Introduction

Thirty million workers filed initial unemployment claims between March 15 and April 25. Near-term forecasts suggest the unemployment rate will likely be between 15 to 20 percent by June. Economic forecasters at S&P expect the unemployment rate to reach 18 percent in May, which they note would be closer to the Depression-era peak of 25 percent in 1933 than the 10 percent peak following the Great Recession. One estimate by the Federal Reserve Bank of St. Louis has suggested the unemployment rate could reach as high as 30 percent. As workers lose their jobs, many will lose their employer-sponsored health insurance (ESI). Many of these workers will newly qualify for Medicaid coverage, particularly in states that expanded Medicaid eligibility under the Affordable Care Act (ACA). Others will purchase individual coverage on the health insurance marketplaces, possibly with a subsidy to offset the premium cost (depending on their income). And some will be unable to replace their ESI coverage and will become uninsured.

In this brief, we estimate how health insurance coverage could change as millions of workers lose their jobs because of the slowdown in economic activity resulting from public health efforts to reduce the spread of the coronavirus. We present national and state-level estimates of coverage changes if unemployment rates rise from precrisis levels (around 3.5 percent nationally) to 15 percent, 20 percent, or 25 percent. We provide this range of unemployment scenarios given the uncertainty around how high unemployment will climb, and because states have different pre-COVID-19 unemployment rates and will likely experience varying levels of economic disruption through the crisis. For each level of unemployment, we provide a base case scenario of coverage changes as well as a high (but also plausible) scenario, derived from two different estimation methods. We present an overview of our methods and main findings in the main body of the paper. We provide further details on our modeling assumptions and discuss uncertainties surrounding the estimates in the appendix.

We find the following:

- An estimated 160 million people under age 65 had ESI coverage before March 2020. If the unemployment rate rises to 20 percent, we estimate that 25 million people will lose their ESI coverage in our base scenario and 43 million would lose ESI in our scenario based on a higher estimate of responsiveness to unemployment rate changes.

- Among those people losing ESI in our base scenario, we estimate that 12 million (47 percent) will gain Medicaid coverage, 6 million (25 percent) will gain coverage through the marketplace or other private plan, and 7 million (29 percent) will become uninsured.

- Among those losing ESI in our high scenario, with 20 percent unemployment we estimate that 21 million will gain Medicaid coverage, 10 million will gain coverage through the marketplace or other private plan, and 12 million will become uninsured.

- Adults make up about 75 percent of people expected to lose ESI coverage in our base scenario but 91 percent of people expected to become uninsured.

- In expansions states, in our base scenario, among people losing ESI, more than half (about 9 million under a 20 percent unemployment rate) are expected to enroll in Medicaid and less than a quarter (nearly 4 million) are expected to become uninsured. In the high scenario with 20 percent unemployment, we estimate that more than 15 million will enroll in Medicaid and more than 6 million will become uninsured.

- In nonexpansion states, in our base scenario, among those losing ESI coverage, about one-third (3 million under a 20 percent unemployment rate) are expected to gain Medicaid coverage while about 40 percent (3.5 million) are expected to become uninsured. In the high scenario with 20 percent unemployment, we estimate that more than 5 million will enroll in Medicaid and nearly 6 million will become uninsured.

All unemployment scenarios indicate that millions of people under age 65 will lose ESI coverage throughout the country. States that have not expanded Medicaid under the ACA will see larger shares of those losing ESI coverage becoming uninsured. Proposed policy recommendations such as temporary
or permanent Medicaid expansions, expanding eligibility for subsidies for marketplace coverage, and providing subsidies for COBRA benefits could help mitigate the rise in uninsurance driven by the pandemic’s effects on the economy.2

Moreover, our findings indicate that more than half of people estimated to lose ESI coverage in Medicaid expansion states will gain Medicaid coverage. This is the purpose of the Medicaid program, to provide a safety net to people in financial distress, including those with short-term changes in circumstances. However, given that jobless rates may reach unprecedented heights under the COVID-19 pandemic, steep increases in Medicaid coverage will strain state budgets, restricting already limited resources in the very communities hardest hit by the crisis. To help blunt this, current legislation has already enhanced the federal matching rate for Medicaid financing. Still, further increasing the federal matching rate could help provide the critical resources needed to protect the states most in need.10

