

Medicaid-ing Uninsurance? Reducing the Duration of Uninsurance Spells

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1. Introduction

Periods of uninsurance increase the cost of health care utilization and expose individuals to financial risk. In the U.S., such spells of uninsurance are common among the low-income population, who churn into and out of eligibility for means-tested public insurance programs such as Medicaid and the Childrens Health Insurance Program (CHIP). This churn has been found to increase the likelihood of both foregoing necessary medical attention and medical bankruptcy (Schoen and DesRoches, 2000; Sudano Jr and Baker, 2003). At the same time, just 11% of the adult population aged 18–64 were ever covered by Medicaid in 2013, just before the passage of the Affordable Care Act (ACA) and its associated expanded access to public insurance, whereas 59% were covered by Employer-Sponsored Insurance (ESI).¹ However, little is known about the uninsurance dynamics for this population.

We study the duration of uninsurance for ESI policy holders who separate from their plan. Our analysis draws from U.S. administrative tax data, which began reporting monthly insurance coverage for the population in 2014 under the ACA. In 2016, for example, roughly 11 million policy holders separated from their ESI plan after having been covered by this same policy for at least one year prior to separation. These data reveal, for the first time, both short- long-run spells of uninsurance among ESI policy holders: we estimate that two-thirds of ESI policy holders find coverage one month after separation, but 16% of policy holders who separate from an ESI plan remain uninsured twelve and twenty four months later. A survival analysis of the duration of uninsurance suggests that women, married individuals, and individuals with expanded access to Medicaid under the ACA experience shorter durations of uninsurance following a separation. We further exploit post-2014 state-sponsored Medicaid expansions to show that access to Medicaid increases the likelihood of finding coverage by

¹Author’s calculations based on the 2013 American Community Survey.

15-20%. Finally we show that the onset of the SARS-COV2 pandemic and subsequent loss in ESI increased the typical duration of uninsurance, however this effect was mitigated by ACA Medicaid expansion.

Our analysis provides compelling evidence that access to public health insurance is an important part of the US social safety net, providing protection for a population that, ex-ante, was unlikely to benefit from such a program. In 2013 — one year before the implementation of the ACA — childless adults, jobless parents in a family of three earning more than \$7,226 per year (37% FPL), and employed parents in a family of three earning more than \$11,913 (61% FPL) did not qualify for Medicaid. Although 26 states expanded Medicaid eligibility to adults earning less than 138% FPL — or \$16,105 for childless adults or \$27,310 for a family of three — for the XX% of adults who lived in states that did not expand Medicaid, childless adults and parents in a household of three earning more than \$9,301 (47% FPL) remained ineligible for Medicaid. By comparison, ESI policy holders who separate from their plan in 2016 earned an average \$62,145 in wage income in 2015, and just 11% had an FPL below 138%. In other words, this population is ex-ante unlikely to benefit from access to Medicaid upon separation from their policy. In spite of this, we estimate an economically and statistically significant reduction in the duration of uninsurance due to ACA Medicaid expansion.

Our analysis requires observations of individual monthly coverage before and after ESI policy separation. Prior to the ACA's monthly coverage reporting requirement in 2014, small sample sizes of survey data have precluded this type of analysis. Using the tax data, we identify the population of individuals in year y who were covered by an ESI policy in month m and separated from that policy in month $m + 1$. In addition to monthly coverage, we use population tax data to attach information about gender, age, marital status, earnings, and unemployment income measured in the tax year prior to separation. We limit our analysis to those who were

attached to their policy for at least 12 months and were aged 18–62 at the time of separation. Then, we create a panel data set of monthly coverage for twenty-four months after separation.

In light of the novelty of our data, we provide descriptive statistics about the ESI separations that we observe between January and November of 2016. Roughly 1.5 million individuals experience an ESI policy transition, either to a new coverage or to uninsurance, in any given month. Among these individuals, the majority (55%) transition from one ESI policy to another one month later; these transitions can reflect a number of behaviors including employee turnover and transitions across policies among eligible members of the same household. About 8% of individuals transition from an ESI policy to a Medicaid policy and 2% of individuals transition from an ESI policy to an exchange policy.² Finally, roughly one-third of individuals lose coverage, transitioning from an ESI policy to uninsurance one month later, and the state of uninsurance is persistent: 34% of those individuals that lose insurance remain uninsured twelve months later and 28% remain uninsured twenty four months later.

We model how observable characteristics of policy holders affect the duration of uninsurance in two ways. First, we estimate an OLS model of the likelihood of coverage within one, six, and twelve months following separation. Second, we formally model the hazard function of the duration of uninsurance, or the instantaneous likelihood of finding coverage after separation, based on a Cox proportional hazard model. While both models provide similar estimates, the latter approach relaxes the normality assumption that is unlikely to reflect the underlying survival model. Among the unemployed, we estimate that women are 20% more likely to find coverage, married policy holders are 31% more likely to find coverage, and those living in expansion states are 36% more likely to find coverage.

²Less than 1% of individuals transition from an ESI policy to a non-group, non-exchange policy or to a policy sponsored by the Department of Veteran Affairs (VA).

We estimate effect of access to Medicaid using a difference-in-difference states that expand Medicaid thresholds under the ACA. In particular, we study the Louisiana Medicaid expansion in 2016 and the Virginia Medicaid expansion in 2019. In each analysis, we compare individuals who separate from a policy (1) before and after the Medicaid expansion to (2) those who separated during these same months in non-expansion states, controlling for month of separation, age, income, and marital status. As before, we proxy for exogenous coverage loss using the subsample of policy holders who both separate from an ESI plan and receive unemployment benefits. We estimate that the Medicaid expansion increased the likelihood of by 21% in Louisiana and by 16% in Virginia. In both states, this is accompanied by a 13 percentage point increase in the likelihood of Medicaid being the first source of coverage following a separation.

Finally, we analyze the effect of the COVID-19 pandemic on the likelihood of gaining coverage for those individuals that lost coverage in April, 2020. This empirical analysis compares individuals that separate from an ESI from March to April, 2020 to those individuals that separate from an ESI policy in March of 2018 and 2019. Our 2018 and 2019 comparison group holds fixed the typical hazard function of gaining coverage for those individuals that were previously covered by ESI — behavior that is reflected by our 2016 analysis — and isolates the specific effect of the employment and health shock that arose with the COVID-19 pandemic. For example, individuals that separate from an ESI plan in March, 2020 were disproportionately more likely to do so as a result of job loss rather than a job change.

While 61% of those who separate in March of 2018 and 2019 find coverage one month after separation, just 56% find coverage one month later if they separate due to the pandemic. Moreover, the likelihood of moving to an ESI policy one month later decreased by 18% in 2020 compared to 2019 and 2018, and the likelihood of moving to a Medicaid plan increased by 42%. We estimate that the likelihood of finding coverage decreased in 2020 by 10%. In

addition, we estimate the effect of the ACA Medicaid expansion on the duration of uninsurance during the pandemic based on a difference-in-difference model that compares those who separate from a policy (1) in expansion vs non-expansion states (2) in 2020 compared to 2019 and 2018. We find that expanded access to Medicaid increases the likelihood of finding coverage during the pandemic by 4.4%. This result provides additional evidence that the social safety provides protection to a broader population than has been previously studied.

The rest of the paper proceeds as follows. Section 2 provides background information on access to the insurance in the United States. Section 3 provides information about the administrative tax data. Section 4 provides descriptive evidence of the dynamics of uninsurance for those who separate from an ESI policy in 2016. Section 5 describes our empirical methods. Section 6 reports evidence on the effect of expanded access to Medicaid through state-based expansions. Section 7 reports our estimates of the effect of the pandemic on the duration of uninsurance and the role that Medicaid played in mitigating this. Finally, Section 8 concludes.

2. Background

3. Identifying ESI Policy Separations Using Administrative Tax Data

We study monthly health insurance coverage for individual policy holders who separate from a specific ESI policy in month m for 12 months prior to separation and 24 months after separation. We assemble these panel data from several sources within the U.S. administrative tax data; we describe these sources in the text that follows. Our primary analysis focuses on those individuals who (1) separate from an ESI policy between January and November of 2016, (2)

were enrolled on that policy for twelve months prior to separation, and (3) were between the ages of 18 and 62 at the time of separation. In subsequent analyses, we identify individuals who separated from an ESI policy in 2015, 2018, 2019, and 2020.

To begin, we identify all individual policy holders who separate from a specific ESI policy in 2016 using the population of Forms 1095-B and 1095-C associated with ESI. The 1095 forms are reported by employers to the IRS for the purposes of administering the Premium Tax Credit (PTC), when applicable, the individual mandate to buy health insurance and the employer mandate. The 1095 forms are year-end tax forms that are plan-specific and contain individual health insurance coverage at the monthly level for all enrollees on a policy who had at least one month of insurance coverage during the relevant calendar year.³ We define an individual as having separated from an ESI policy in month m if a single 1095 (B or C) indicates coverage existed in month m , but coverage is not present in $m + 1$ for a given employer plan.⁴ Because we identify separations within a calendar year, each year of data has only 11 months of potential separations, from January – November.

