Respondents			Fair or Poor Health		

Notes: Authors' analysis of SHED Data tabulated from 2013-2019 for respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Due to lack of time variation in SSI categorical eligibility, triple difference estimates omit state fixed effects. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Appendix C. Health Insurance Estimates During the Pandemic, Census Household Pulse Survey

	Any Health Insurance				Any Medicaid Coverage			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Expansion State	0.054***	0.085***	0.059***	0.058***	0.095***	0.133***	0.093***	0.137***
	(0.012)	(0.011)	(0.010)	(0.009)	(0.010)	(0.013)	(0.009)	(0.013)
Constant	0.603***	0.624***	0.647***	0.822***	0.312***	0.368***	0.285***	0.642***
	(0.024)	(0.020)	(0.019)	(0.016)	(0.024)	(0.025)	(0.018)	(0.031)
Observations	155,859	77,182	423,452	16,514	140,002	69,588	379,455	14,691
R-squared	0.080	0.065	0.065	0.028	0.134	0.158	0.142	0.236
Mean of Dependent Variable	0.901	0.880	0.902	0.921	0.169	0.255	0.168	0.362
Subsample								
Non-White Respondents	YES				YES			
Respondents in Poor Health		YES				YES		
Respondents with Less than a College Degree			YES				YES	
SSI Recipients				YES				YES

Notes: Authors' analysis of Pulse Data. Sample limited to respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Appendix D. Hardship and the Medicaid Expansion, Pulse Estimates by Subsample

	Food Insufficiency				Behind on Housing Payment (Either Rent or Mortgage)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Expansion State	-0.011***	-0.014***	-0.009***	-0.008	-0.007*	-0.013	-0.006	-0.006
	(0.003)	(0.004)	(0.003)	(0.006)	(0.004)	(0.008)	(0.008)	(0.004)
Constant	0.312***	0.383***	0.238***	0.353***	0.177***	0.327***	0.278***	0.193***
	(0.008)	(0.012)	(0.006)	(0.015)	(0.008)	(0.014)	(0.021)	(0.011)
Observations	172,260	78,866	462,722	19,394	464,483	81,322	24,875	203,443
R-squared	0.074	0.079	0.073	0.087	0.060	0.042	0.045	0.055
Mean of Dependent Variable	0.123	0.205	0.104	0.143	0.0897	0.170	0.199	0.123
Subsample								
Non-White Respondents	YES				YES			
Fair/Poor Health		YES				YES		
Low Educational Attainment			YES				YES	
SSI Recipients				YES				YES

Notes: Authors' analysis of Pulse Data. Sample limited to respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Appendix D. Social Security Application and the Medicaid Expansion, by Subpopulations

	Applied or Attempted to Apply for SSA, SSI, or Medicare			Do you currently receive Social Security benefits (Retirement, Disability, or Survivors), Supplemental Security Income (SSI) benefits, or Medicare benefits?		
	(1)	(2)	(3)	(4)	(5)	(6)
Expansion State	-0.001	-0.004	-0.001	-0.002	0.004	-0.003
	(0.002)	(0.003)	(0.001)	(0.005)	(0.008)	(0.005)
Constant	0.059***	0.084***	0.047***	0.128***	0.169***	0.122***
	(0.005)	(0.011)	(0.003)	(0.011)	(0.018)	(0.008)
Observations	94,258	32,743	242,633	95,062	33,137	244,764
R-squared	0.030	0.032	0.029	0.094	0.164	0.114
Mean of Dependent Variable	0.0328	0.0618	0.0326	0.0855	0.184	0.0991
Subsample						
Non-White Respondents	YES			YES		
Respondents in Poor Health		YES			YES	
Respondents with Less than a College Degree			YES			YES

Notes: Authors' analysis of Pulse Data. Sample limited to respondents aged 45 to 64 years old. Data on State Medicaid expansions is from the Kaiser Family Foundation. Data on eligibility for Medicaid for SSI recipients is from the Congressional Research Service. Asterisks denote statistical significance as follows *** p<0.01, ** p<0.05, * p<0.1.

Center for Financial Security

School of Human Ecology
University of Wisconsin-Madison

1300 Linden Drive
Madison, WI 53706

608-890-0229
cfs@mailplus.wisc.edu
cfs.wisc.edu