Methods

We estimate changes in health insurance coverage for the United States and each state in three steps. First, we obtain estimates of the labor force situation in each state before March 2020, when the COVID-19 crisis started leading to large increases in unemployment in the United States. Then we use econometric estimates of how ESI rates change with the unemployment rate. The estimates in the base scenario are from individual-level regression models using American Community Survey (ACS) data from 2008–18. Estimates in the high scenario are from a time series model using national ESI and unemployment rates from 1998 to 2018.11 We compute the number of adults and children in each state expected to lose ESI if the state’s unemployment rate rises to 15, 20, or 25 percent. In the last step, given the estimated number losing ESI in each state, we estimate the number of adults and children likely to enroll in Medicaid, obtain marketplace or other private coverage, or become uninsured. Throughout our analysis, we exclude adults ages 65 or older because they are generally eligible for Medicare coverage and as a result their coverage patterns are less likely to change (though some may lose employer-based coverage with Medicare as secondary coverage and shift to having Medicare as primary coverage).

Monthly Current Population Survey data provide us with estimates of the number of employed workers, unemployed workers (i.e., looking for work), and adults not in the labor force in each state. We combine 12 months of Current Population Survey data from March 2019 to February 2020 to obtain estimates of precrisis employment data for each state. With these data, we find that precrisis unemployment rates for nonelderly adults ranged from 4.9 percent in Mississippi to 1.7 percent in North Dakota.

We use the 2017–18 ACS to estimate precrisis health insurance coverage by state for adults and children, pooling two years of data to obtain more precise estimates of coverage within each state. We use coverage types reported in the ACS and edited by the Integrated Public Use Microdata Series to improve comparability of coverage types over time.12,13 A relatively small number of respondents report multiple types of health insurance coverage, and we classify these cases using the following coverage hierarchy: ESI, Medicare, Medicaid (including CHIP coverage for children), marketplace or other private insurance, and other public insurance.14 We reweight the ACS data to match population estimates by state and employment status in the more recent Current Population Survey data. Using the reweighted ACS data, we estimate the precrisis number and proportion of adults and children with employer-based coverage.

Using individual-level 2008–18 ACS data matched to state-level unemployment rates for each year from the Bureau of Labor Statistics, we estimate regression models of the probability of having ESI coverage as a function of the contemporaneous state unemployment rate and its one-year-lagged value, controlling individual and family demographic characteristics, state fixed effects, and a linear year trend.15 We estimate these regression models separately for nonelderly adults and children. Based on these models, we find that a 1 percentage-point increase in the unemployment rate leads to a 0.61 percentage-point decline in the ESI rate for adults and a 0.52 percentage-point decline for children. These sensitivity estimates capture not only the effects of individuals losing their employment and becoming unemployed, but also the effects on coverage of workers leaving the labor market as unemployment rises and of dependents losing coverage along with those workers. Our estimates capture both the immediate effect of rising unemployment on ESI coverage and the later effects that may occur over an adjustment period. What coverage effects ultimately materialize will likely depend on the time path the unemployment rate takes. Our estimates are best interpreted as the coverage levels that would result from unemployment rising to a given level and holding there for several months to a year. Fewer people could lose ESI coverage if the unemployment rate moderates quickly after it peaks.