Once we have identified the population of policy-holders who separate from an ESI in month m in 2016, we use the full 1095 data to follow these individuals for twelve months prior to separation and twenty-four months after separation. In particular, we draw additional coverage data from Form 1095-A, which reports coverage for policies purchased through state and federal exchanges. Together with the 1095-B and -C, these data allow us to determine monthly coverage for the thirty-six months surrounding the ESI policy separation regardless of source of coverage (ESI, Medicaid, Medicare, TRICARE, etc). Using these data, we limit our

³The 1095-C coverage information is entirely for self-insured ESI policies (mostly over 50 employees). To identify ESI policies on the 1095-B we use information from line 8 of the form indicating the coverage source. We define ESI as having the following line 8 codes: code A-Small Business Health Options Program (SHOP); code B- Employer-sponsored coverage or code E multiemployer plans. See Lurie and Pearce (2021) for a more detailed description of these tax forms.

⁴We exclude Small Business Health Options Program (SHOP) and multi-employer plans because these plans are not necessarily associated with a specific employer.

sample to those policy-holders who were well-attached to their ESI policy prior to separation, or those that were covered on the same policy in every month in the twelve months that precede the separation, to focus on those who had stable coverage leading up to the change. This restriction limits our analysis to XX% of the population of policy-holders who separate from a policy in 2016; of the remaining (1-XX)%, YY% had stable coverage for six months prior to separation, and ZZ% had stable coverage for three months prior to separation.⁵

Next, we use the population of administrative tax data to combine information on an individual's geographic location, age, gender, unemployment compensation, and wages to supplement coverage information for the population of ESI separators. Geographic location is determined based on address information reported on the 1095, age and gender are determined based on information contained in the tax data, unemployment compensation is reported on Form 1099-G and linked to individuals based on their taxpayer identifier number (TIN), and wages are reported on Form W-2 and linked to individuals based on their TIN. Finally, we use the previous year's tax return, Form 1040, to determine filing status (joint or non-joint) and to calculate modified adjusted gross income (MAGI) in the year prior to the coverage change. We further restrict this sample to people aged 18 to 62 to ensure that policy holders experiencing a separation do not subsequently transition to Medicare during the post-separation period. This baseline sample comprises roughly 11 million policy-holders in 2016.

The first column of Table 1 reports summary statistics for those policy holders who separated from an ESI policy in 2016, our baseline sample as previously described. 45% of this sample is female, 42% are married, and policy holders earned an average of \$62,145 in 2015. 9.3% policy holders in our baseline sample were between 18 and 25 years old, 55% were between 25 and 44 years old, and 36% were between 45 and 62 years old. Finally, 15% of policy holders received unemployment insurance income in 2016 or 2017.

⁵In Appendix ?? we provide evidence of robustness of our empirical results to these sample restrictions.

Because average wages mask the underlying wage distribution, we also characterize policy holders based on their MAGI relative to the Federal Poverty Limit in 2015 — these benchmarks are used to determine eligibility for Medicaid coverage and PTC for policies purchased through the exchange.⁶ Medicaid eligibility, of course, depends on whether or not an individual lives in a state that expanded Medicaid threshold under the ACA Medicaid expansion. In non-expansion states, Medicaid eligibility thresholds were determined based on state policy; the median eligibility thresholds for childless adults, parents, pregnant women, and children in non-expansion states was 0%, 42%, 200%, and 205% of the FPL.⁷ In expansion states, Medicaid eligibility thresholds rose to a minimum of 138% of the FPL for all enrollees. Among policy-holders who separated from an ESI policy in 2016, 5.5% were below 100% FPL, the so-called “coverage gap”. The coverage gap describes the region in which individuals in non-expansion states earn too little to qualify for premium tax credits ($< 100\%FPL$) in non-expansion states while also being unlikely to qualify for Medicaid — the median eligibility threshold for parents in non-expansion states in 2016 was 42% FPL and childless adults did not qualify for Medicaid. 5.1% of policy holders earn between 100% and 138% of the FPL — individuals in this region qualify for premium tax credits in non-expansion states and qualify for Medicaid in expansion states. 46% of policy holders earned between 138% and 400% FPL and were therefore eligible for PTCs for coverage purchased through the exchange, regardless of state of residence. ⁸ 43% of policy holders earned more than 400% of the FPL, meaning they earned too much to qualify for PTCs for policies purchased through the exchange.

⁶The Poverty Guidelines are issued each year by the Department of Health and Human Services (HHS) and are used for administrative purposes to determine eligibility for certain programs. In 2015, the poverty guidelines for a single-person household was set at income below \$11,770. A four-person household faced a poverty guideline of \$24,250. An eight-person household faced a poverty guideline of \$40,890. Full details of the 2015 poverty guideline were published in the *Federal Register* on January 22, 2015.

⁷Add Cite.

⁸PTC amount is based on the difference between a reference premium policy known as the second lowest cost silver plan (SLCSP) and the maximum required contribution the household is needs to pay for premiums. Hence, some people in the 138% to 400% of FPL might not get PTC if their required contributions exceed the SLCSP.

In addition to demographic information, we document basic statistics of coverage dynamics during the 24 months after ESI separation for those policy holders in our sample. 66% of those separating from a policy in month m are covered by a new source of coverage one month later implying 34% are uninsured one month later. The average duration of insurance for those individuals who eventually regain coverage is 3.71 months. At the same time, 5.3% of those individuals who separate from a policy experience long-run uninsurance by remaining uncovered for the full twenty-four months after separation.

Columns (2) through (5) of Table further restricts this sample based on whether or not an individual lives in a state that expanded Medicaid by December 2015 and whether or not the individual received unemployment insurance in the year of or the year after the policy separation.

In general, non-expansion and expansion states look similar with respect to their gender and age compositions. People are slightly more likely to be married (i.e. joint filer) in non-expansion states, though the average rates are fairly comparable. Those in expansion states earn higher wages with more individuals earned above 400% of MAGI relative to the federal poverty line (FPL) in the previous year, and more individuals in expansion states claim unemployment insurance within a year after separating from an ESI policy. Relative to the population, the sample of those claiming unemployment insurance is more likely to be male and less likely to be married. Their wages are lower with more of the income distribution concentrated among those earning between 138 and 400% of MAGI relative to FPL. Those claiming unemployment experience a longer duration of uninsurance and are more likely to remain uninsured after 24 months.

4. 2016 Trends in ESI Separations

We start by documenting insurance coverage dynamics following an ESI policy separation. Within one month of a separation, roughly two thirds of policyholders are covered by a new policy while the remaining one third become uninsured. Figure 1 plots the share of without any insurance coverage for a 24 month window following the ESI policy loss. Although the share of uninsured drops from 34% to 16%, over the next 12 months, there is little change in the share of the uninsured beyond that. That is, uninsurance among ESI policy holders is persistent for the roughly 50% of former policyholders who did not immediately switch to a new policy.

Figure 2 shows the different sources of coverage that people switch to in six month intervals. Unsurprisingly, the most common source of new coverage is a new ESI plan. Still, Medicaid accounts for roughly 8-9% of policy switches while the Exchange accounts for 2-3%. While the share of ESI grows from 55% to 72%, the shares of Medicaid and Exchange coverage remain relatively stable starting from month one. Figure 3 splits coverage source by whether or not the individual was living in an expansion or non-expansion state prior to the ESI policy change. The chart shows that share of uninsured is higher in non-expansion states than in expansion states both in the month after and 6 months after the policy change. ESI coverage is roughly 6 percentage points higher in the initial month for expansion states compared to non-expansion state, but that difference narrows to 3 percentage a year later. In expansion states, Medicaid coverage is roughly three times higher than in non-expansion states (19% vs 6%) in the month following the ESI change, making up much of the persistent gap in the share uninsured.

4.1. Exogenous Switching

The full sample of policy switches that include changes and losses comprises people who choose to make a change and people whose choice is made for them. To separate these groups, we create an indicator for people who claim unemployment benefits following their policy change. Unemployment benefits are generally claimed by people who have been laid off (rather than fired for cause). As such, they are unlikely to be claimed by those who actively chose to change jobs and as such, can proxy for exogenous ESI policy changes.

Figure 4 plots the same information given in Figure 1, but split by whether or not the policy holder claims unemployment benefits in the year of the policy change or the year after. This figure shows a substantial difference in uninsurance rates, where those who claim unemployment benefits are 16 percentage points more likely to be uncovered in the month after separating from their ESI policy. While persistence in uninsurance remains for both groups, those who claim benefits are respectively 9 and 5 percentage points more likely to be uncovered one and two after separating from their ESI policy.

Finally, focusing on the unemployment claimants, Figure 5 shows that those who were living in expansion states fared better in terms of regaining coverage than those who were living in non-expansion states. In particular, the uninsurance rate in non-expansion states is 16 percentage points higher in the first month after the ESI switch and remains 10 percentage points higher two years later.