As we discuss further in the appendix, the ACS-based sensitivity parameters we use are smaller in magnitude than those reported in previous work using pre-ACA data.16 We obtain alternative updated estimates of the sensitivity parameter using national time series data from 1998-2018, which has the benefit of spanning two recessions. From a time series regression model, we estimate that a 1 percentage-point increase in the unemployment rate leads to a 0.99 percentage point decrease in the ESI rate for adults and children combined, which is a larger effect than the ACS-based estimates with individual-level data, but very similar to estimates from previous work. Accordingly, we produce two sets of estimates. Our first set of estimates (base scenarios) apply the smaller ACS-based ESI sensitivity parameters and may be viewed as conservative. The second set (higher response scenarios) uses the larger ESI sensitivity parameter (applied to both adults and children) that we estimate from time series data. Whereas the ACS models allow us to control for individual-level factors that affect ESI coverage and arguably lead to less-biased estimates of unemployment.
rate effects, the time series model draws on a longer period including two recessions in estimating how ESI rates change with unemployment rates.

We obtain estimated changes in ESI rates by multiplying the applicable ESI-unemployment sensitivity estimates by the increase in unemployment rates from precrisis levels. Multiplying the changes in ESI rates by population levels (separately for adults and children) provides the estimated number of individuals losing ESI under different unemployment rates in each state.

As a last step, given the number of adults and children losing ESI, we compute changes in the number of people enrolling in Medicaid, obtaining marketplace or other private coverage, and becoming uninsured. A small share of the population under age 65 has Medicare or other public insurance, and we assume this share remains fixed. We compute the distribution of coverage types by state among adults and children without ESI and apply these rates to the estimated number losing ESI. Idaho, Maine, Utah, and Virginia expanded Medicaid after 2018, the most recent year of ACS data. For these four states, we apply the average coverage distribution for adults and children without ESI in the other 32 expansion states to predict coverage transitions for people losing ESI in these states. Using this approach, states with high ratios of Medicaid coverage to uninsurance (and marketplace/other private coverage to uninsurance) will be estimated to have higher growth in Medicaid (marketplace) coverage as unemployment rates rise. Though our approach assumes people losing ESI will obtain coverage at rates similar to groups already lacking ESI, such people may go uninsured or gain Medicaid/nongroup coverage at higher or lower rates, depending on the composition of those losing their jobs and how they behave. A limitation of our approach is that it does not capture other potential coverage transitions that are not associated with the loss of ESI. Income loss resulting from higher unemployment could, for example, result in some individuals with marketplace coverage enrolling in Medicaid or becoming uninsured. In this situation, our approach would underestimate the total increases in Medicaid enrollment and the uninsured. We discuss our estimation approach and sources of uncertainty further in the appendix.

### National Estimates of Coverage Changes under the COVID-19 Recession

We present national estimates of changes in health insurance coverage under 15, 20, and 25 percent unemployment for our base scenario in the top panel of Table 1. We focus on the estimated changes under a 20 percent unemployment rate. Before the crisis, an estimated 160 million Americans under age 65 had employer-sponsored health insurance. With 20 percent unemployment, we estimate that 25 million people would lose employer-sponsored health insurance. Of these, 11.8 million would gain Medicaid coverage, 6.2 million would gain marketplace or other private coverage, and 7.3 million would become uninsured. The magnitude of these estimates scales with the postcrisis unemployment rate.

### Table 1. National Estimates of Changes in Health Insurance Coverage with 15, 20, and 25 Percent Unemployment Rates, Base Scenarios

<table>
<thead>
<tr>
<th>Coverage type</th>
<th>3.5% (precrisis) Precrisis levels (# of people)</th>
<th>Unemployment rate scenario</th>
<th>15% Change</th>
<th>20% Change</th>
<th>25% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US TOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employer-sponsored insurance</td>
<td>160,282,000</td>
<td>-17,689,000</td>
<td>-25,363,000</td>
<td>-33,037,000</td>
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</tr>
<tr>
<td>Medicaid</td>
<td>50,339,000</td>
<td>8,225,000</td>
<td>11,798,000</td>
<td>15,371,000</td>
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</tr>
<tr>
<td>Marketplace or other private insurance</td>
<td>24,538,000</td>
<td>4,348,000</td>
<td>6,229,000</td>
<td>8,109,000</td>
<td></td>
</tr>
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<td>Medicare or other public insurance</td>
<td>7,474,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Uninsured</td>
<td>28,415,000</td>
<td>5,116,000</td>
<td>7,336,000</td>
<td>9,557,000</td>
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</tr>
<tr>
<td><strong>EXPANSION STATES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employer-sponsored insurance</td>
<td>108,114,000</td>
<td>-11,606,000</td>
<td>-16,653,000</td>
<td>-21,699,000</td>
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</tr>
<tr>
<td>Medicaid</td>
<td>35,737,000</td>
<td>6,191,000</td>
<td>8,887,000</td>
<td>11,583,000</td>
<td></td>
</tr>
<tr>
<td>Marketplace or other private insurance</td>
<td>15,129,000</td>
<td>2,745,000</td>
<td>3,934,000</td>
<td>5,123,000</td>
<td></td>
</tr>
<tr>
<td>Medicare or other public insurance</td>
<td>4,599,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Uninsured</td>
<td>14,246,000</td>
<td>2,670,000</td>
<td>3,832,000</td>
<td>4,993,000</td>
<td></td>
</tr>
<tr>
<td><strong>NONEXPANSION STATES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employer-sponsored insurance</td>
<td>52,169,000</td>
<td>-6,084,000</td>
<td>-8,711,000</td>
<td>-11,337,000</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>14,602,000</td>
<td>2,034,000</td>
<td>2,911,000</td>
<td>3,788,000</td>
<td></td>
</tr>
<tr>
<td>Marketplace or other private insurance</td>
<td>9,409,000</td>
<td>1,604,000</td>
<td>2,295,000</td>
<td>2,986,000</td>
<td></td>
</tr>
<tr>
<td>Medicare or other public insurance</td>
<td>2,876,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Uninsured</td>
<td>14,168,000</td>
<td>2,446,000</td>
<td>3,505,000</td>
<td>4,563,000</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Medicaid coverage is inclusive of CHIP coverage for children. Coverage changes modeled for US population under age 65.
Figure 1. Estimated Coverage Types of People Losing Employer-Sponsored Health Insurance

Table 2. National Estimates of Changes in Health Insurance Coverage with 15, 20, and 25 Percent Unemployment Rates, High Scenarios

Table 3. Composition of National Changes in Coverage under 20 Percent Unemployment Rate, by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>ESI</th>
<th>Share</th>
<th>Medicaid</th>
<th>Share</th>
<th>Marketplace or other private</th>
<th>Share</th>
<th>Uninsured</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPOSITION OF CHANGES IN BASE SCENARIO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonelderly adults ages 19 to 64</td>
<td>-18,722,000</td>
<td>73.8%</td>
<td>6,801,000</td>
<td>57.6%</td>
<td>5,278,000</td>
<td>84.7%</td>
<td>6,643,000</td>
<td>90.6%</td>
</tr>
<tr>
<td>Children from birth to age 18</td>
<td>-6,641,000</td>
<td>26.2%</td>
<td>4,997,000</td>
<td>42.4%</td>
<td>951,000</td>
<td>15.3%</td>
<td>693,000</td>
<td>9.4%</td>
</tr>
<tr>
<td>Total change</td>
<td>-25,363,000</td>
<td></td>
<td>11,798,000</td>
<td></td>
<td>6,229,000</td>
<td></td>
<td>7,336,000</td>
<td></td>
</tr>
<tr>
<td><strong>COMPOSITION OF CHANGES IN HIGH SCENARIO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonelderly adults ages 19 to 64</td>
<td>-30,495,000</td>
<td>70.7%</td>
<td>11,078,000</td>
<td>53.8%</td>
<td>8,596,000</td>
<td>82.6%</td>
<td>10,821,000</td>
<td>89.1%</td>
</tr>
<tr>
<td>Children from birth to age 18</td>
<td>-12,629,000</td>
<td>29.3%</td>
<td>9,502,000</td>
<td>46.2%</td>
<td>1,809,000</td>
<td>17.4%</td>
<td>1,318,000</td>
<td>10.9%</td>
</tr>
<tr>
<td>Total change</td>
<td>-43,123,000</td>
<td></td>
<td>20,579,000</td>
<td></td>
<td>10,405,000</td>
<td></td>
<td>12,139,000</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ESI = employer-sponsored insurance. Medicaid coverage is inclusive of CHIP coverage for children. Coverage changes modeled for US population under age 65.

and therefore the sizes of the changes are smaller in the 15 percent unemployment scenario and larger in the 25 percent unemployment scenario.