5. Variation in the Duration of Uninsurance Following an ESI Policy Separation

We study how the likelihood of re-insurance following an ESI policy separation in month m varies based on observable characteristics of policy holders. For this analysis, each policy holder is characterized based on their gender, age, earnings, and geography. The outcome of interest is either the likelihood of coverage in months 1–24 after separation or the instantaneous likelihood of finding coverage after a separation, measured in months since an ESI policy separation. Recall that the average duration of uninsurance in our data is 3.7 months, but this mean masks a non-normal distribution of time to reinsurance: two-thirds of our sample regains coverage one month after a policy separation whereas the remaining one-third regain insurance slowly throughout the following 24 months. We capture these dynamics based on two difference econometric models: (1) an OLS model describing the relationship between observable characteristics and a dummy for re-insurance by a certain month after separation (1, 6, or 12), and (2) a Cox proportional hazard model describing the instantaneous probability of re-insurance, conditional on having been uninsured up to month m . In what follows, we describe each of these models.

5.1. Empirical Methods

To begin, we estimate a linear probability model of the likelihood of re-gaining coverage by month n after a separation in month m based on the following OLS model

$$Y_n = \mathbf{X}\beta + \phi_m + u$$

where Y_n is a binary variable equal to 1 if a policy holder has regained coverage by month n for $n = 1, 6, 12$. \mathbf{X}_i captures the marginal effect of the following demographic characteristics describing policy-holder i : gender, marital status, income, age, access to expanded Medicaid enrollment thresholds, and unemployment insurance receipt. Marital status, income, and access to Medicaid expansion are measured in 2015, the year prior to separation. Unemployment insurance receipt is a dummy variable indicating receipt of unemployment insurance income in 2016 or 2017. We use three dummy variables for the length of time in months to re-insurance as our dependent variables (1, 6, and 12). In light of discrete time, individuals who re-gain coverage one month later are classified as experiencing one month of uninsurance. Individuals who re-gain coverage 24 months later are grouped together with the 5% of this population who do not find coverage 24 months later; in other words, these data are right-censored at 24 months. All specifications include fixed effects for the month in which the policy separation occurred, ϕ_m .

We additionally analyze the duration of uninsurance in the context of a survival model in order to more efficiently capture the dynamics of the re-insurance process. Survival models study the time to occurrence of a particular event. In this case, we study the time to re-insurance following an ESI policy separation, where time to re-insurance is, again, measured in months. These models have an efficiency advantage over OLS models by relaxing the assumed normality of the error term in the OLS model

$$time_j \sim N(\mathbf{X}\beta, \sigma^2)$$

At a minimum, this is driven by the right-censor of our data – we do not observe policy holders for long enough to see the full population regain insurance. More importantly, the instantaneous likelihood of re-insurance is unlikely to be constant over time. Instead, descriptive analyses of the duration of uninsurance is consistent with this: 66% of this population moved

to a new policy one month later, and 33% slowly regained coverage over time with a small population never regaining coverage over the twenty-four month period.

With survival data, events are ordered and analyses is based exclusively using the ordering of the survival times. Specifically, these models study the probability of failure (re-insurance) conditional on exposure to the risk of failure for an additional unit of time. This amounts to a conditional probability that describes the likelihood of re-gaining coverage conditional on having been uninsured following a policy separation for m months. If M is a non-negative random variable denoting time to re-insurance, then its survivor function $S(m)$ is defined as follows

$$S(m) = 1 - F(m) = P(M > m)$$

and reports the probability of remaining uninsured beyond month m . In other words, the survivor function describes the probability that an individual did not re-gain coverage prior to month m . Figure 6 depicts a Kaplan-Meier estimate of the survival function for individuals who separate from an ESI policy in 2016.

A statistical counterpart to the survivor function is the hazard function, $h(m)$, or the conditional failure rate. The hazard function describes the instantaneous likelihood of re-gaining coverage, conditional upon an individual having been uninsured up until month m

$$h(m) = \lim_{\Delta m \rightarrow 0} \frac{Pr(m + \Delta m > M > m | M > m)}{\Delta m} = \frac{f(m)}{S(m)}$$

Hazard rates can vary from zero, meaning no likelihood of regaining coverage, to infinity, meaning certainty of finding coverage at that instant. The shape of the hazard function reflects the underlying survival process. In discrete time, it is common that subjects are not observed from the onset of risk, $m = 0$. Indeed, this is the case in our dataset — we cannot observe periods of uninsurance that are smaller than one month given the discrete nature of our data.

In other words, individuals who go uncovered for a matter of weeks between policies will appear to the econometrician as having regained coverage one month later. However, this does not affect the hazard function, which is an instantaneous rate that is not a function of the past.

We estimate a Cox proportional hazards model to complement our OLS analysis of the duration of uninsurance. The Cox model is a semiparametric model that is agnostic about the shape of the hazard function and assumes that covariates multiplicatively shift the baseline hazard function. In particular, the hazard rate for the j th individual in the data is

$$h(m|x_j) = h_0(m) \exp(x_j \beta_x)$$

Interpretation of the coefficients in this model comes from the ratio of two individuals hazard

$$\frac{h(m|x_j)}{h(m|x_m)} = \frac{\exp(x_j \beta_x)}{\exp(x_m \beta_x)}$$

Exponentiated coefficients have the interpretation as the ratio of the hazards for a one-unit change in the corresponding covariate. For example, the coefficient for a gender dummy variable, *female*, is interpreted as the ratio of the hazard for women compared to men. When $\hat{\beta} > 1$, this implies that women are more likely than men to re-gain coverage, and vice versa. In light of this, statistical significance is interpreted based on a null hypothesis that the exponentiated coefficient is equal to one. A rejection of this null hypothesis suggests that there is enough statistical evidence to reject a null hypothesis that women and men are equally likely to instantaneously re-gain coverage.

5.2. Empirical Evidence

Columns (1) – (3) of Table 2 report estimates of the likelihood of regaining insurance one, six, and 12 months after separation based on this OLS model for the full population of policyholders who experienced a separation in 2016, respectively. Columns (5) – (7) report estimates for those policy holders who also coincidentally received unemployment insurance in 2016 or 2017 — we refer to these individuals as unemployed.

Among the full population of individuals who separated from an ESI policy in 2016, women were more likely to regain coverage than men: women were 4.55 percentage points 5.85, and 4.85 more likely to be insured one, six, and 12 months after separation respectively. This is likely driven by the fact that (1) women have historically had a higher demand for health insurance than men, (2) women are more likely to be primary care-takers for children, increasing the demand for health insurance, and, relatedly, (3) low income, women are more likely to be single parent and to qualify for Medicaid men. Married policy holders who separate from an ESI policy are 12.7 percentage points more likely to be covered one month later, consistent with increased access to health insurance for married couples through a spouse’s policy. This difference decreases but remains positive throughout the post-separation period.

Turning to differences in the likelihood of re-insurance by income, we compare individuals with 2015 MAGI between 100 and 138% of the FPL, 138% – 400% of the FPL, and greater than 400% of the FPL to those individuals with income below 100% of the FPL. Recall that individuals who live in non-expansion states and earn below 100% of the FPL fall into the coverage gap: they are unlikely to qualify for Medicaid and are also not eligible for PTCs. Compared to those earning less than 100% FPL, individuals earning 100 - 400% FPL are less likely to find insurance during the 12 months after separation, although the magnitude of these differences decreases with the duration of uninsurance. High earning individuals, however,

are no more or less likely to find insurance one month after separation, but as the duration of uninsurance increases, a gap emerges. After 12 months, high-income individuals are 5.11 percentage points more likely to find coverage than low income individuals.

Next, we study differences in the likelihood of finding coverage by age. We compare 18 to 25 year olds, who are eligible to remain as dependents on their parents health plans, and individuals aged 26–44 to older individuals aged 45–62, our reference group. We find a non-monotonic relationship between age and the likelihood of re-insurance. Young policy holders aged 18–25 are 5.95 percentage points more likely to find coverage than adults aged 45–62 one month after separation and this difference persists through twelve months post separation, consistent with the additional outside option of dependent coverage through their parents. By comparison, adults 26–44 are 3.02 percentage points less likely to find insurance than adults aged 45–55, and this difference disappears after twelve months.

Finally, we compare the duration of uninsurance for policy holders who live in expansion states compared those who live in non-expansion states. We find that the likelihood of reinsurance one month after separation is 9.63 percentage points larger for those who live in expansion states, and this advantage persists for at least twelve months. The magnitude of this estimate, while not causal, suggests that the higher Medicaid eligibility thresholds in Medicaid expansion states expand the social safety net to a the ESI population – a broader population than the low-income population that is typically studied in this context. In particular, the ESI population is higher income than the typical ESI enrollee, who earned \$XX in wages in 2016.

In columns (5) – (7) of Table 2 we analyze these same effects for those who coincidentally receive unemployment income in 2016 or 2017, respectively. This unemployed population is more likely to have exogeneously separated from their ESI policy than among the full population. In the full population, we estimate that unemployed individuals are 15.4 percentage points less likely to be insured one month after separation, 13.4 percentage points less likely to

be insured six months after separation, and 3.62 percentage points less likely to be insured twelve months after separation.

Focusing on the unemployed in columns (5)–(7), we estimate that the advantage that women, married individuals, and young policy holders have in finding coverage is more pronounced than for the full population. For example, women were 7.82 percentage points more likely to be insured one month after separation, married policy holders are 16.5 percentage points more likely to be insured, and policy holders age 18–25 are 15.5 percentage points more likely to be insured. Turning to earnings, we estimate that unemployed individuals who earned more than 100% FPL are substantially less likely to find insurance compared to those earning less than 100% FPL. Finally, we estimate that unemployed individuals who separate from a policy in an expansion state are 16.0 percentage points more likely to find insurance one month later, and this effects remains large throughout the twelve month period of study.

In columns (4) and (8) we estimate how the hazard rate, or the instantaneous likelihood that a policy holder who separated from an ESI policy re-gains coverage, varies with observable characteristics for the full population and the unemployed, respectively. Recall that the Cox proportional hazard model is agnostic about the shape of the hazard function; in this case, the flexibility of the hazard model allows for the variation in the effect of covariates on the likelihood of finding coverage that we document across the post-separation period. Broadly, the sign of estimated differences in the hazard rate based on observable characteristics is consistent with estimated differences in likelihood of finding coverage by one, six, and 12 months after separation. For example, the likelihood of regaining coverage is 12.3% higher for women than men among the full population and 19.0% higher among the unemployed. Policy holders who separate from an ESI policy and are married are 19.7% more likely to regain coverage than those who are unmarried, and this difference grows to 31.8% for the unemployed. Finally, policy holders who separate from an ESI policy in expansion states are 16.7% more

likely to regain coverage than those who live in non-expansion states, and this estimate more than doubles among the unemployed (1.358).

While these estimates are not causal, they provide descriptive evidence of observable likely determinants of the duration of insurance following an ESI policy separation. Prior to this work, these ex-post separation insurance dynamics have not easily been studied due to small sample restrictions in publicly available data. The MEPS and SIPP are the only surveys that have the granularity of monthly data while the MEPS is very small the SIPP suffers from the well known seam bias. It should be noted that the ACA should have changed those dynamics dramatically. The expansion of Medicaid and introduction of marketplace coverage should have made the transition from ESI policy to another coverage type seamless. Since we do not have data prior to 2015 these dynamics are purely post ACA description. Descriptive evidence highlights important differences in the dynamics of reinsurance based on gender, age, marital status, and earnings. In addition, descriptive evidence reveals stark differences in these dynamics based on whether or not a policy holder has access to expanded Medicaid thresholds. Because the ESI population is, on average, older, more educated, and higher earning, this population is not typically thought to benefit from the Medicaid social safety net however, our descriptive findings suggest that they do. In order to see if Medicaid expansion provides larger safety net value to this population, in what follows we exploit variation in the timing of Medicaid expansion at the state level to provide causal evidence of expanded Medicaid thresholds on the dynamics of reinsurance after an ESI policy separation.

6. Effect of Medicaid Expansion on the Duration of Uninsurance

In this section we estimate the effect of expanded Medicaid eligibility thresholds on the duration of uninsurance using a difference-in-difference empirical strategy for identification purposes. This analysis requires us to estimate how the duration of uninsurance changes before and after a Medicaid expansion. However, we can observe monthly coverage only after the full implementation of the ACA, so we cannot study the effect of the first states to expand Medicaid in 2014. In addition, we must be able to observe monthly coverage for a post-expansion period in order to be able to study the duration of uninsurance, so we further limit our analysis to those states that expanded Medicaid by 2019. Two such states meet these criteria: (1) Louisiana, which expanded Medicaid June 1, 2016, and (2) Virginia, which expanded Medicaid January 1, 2019. In what follows, we describe each of these analyses.

6.1. The Effect of Louisiana's 2016 Medicaid Expansion

Background on Louisiana Medicaid Expansion Following good on a signature campaign issue, the first executive order signed by newly elected Governor John Bel Edwards on January 12, 2016 directed the state to begin the process of Medicaid expansion in Louisiana. Prior to 2016, childless adults were ineligible for Medicaid and eligibility for parents was limited to those earning less than 24% of the FPL, or \$4,838 for a parent in a family of three. Enrollment for *Healthy Louisiana* began June 1, 2016, expanding Medicaid thresholds to 138% of the FPL for childless adults and parents, or \$27,821 for a family of 3.

Data and Methodology To study the effect of Medicaid expansion in Louisiana we estimate a difference-in-difference model that compares the duration of uninsurance (1) for those policy holders who separate from an ESI policy between June – December of 2016, just after the Medicaid expansion, to individuals who separated from an ESI policy in same months in 2015, one year before the Medicaid expansion (2) in Louisiana compared to other non-expansion states. This empirical strategy requires us to expand our baseline data to include those policy holders who separate from an ESI policy in 2015. We follow the methodology described in Section 3, identifying the population of policy holders who separate from an ESI policy in month m from June to December of 2015 and limiting our analysis to those policy holders aged 18–62. We limit our analysis to those policy holders who had at least stable coverage for six months prior to separation and follow them for 24 months ex-post the policy separation.⁹

Columns (1) and (2) of Table 3 summarizes ESI policy holders who separate from their plan in Louisiana in 2016 and 2015, respectively. The unemployment rate among these policy holders is much higher in 2016 compared with 2015, which is likely related to the historic flood that occurred in mid to late August of 2016. In spite of this, the observable characteristics of individuals in our sample are similar across the two years. 40-45% of those policy holders who separated from their ESI policy were female, 34% were married, the majority were aged 26-44, and they earned, on average, \$48,000-50,000 in the year prior to their policy separation.

Descriptive evidence of post-separation insurance dynamics is consistent with the hypothesis that the Medicaid expansion reduced the duration of uninsurance. The share of individuals regaining coverage one month after separation increased from 45% to 53% from 2015

⁹In our descriptive analysis, we required that individuals be covered for 12 months to be defined as having stable coverage. We cannot impose the same restriction in this difference-in-difference analysis because it would require us to observe monthly coverage into 2014, the first year of ACA monthly reporting requirements. The 2014 data includes only 1095A from the marketplaces and no other type of coverage in light of transitional reporting requirements.

to 2016. In addition, the average duration of uninsurance dropped from 5.73 months to 5.08 months from 2015 to 2016.

We formally analyze the causal effect of the Medicaid expansion by comparing differences in the duration of uninsurance in 2016 and 2015 in Louisiana to these same months in 2016 and 2015 in non-expansion states. The comparison to the non-expansion states controls for underlying secular trends in post-separate coverage dynamics that exist in states that did not otherwise expand Medicaid. This analysis recovers the causal analysis of Medicaid expansion in Louisiana only under the assumption that trends in post-separation insurance dynamics that occur in non-expansion states would have also occurred in Louisiana if not for the Medicaid expansion.

Empirical Evidence of Medicaid Expansion Columns (1) – (3) of Table 4 report estimates of the effect of the Louisiana Medicaid expansion on the likelihood of finding insurance by month one, six, and 12 after separation, respectively, for the full population of ESI separators. Columns(5) – (7) report similar estimates among the population of unemployed policy holders. Columns (4) and (8) report estimates based on the Cox proportional hazard model for the full and unemployed populations, respectively. All specifications are based on a Cox proportional hazard model and include control for month of ESI separation, age, income in the year prior to separation, and marital status in the year prior to separation. As a reminder, we proxy for exogenous coverage loss with the subsample of ESI policy holders who separate from a policy and also receive unemployment benefits.

Panel A column 4 and 8 report changes in the hazard rate for finding coverage in Louisiana in 2016 compared to 2015. We estimate that the likelihood of finding coverage after a policy separation increased by 9% for the full population and for 11.5% for the unemployed after the Medicaid expansion in 2016 (cols 4 and 8). Panel B reports the change in the hazard rate for

reinsurance in non-expansion states between 2015 and 2016. We estimate just a 0.6% increase in the likelihood of finding coverage after a policy separation, both for the full population and the unemployed (cols 4 and 8). Given this, the identifying assumption of the model is that there would have been a small increase in the likelihood of finding coverage from 2015 to 2016, without the Medicaid expansion. Finally, panel C reports the difference-in-difference estimate of the effect of the Medicaid expansion on the likelihood of finding coverage. We estimate that the Medicaid expansion increased the likelihood of finding coverage for the full population by 8.3% and by 21.1% for those individuals that most likely exogenously lost their coverage (cols 4 and 8).

6.2. The Effect of Virginia's 2019 Medicaid Expansion

Background on Virginia Medicaid Expansion In Virginia, Medicaid expansion was achieved via a legislative effort in May, 2018 (HB5002 and HB5001) after having been proposed but not ultimately passed each year between 2014 and 2016. Prior to 2019, childless adults were ineligible for Medicaid and eligibility for parents was limited to those earning less than 38% FPL, or \$7,896 for a parent in a family of size 3. Enrollment for Virginia Medicaid began January 1, 2019, expanding Medicaid thresholds to 138% FPL for childless adults and parents, or \$29,435 for a family of 3.

Data and Methods To study the effect of Medicaid expansion in Virginia in 2019 we estimate a difference-in-difference model that compares the duration of uninsurance (1) for those policy holders who separate from an ESI policy between January and June of 2019, just after the Medicaid expansion, to those who separated from an ESI policy during these same months in 2018, (2) in Virginia compared to other non-expansion states. Again, this empirical analy-

sis requires us to expand our baseline data, this time to include policy holders who separate in later years.

We follow a similar data methodology to that described in Section 3, however we make some important adjustments in light of the timing of the Virginia Medicaid expansion and the subsequent onset of the COVID-19 pandemic. We begin by identifying policy holders aged 18–62 who separate from an ESI policy between January – June of 2018 and 2019, both in Virginia and other non-expansion states as of 2019. As with the Louisiana expansion, we focus on those individuals that are the first to be affected by the new Medicaid expansion by limiting our analysis to those who separated from an ESI policy within six months of the expansion. As with the 2016 sample, we limit our analysis to those policy holders who were well-attached to their policy for 12 months prior to separation.

At the same time, we make a few important adjustments to our data methodology when we study the Virginia Medicaid expansion in order to avoid the confounding influence of the onset of the pandemic and the ensuing macroeconomic turmoil that affected employment, and therefore insurance, in addition to health. First, we limit our post-separation period to December of the separation year. So, in 2019 for example, we identify separations from January – June, 2019 and we follow separators through December, 2019. This truncation of the post-period analysis at December of the same calendar year in which the separation occurs prevents our post-period from being contaminated by the onset of the pandemic in March, 2020. Second, we limit our identification of unemployed individuals to those who receive unemployment within the same calendar year as separating from their ESI policy — recall that in previous analysis we had included those individuals who received benefits in the year or the year after separation.

Columns (3) and (4) of Table 3 report summary statistics for those policy holders who separated from an ESI policy in Virginia in 2019, just after the Medicaid expansion, and

2018, respectively. By and large, individuals who separate from a policy in Virginia in 2018 and 2019 look similar to those who separate from a policy in 2015 and 2016 in Louisiana. Slightly fewer than half are female, the majority are married, and the majority are aged 25–44. Average earnings in the year before separation are about 40% higher in Virginia than Louisiana (roughly \$70,000), consistent with demographic differences across these states. Roughly 6% of those who separate from an ESI policy in Virginia receive unemployment benefits – higher than the 2% who received unemployment benefits in Louisiana in 2016, but consistent with pre-existing differences in unemployment reciprocity rates for these two states over time. In addition to similarities across Louisiana and Virginia, the population of policy holders who separate from an ESI policy in 2018 is similar demographically to the population who separate in 2019. Finally, these summary statistics provide early descriptive evidence of the impact of the Medicaid expansion on the duration of uninsurance following an ESI policy separation: the share of policy holders covered one month after a policy separation increases and the duration of uninsurance falls.

Empirical Evidence of Medicaid Expansion Columns (3) and (4) of Table ?? report estimates of the effect of the Virginia Medicaid expansion for the full population of ESI separators and those that were also unemployed, respectively. As in the Louisiana analysis, we estimate both an OLS model of the likelihood of coverage after separation and a Cox proportional hazard model. These specifications control for month of ESI separation, age, income in the year prior to separation, and marital status in the year prior to separation. As a reminder, we proxy for exogenous coverage loss with the subsample of ESI policy holders who separate from a policy and also receive unemployment benefits.

We estimate that the likelihood of finding coverage after a policy separation increased by 0.8% for the full population and for 15.3% for the unemployed after the Medicaid expansion

in 2019. By comparison, we find a 2% *reduction* in the likelihood of finding coverage after a policy separation for the full population of ESI policy separators between 2018 and 2019. This increase in the duration of uninsurance is likely related to the repeal of the individual mandate to buy insurance that became effective in 2019. At the same time, we do not estimate a change in the likelihood of finding coverage after a policy separation for the unemployed in non-expansion states during this same time period. Taken together, we estimate that the Medicaid expansion increased the likelihood of finding coverage for the full population by 2.8% and by 15.8% for those individuals that most likely exogenously lost their coverage.

6.3. Discussion

We find that the Medicaid expansion in both Louisiana in 2016 and Virginia in 2019 lead to an increase in the likelihood of finding coverage for policy holders following a separation from an ESI policy. Next, we analyze the first source of coverage in a difference-in-difference empirical framework to confirm that the reduction in the duration of insurance that we estimate is driven by an increase in Medicaid take-up. Specifically, we estimate the following model separately for the Louisiana and Virginia Medicaid expansions:

$$Y_i = \beta_0 + \beta_1 Treat + \beta_2 Post + \beta_3 Treat \times Post + \sum \Gamma + u$$

for the set of individuals who we observe re-gaining coverage in the first month in which they re-gain coverage. Here, Y_i is a binary variable identifying source of coverage (ESI, Medicaid, or Exchange, respectively, across three different specifications). $Treat$ is a dummy variable equal to 1 for individuals who separate from an ESI policy in either Louisiana or Virginia, and the control group are those individuals who separate from an ESI policy in non-expansion states. $Post$ is a dummy variable equal to 1 for individuals who separate in 2016 in Louisiana

and 2019 in Virginia. β_3 identifies the causal effect on the source of coverage among ESI, Medicaid, and Exchange policies. All specifications include controls for month of separation, age, income, and marital status.

Results from this model are reported in Table 6. Columns (1)–(3) report results for the full population and columns (4)–(6) report results for the unemployed. Panel A reports results for Louisiana comparing those who separate in 2016 compared to 2015 in Louisiana compared to non-expansion states. Panel B reports results for Virginia comparing those who separate in 2019 compared to 2018 in Virginia compared to non-expansion states. Columns (1) and (4) report the effect of the expansion on the likelihood that ESI is the first source of coverage, columns (2) and (5) for the likelihood that Medicaid is the first source of coverage, and columns (3) and (6) for the likelihood that the Exchange is the first source of coverage.

Among the full population, we find a reduction in ESI as the first source of coverage by roughly 2 percentage points in both Louisiana and Virginia (col 1, panels A and B) paired with an increase in the likelihood that Medicaid is the first source of coverage by 4-10 percentage points (col 2, panels A and B). In Virginia, we also find a 0.7 percentage point reduction in exchange policies as a first source of coverage, however we find no effect in Louisiana (col 3, panels A and B).

Among the unemployed population, for whom we believe the loss of ESI coverage was plausibly exogenous, we find strong evidence of an increase in Medicaid coverage that is paired with a reduction in ESI and exchange coverage, particularly in Virginia. Specifically, we estimate that the likelihood of Medicaid as the first source of coverage increased by 13.2 percentage points after the Medicaid expansion, both in Virginia and Louisiana (col 5, panels A and B). In Virginia, we find that this is paired with a 8.9 percentage point and 2.9 percentage point reduction in the likelihood of ESI and exchange policies as the first source of coverage, respectively.

This evidence provides further support for our hypothesis that the Medicaid expansion reduces the duration of insurance for the ESI population.

7. Effect of COVID-19 Pandemic on the Duration of Uninsurance

The onset of the COVID-19 during March, 2020 induced a widespread shut down of economic activity as the U.S. and the rest of the world tried to contain the spread of the new virus. As a consequence of the shutdown, the U.S. unemployment rate jumped suddenly and unexpectedly by 10 percentage points from March to April of 2020, from 4.4% to 14.7%. Such a large jump in the unemployment rate suggests an equally sudden change in the number of ESI policy holders separating from an ESI policy. Moreover, these separations are distinct from a typical ESI separation in that they are more likely to be exogenous, and they come at a time of heightened risk of uninsurance: the onset of the pandemic imposed a broad increase in ex-ante expected health care expenditures for the U.S. population due to the perceived risk of infection due to hospitalization from COVID complications simultaneously with increased macroeconomic turmoil and reduced financial ability to weather large medical expenditures.

In this section we study the impact of the COVID-19 pandemic on the duration of uninsurance. In particular, we ask whether and how the likelihood of uninsurance following an ESI separation changed in 2020 due to the pandemic. Moreover, we analyze the role that Medicaid plays in the social safety net for the ESI population during a time of instability.

7.1. Data and Methods

To study the effect of the pandemic on the duration of uninsurance we estimate an OLS and a Cox proportional hazard model that compares the duration of insurance for policy holders who separate from an ESI policy in March 2020 to policy holders who separate from an ESI policy in March 2019 and 2018. To the extent that the onset of the pandemic induced an exogenous shock to employment and therefore separations, this analysis will recover the causal effect of the pandemic. Next, we estimate a difference-in-difference model of the effect of Medicaid expansion on the duration of uninsurance during the pandemic by comparing policy holders who separate from an ESI policy in March 2020 compared to March 2018 and 2019 in expansion vs non-expansion states.

We follow a data method similar to that described in Section 6.2. Specifically, we identify policy holders who separate from an ESI plan March 2018–2020 and we follow their monthly coverage through the end of the respective calendar year. Recall that the Cox proportional hazards model explicitly models the right-censor in our data. As before, we limit our analysis to adults aged 18–62. We focus on those that separate from an ESI policy in March, 2020 because this coincides with the sudden and large increase in the unemployment rate. Unlike previous analysis, we do not include a measure of unemployment or an analysis of the subsample of individuals who coincidentally receive unemployment benefits. We make this choice due to the sweeping nature of temporary changes made to the unemployment system in response to the onset of the pandemic, which make comparisons of unemployed individuals across years difficult to interpret.

Table 7 reports summary statistics for those who separate from an ESI policy in March of 2018, 2019, and 2020 in columns (1) – (3), respectively. 1,219,279 individuals separated from an ESI policy in 2020, a 10% increase compared to 2019 and a 9% increase compared to

2018. Compared to the “typical” policy holder who separates, those who separate in 2020 are less likely to be married and more likely to earn less than 100% FPL. This is consistent with the nature of job-loss in March 2020, which disproportionately fell on those whose employer shut down without an option for remote work, such as hospitality and construction.

Turning to the dynamics of uninsurance, 56% of those who separate from an ESI policy in March 2020 find coverage in April, 2020, a 5 percentage point reduction compared to 2018 and 2019. The duration of uninsurance was longer: 3.4 months compared to 2.97 and 2.99 in 2018 and 2019, respectively. Finally, 22% of individuals who separate from a policy in March, 2020 were still uninsured in December, 2020, 9 months later, compared with just 17% in 2018 and 2019.

7.2. Empirical Results

Table 8 reports how observable characteristics affect the likelihood of re-insurance following an ESI policy separation in March of 2018, 2019, and 2020. Columns (1) – (3) report the likelihood of finding coverage within one, three, and six months after separation. Column (4) reports results from the Cox proportional hazard model.

Broadly, observable characteristics affect the duration of uninsurance in much the same way as 2016. Women and married individuals are more likely to find coverage, regardless of how many months ex-post separation. Adults age 18–25, who are eligible for dependent care coverage, are more likely to find coverage compared to adults aged 45–62. Individuals in Medicaid expansion states are more likely to find coverage than those in non-expansion states. Finally, we estimate that those who lose coverage in 2020 are 5 percentage points *less* likely to find coverage – a reflection of the effect of the pandemic on the duration of uninsurance.

Table 8 reports difference-in-difference estimates of the effect of Medicaid expansion on the likelihood of finding coverage during the pandemic. Panel A reports differences in 2020 compared to 2018 and 2019 for those who separate from an ESI policy in an expansion states, panel B reports these same differences in non-expansion states, and panel C combines these two measures to report the difference-in-difference estimate. All specifications include controls for age, income, and marital status.

We estimate that the likelihood of finding coverage one month after separation fell by 4.8 percentage points for those who live in expansion states, and by 4.5 percentage points six months after separation (panel A, cols 1 and 3). Recall that the Cox proportional hazard model accounts for the right-censor of our data – we only observe re-insurance for 10 months after separation (December of the same calendar year as separation). Although the mean duration of uninsurance is typically 3–4 months (col 1. Table 1), which suggests that we capture the majority of re-insurance decisions in spite of our right censored data, we observe a high share of individuals that do not recover coverage by December 2020 compared to 2019 and 2018. For this reason, we put extra weight on the evidence of the Cox-model.

We estimate that individuals who separate from a policy in March 2020 were 8.8% less likely to find coverage compared to a typical ESI separation in 2018 and 2019 (panel A col 4). By comparison, those who live in non-expansion were 12.4% less likely to find coverage (panel B col 4). Combining these estimates, we find that the access to Medicaid expansion increased the likelihood of re-insurance by 4.4% during the pandemic (panel C col 4).

Finally, Table 10 reports estimates of an analysis of how Medicaid expansion affected the likelihood of ESI, Medicaid, and Exchange coverage as the first source of coverage in columns (1) – (3) respectively. As before, we estimate this based on a linear probability model that controls for age, income, and marital status. Panel A reports the change in likelihood of coverage in 2020 compared to 2019 and 2018 for those who separated from their policy in

expansion states. Panel B reports the change in the likelihood of coverage in 2020 compared to 2019 and 2018 for those who separated in non expansion states. Finally, panel C combines these estimates, reporting the effect of Medicaid expansion on the likelihood of coverage based on a difference-in-difference model. We estimate that that the likelihood of Medicaid coverage increased by 2.5 percentage points, and this was paired with a reduction in the likelihood of ESI coverage by 2 percentage points and a reduction in Exchange coverage of 0.7 percentage points.

8. Conclusion

References

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A. Tables and Figures

Table 1
Summary Statistics: ESI Policy Holders Who Separate From Their Plan in 2016

	Population (1)	Non-Expansion (2)	Expansion (3)	Unemp Ins (4)	No Unemp Ins (5)
Female	0.45	0.45	0.46	0.42	0.46
Married	0.42	0.44	0.42	0.38	0.43
Wages	62,145	57,167	65,554	55,652	63,320
FPL < 100%	0.055	0.058	0.052	0.051	0.056
FPL 100-138%	0.051	0.059	0.045	0.058	0.050
FPL 138-400%	0.46	0.49	0.45	0.51	0.46
FPL > 400%	0.43	0.39	0.46	0.38	0.44
Aged 18-25	0.093	0.095	0.089	0.064	0.098
Aged 25-44	0.55	0.54	0.55	0.52	0.55
Aged 45-62	0.36	0.36	0.36	0.42	0.35
Unemployment Insurance	0.15	0.12	0.17		
Covered Month 1	0.66	0.61	0.70	0.52	0.68
Duration (Months)	3.71	4.43	3.19	4.88	3.50
Always Uncovered	0.053	0.072	0.039	0.063	0.051
N	10,984,660	4,501,978	6,441,646	1,653,337	9,331,326

Notes:

Table 2
2016: Likelihood of Finding Coverage Following ESI Policy Separation

	Full Population				Unemployed			
	OLS	OLS	OLS	COX	OLS	OLS	OLS	COX
	1 Month (1)	6 Months (2)	12 Months (3)	(4)	1 Month (5)	6 Months (6)	12 Months (7)	(8)
Female	0.0455*** (0.000281)	0.0585*** (0.000241)	0.0410*** (0.000173)	1.123*** (0.000706)	0.0782*** (0.000773)	0.0891*** (0.000726)	0.0549*** (0.000518)	1.190*** (0.00197)
Married	0.127*** (0.000300)	0.102*** (0.000257)	0.0510*** (0.000185)	1.197*** (0.000804)	0.165*** (0.000811)	0.156*** (0.000762)	0.0770*** (0.000543)	1.318*** (0.00228)
FPL 100–138%	-0.0726*** (0.000854)	-0.0421*** (0.000732)	-0.0107*** (0.000526)	0.952*** (0.00185)	-0.108*** (0.00228)	-0.0812*** (0.00214)	-0.0377*** (0.00153)	0.862*** (0.00421)
FPL 138%–400%	-0.0952*** (0.000631)	-0.0301*** (0.000541)	0.00846*** (0.000389)	0.984*** (0.00141)	-0.221*** (0.00176)	-0.148*** (0.00165)	-0.0476*** (0.00118)	0.791*** (0.00297)
FPL > 400%	-0.000372 (0.000648)	0.0519*** (0.000556)	0.0511*** (0.000400)	1.141*** (0.00168)	-0.170*** (0.00181)	-0.0874*** (0.00170)	-0.00472*** (0.00121)	0.904*** (0.00349)
Aged 18–25	0.0595*** (0.000539)	0.0405*** (0.000462)	0.0264*** (0.000332)	1.091*** (0.00132)	0.155*** (0.00165)	0.112*** (0.00155)	0.0528*** (0.00111)	1.229*** (0.00434)
Aged 26–44	-0.0302*** (0.000302)	-0.00264*** (0.000259)	0.00423*** (0.000186)	0.999* (0.000676)	0.00648*** (0.000795)	0.00972*** (0.000747)	0.0113*** (0.000533)	1.040*** (0.00177)
Medicaid Expansion	0.0963*** (0.000283)	0.0809*** (0.000243)	0.0490*** (0.000175)	1.167*** (0.000747)	0.160*** (0.000799)	0.158*** (0.000750)	0.0930*** (0.000535)	1.358*** (0.00237)
Unemployment	-0.154*** (0.000391)	-0.134*** (0.000335)	-0.0362*** (0.000241)	0.851*** (0.000751)				
Month Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓
N	10,943,624	10,943,624	10,943,624	10,943,624	1,650,610	1,650,610	1,650,610	1,650,610

Notes:

Table 3
Summary Statistics: Louisiana and Virginia

	Louisiana		Virginia	
	2016 (1)	2015 (2)	2019 (3)	2018 (4)
Female	0.45	0.40	0.46	0.45
Married	0.34	0.36	0.51	0.53
Wages	48,462	50,359	71,138	68,402
FPL < 100%	0.11	0.10	0.04	0.04
FPL 100-138%	0.09	0.08	0.04	0.04
FPL 138-400%	0.47	0.47	0.42	0.43
FPL > 400%	0.33	0.35	0.51	0.50
Aged 18-25	0.11	0.12	0.07	0.07
Aged 25-44	0.58	0.57	0.56	0.56
Aged 45-62	0.31	0.32	0.36	0.37
Unemployment Insurance	0.10	0.02	0.06	0.06
Covered Month 1	0.53	0.45	0.66	0.65
Duration	5.08	5.73	2.65	2.71
Failure	0.08	0.09	0.16	0.17
Medicaid Expansion	✓		✓	
N	97,146	81,814	193,728	197,593

Notes:

Table 4
Effect of Louisiana Medicaid Expansion on the Likelihood of Finding Coverage

	Full Population				Unemployed			
	OLS 1 Month (1)	OLS 6 Months (2)	OLS 12 Months (3)	COX (4)	OLS 1 Month (5)	OLS 6 Months (6)	OLS 12 Months (7)	COX (8)
<i>Panel A: Louisiana</i>								
2016	0.0846*** (0.00233)	0.0538*** (0.00198)	0.0180*** (0.00169)	1.090*** (0.00548)	0.0775*** (0.0118)	0.0433*** (0.0115)	0.0284*** (0.0100)	1.115*** (0.0298)
N	178,748	178,748	178,748	178,748	11,405	11,405	11,405	11,405
<i>Panel B: Non-Expansion States</i>								
2016	0.0265*** (0.000405)	-0.00299*** (0.000331)	0.000669** (0.000296)	1.006*** (0.000894)	0.0196*** (0.00113)	-0.00325*** (0.00111)	0.00237** (0.000982)	1.006** (0.00259)
N	5,664,723	5,664,723	5,664,723	5,664,723	695,107	695,107	695,107	695,107
<i>Panel C: Effect of Louisiana Medicaid Expansion</i>								
Medicaid Expansion	0.0675*** (0.00231)	0.0617*** (0.00189)	0.0218*** (0.00169)	1.083*** (0.00546)	0.110*** (0.0116)	0.0899*** (0.0114)	0.0572*** (0.0100)	1.211*** (0.0318)
N	5,843,471	5,843,471	5,843,471	5,843,471	706,512	706,512	706,512	706,512
Month FE	✓	✓	✓	✓	✓	✓	✓	✓
Age FE	✓	✓	✓	✓	✓	✓	✓	✓
Income FE	✓	✓	✓	✓	✓	✓	✓	✓
Marital Status	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

Table 5
Effect of Virginia Medicaid Expansion on the Likelihood of Finding Coverage

	Full Population				Unemployed			
	OLS 1 Month (1)	OLS 6 Months (2)	OLS 12 Months (3)	COX (4)	OLS 1 Month (5)	OLS 6 Months (6)	OLS 12 Months (7)	COX (8)
<i>Panel A: Virginia</i>								
2019	0.00492*** (0.00147)	0.00380*** (0.00132)	0.00842*** (0.00109)	1.008** (0.00353)	0.0633*** (0.00633)	0.0609*** (0.00634)	0.0478*** (0.00541)	1.153*** (0.0175)
N	391,321	391,321	391,321	391,321	23,306	23,306	23,306	23,306
<i>Panel B: Non-Expansion States</i>								
2019	-0.00706*** (0.000453)	-0.00883*** (0.000423)	-0.00831*** (0.000358)	0.980*** (0.00104)	-0.00142 (0.00153)	0.000532 (0.00161)	-0.000764 (0.00143)	0.994 (0.00397)
N	4,563,037	4,563,037	4,563,037	4,563,037	372,398	372,398	372,398	372,398
<i>Panel C: Effect of Louisiana Medicaid Expansion</i>								
Medicaid Expansion	0.0125*** (0.00160)	0.0128*** (0.00149)	0.0181*** (0.00126)	1.028*** (0.00376)	0.0644*** (0.00633)	0.0604*** (0.00662)	0.0491*** (0.00589)	1.158*** (0.0181)
N	4,954,358	4,954,358	4,954,358	4,954,358	395,704	395,704	395,704	395,704
Month FE	✓	✓	✓	✓	✓	✓	✓	✓
Age FE	✓	✓	✓	✓	✓	✓	✓	✓
Income FE	✓	✓	✓	✓	✓	✓	✓	✓
Marital Status	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

Table 6
Assessing Take-Up of Coverage Due to Medicaid Expansion

	Full Population			Unemployed		
	ESI (1)	Medicaid (2)	Exchange (3)	ESI (4)	Medicaid (5)	Exchange (6)
<i>Panel A: Louisiana</i>						
Medicaid Expansion	-0.0195*** (0.00239)	0.0966*** (0.000982)	-0.00102 (0.000676)	-0.00870 (0.0117)	0.132*** (0.00623)	-0.00182 (0.00395)
N	5,298,172	5,298,172	5,298,172	618,542	618,542	618,542
<i>Panel B: Virginia</i>						
Medicaid Expansion	-0.0235*** (0.000860)	0.0357*** (0.000726)	-0.00725*** (0.000466)	-0.0892*** (0.00583)	0.132*** (0.00439)	-0.0291*** (0.00369)
N	7,669,314	7,669,314	7,669,314	308,363	308,363	308,363
Month FE	✓	✓	✓	✓	✓	✓
Age FE	✓	✓	✓	✓	✓	✓
Income FE	✓	✓	✓	✓	✓	✓
Marital Status	✓	✓	✓	✓	✓	✓

Notes:

Figure 1. Monthly Coverage for Individuals Losing/Changing ESI

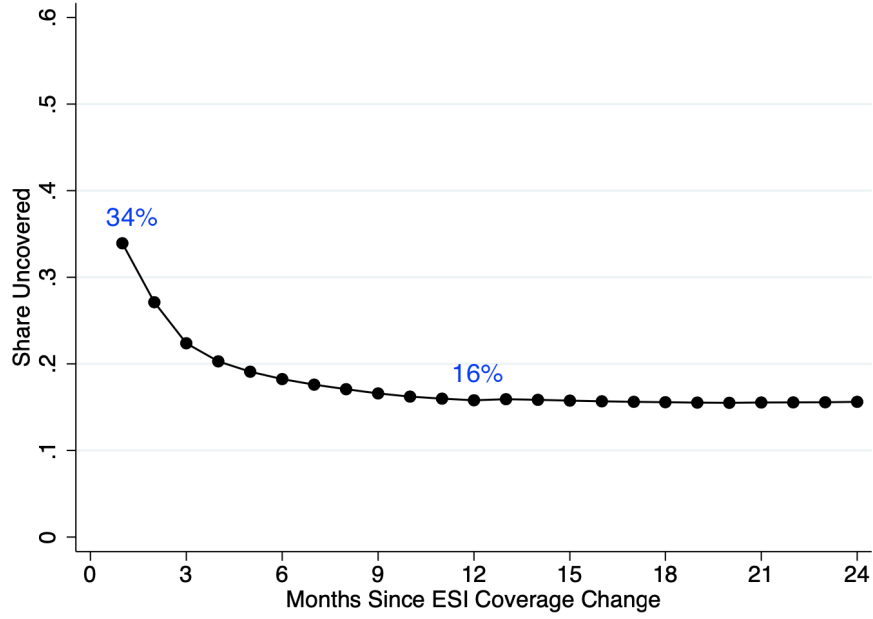


Figure 2. Coverage Sources Following ESI-drop

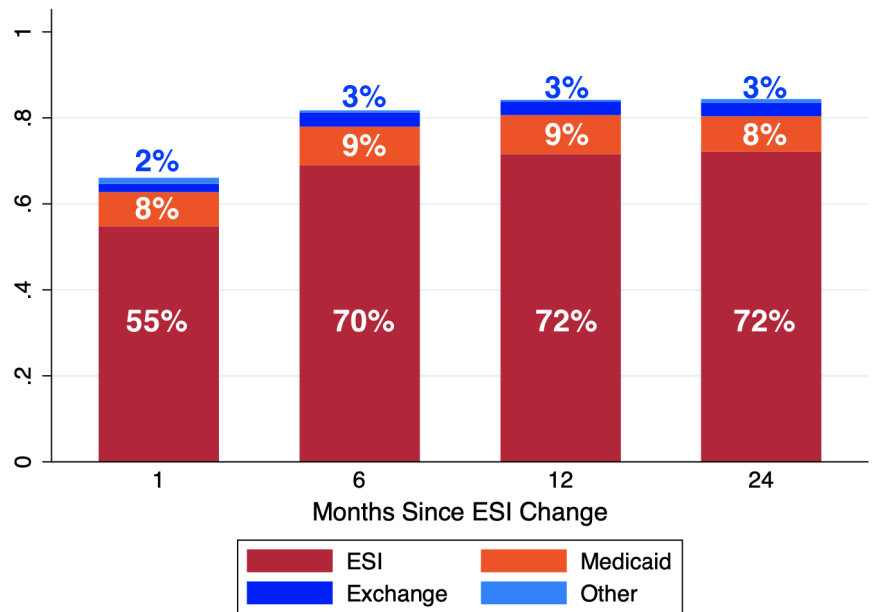


Table 7
Summary Statistics:
Policy Holders Who Separate in March 2018,2019, and 2020

	2018	2019	2020
	(1)	(2)	(3)
Female	0.44	0.44	0.44
Married	0.40	0.40	0.37
Wages	66,172	68,374	66,775
FPL < 100%	0.049	0.048	0.056
FPL 100-138%	0.047	0.045	0.042
FPL 138-400%	0.46	0.45	0.46
FPL > 400%	0.44	0.46	0.44
Aged 18-25	0.083	0.086	0.090
Aged 25-44	0.56	0.56	0.56
Aged 45-62	0.36	0.35	0.35
Covered Month 1	0.61	0.61	0.56
Duration	2.97	2.99	3.40
Failure	0.17	0.17	0.22
N	1,121,298	1,100,983	1,219,279

Notes:

Table 8
Likelihood of Finding Coverage Following ESI Policy Separation:
Differences During the Pandemic

	OLS 1 Month (1)	OLS 3 Months (2)	OLS 6 Months (3)	COX (4)
Female	0.0559*** (0.000524)	0.0687*** (0.000480)	0.0632*** (0.000444)	1.136*** (0.00137)
Married	0.136*** (0.000563)	0.112*** (0.000516)	0.0870*** (0.000477)	1.209*** (0.00157)
FPL 100–183%	-0.0746*** (0.00168)	-0.0474*** (0.00154)	-0.0312*** (0.00142)	0.929*** (0.00367)
FPL 138%–400%	-0.133*** (0.00121)	-0.0627*** (0.00111)	-0.0355*** (0.00103)	0.903*** (0.00257)
FPL > 400%	-0.0114*** (0.00124)	0.0402*** (0.00113)	0.0457*** (0.00105)	1.081*** (0.00312)
Aged 18–25	0.118*** (0.00102)	0.0877*** (0.000934)	0.0746*** (0.000864)	1.184*** (0.00279)
Aged 26–44	0.00503*** (0.000563)	0.0210*** (0.000515)	0.0241*** (0.000477)	1.048*** (0.00137)
Medicaid Expansion	0.0986*** (0.000543)	0.0899*** (0.000497)	0.0846*** (0.000460)	1.202*** (0.00154)
2020	-0.0510*** (0.000541)	-0.0563*** (0.000495)	-0.0524*** (0.000458)	0.901*** (0.00114)
N	3,433,381	3,433,381	3,433,381	3,433,381

Notes:

Table 9
Effect of Medicaid Expansion on the Likelihood of Finding
Coverage During the COVID-19 Pandemic

	OLS 1 Month (1)	OLS 3 Months (2)	OLS 6 Months (3)	COX (4)
<i>Panel A: Expansion States</i>				
2020	-0.0483*** (0.000659)	-0.0520*** (0.000590)	-0.0452*** (0.000538)	0.912*** (0.00139)
N	2,227,387	2,227,387	2,227,387	2,227,387
<i>Panel B: Non-Expansion States</i>				
2020	-0.0567*** (0.000942)	-0.0648*** (0.000894)	-0.0664*** (0.000847)	0.876*** (0.00198)
N	1,205,994	1,205,994	1,205,994	1,205,994
<i>Panel C: Effect of Expanded Medicaid Thresholds</i>				
Medicaid Expansion	0.00922*** (0.00114)	0.0140*** (0.00104)	0.0224*** (0.000966)	1.044*** (0.00284)
N	3,433,381	3,433,381	3,433,381	3,433,381
Age FE	✓	✓	✓	✓
Income FE	✓	✓	✓	✓
Marital Status	✓	✓	✓	✓

Notes:

Table 10
Assessing Take-Up of Coverage Due to Medicaid Expansion During Pandemic

		Full Population		
		ESI (1)	Medicaid (2)	Exchange (3)
<i>Panel A: Expansion States</i>				
	2020	-0.0798*** (0.000588)	0.0578*** (0.000530)	0.0245*** (0.000285)
	N	1,872,894	1,872,894	1,872,894
<i>Panel B: Non-Expansion States</i>				
	2020	-0.0611*** (0.000752)	0.0354*** (0.000550)	0.0314*** (0.000475)
	N	916,358	916,358	916,358
<i>Panel C: Effect of Medicaid Expansion</i>				
	Medicaid Expansion	-0.0210*** (0.00101)	0.0254*** (0.000870)	-0.00738*** (0.000530)
	N	2,789,252	2,789,252	2,789,252
	Month FE	✓	✓	✓
	Age FE	✓	✓	✓
	Income FE	✓	✓	✓
	Marital Status	✓	✓	✓

Notes:

Figure 3. Coverage Sources 1 and 12 months after ESI Change, by Medicaid Expansion

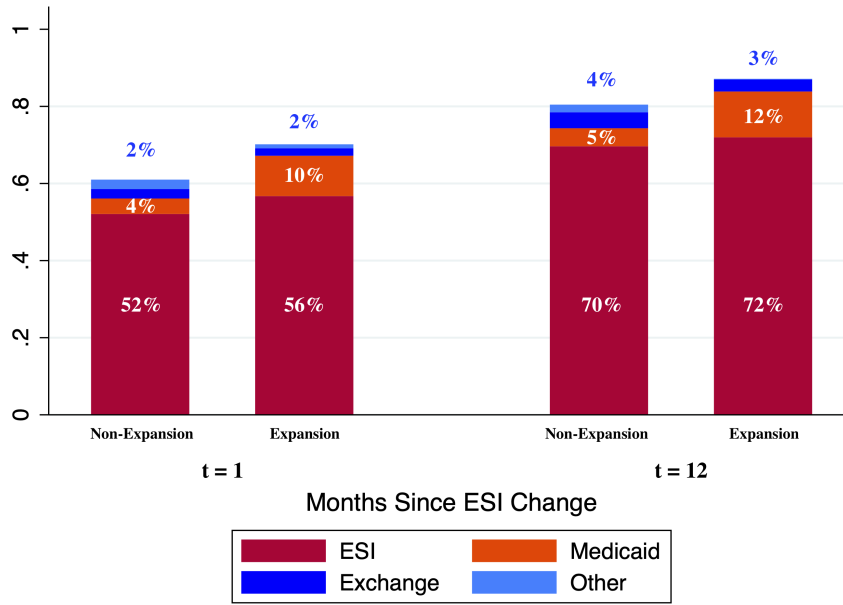


Figure 4. Uninsurance rates, by Unemployment Status

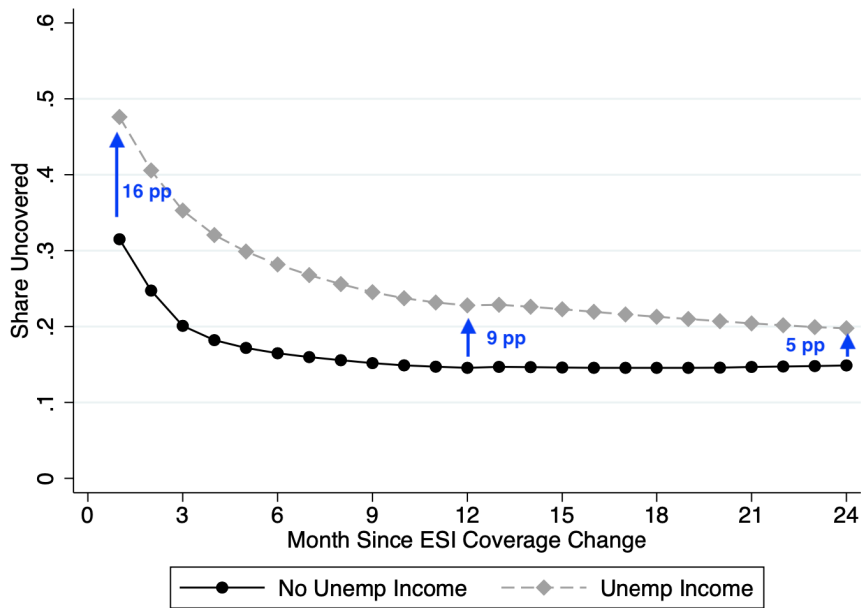


Figure 5. Uninsurance Rates for the Unemployed, by Medicaid Expansion

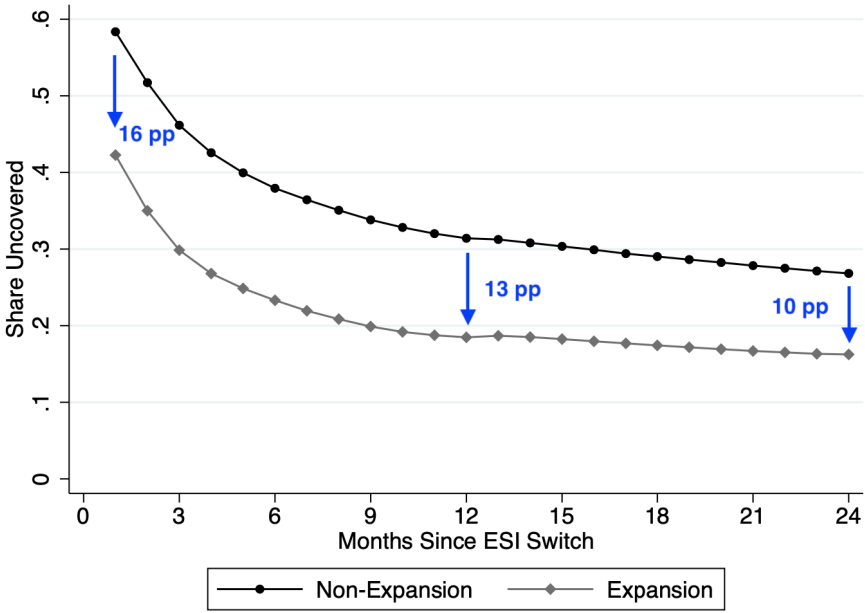


Figure 6. Kaplan-Meier Survival Function: 2016