In Figure 1 and in the middle and bottom panels of Table 1, we show how national changes in coverage differ for two groups of states—those that expanded Medicaid under the ACA (36 states) and those that did not (15 states). Of the 25.3 million people estimated to lose ESI under the 20 percent unemployment scenario, 16.7 million live in expansion states (Table 1, middle panel). Of these, more than half (8.9 million) would gain Medicaid coverage, 24 percent (3.9 million) would gain marketplace or other private coverage, and 23 percent (3.8 million) would become uninsured. In nonexpansion states, we estimate that 8.7 million individuals would lose ESI (Table 1, bottom panel). Relative to expansion states, a smaller share of people losing ESI in nonexpansion states would gain Medicaid coverage (33 percent, or 2.9 million) or marketplace or other private coverage (26 percent or 2.3 million), and a greater share of people would become uninsured (40 percent or 3.5 million). Even though expansion states are predicted to see 7.9 million more people lose ESI coverage under a 20 percent unemployment rate, we estimate similar numbers of people would become uninsured in expansion and nonexpansion states (3.8 million versus 3.5 million).

In Table 2 (top panel), we report national estimates of changes in health insurance coverage under the same unemployment scenarios but applying the higher estimate of ESI responsiveness to the unemployment rate. With 20 percent unemployment, we find that 43 million would lose ESI in this scenario (as compared with 25 million in the main scenario and 35 million in the high scenario). Of those losing ESI, 20.6 million would enroll in Medicaid, 10.4 million would obtain marketplace or other private insurance, and 12.1 million would become uninsured. In Medicaid expansion states (middle panel), 15.4 million people would enroll in Medicaid and 6.3 million would become uninsured in this scenario. In nonexpansion states (bottom panel), 5.2 million would enroll in Medicaid and 5.8 million would become uninsured.

In Table 3 (top panel), we report the number and proportion of adults and children losing ESI coverage under a 20 percent unemployment rate in the base scenario. Among the estimated 25 million people losing ESI coverage, 18.7 million are nonelderly adults and 6.6 million are children under age 19. Among nonelderly adults losing ESI coverage, we estimate that 6.8 million (36 percent) will gain Medicaid coverage, 5.3 million (28 percent) will gain marketplace or other private coverage, and 6.6 (35 percent) will become uninsured. Nearly three out of four children losing ESI coverage are estimated to gain Medicaid or Children's Health Insurance Program (CHIP) coverage (5.0 million children), reflecting that income eligibility limits for children's Medicaid or CHIP coverage are much higher than such limits for parents or childless adults. We estimate that 1.0 million children would gain marketplace or other private coverage (15 percent of all children estimated to lose ESI coverage), and about 693,000 children would become uninsured (10 percent of children estimated to lose ESI). We report analogous figures for the high scenario in the bottom panel. While the shares of non-elderly adults and children estimated to lose ESI, to gain Medicaid or Marketplace or other private coverage, or to become uninsured in this scenario are similar to our base scenario, there is a greater total number of people in each of these categories, reflecting the additional 18 million estimated to lose ESI coverage in the high scenario relative to the base scenario.

State-Level Estimates of Health Insurance Coverage Changes under the COVID-19 Recession

Though all states will likely see very large increases in unemployment rates, states will differ in the rates of unemployment they experience over the coming months and years. States will also differ in the extent to which Medicaid coverage is available to those losing ESI and how affordable marketplace coverage would be given differences in premium levels and eligibility for premium subsidies across states.17 Table 4 reports estimated changes in coverage by state in our main scenarios (see Appendix Table 1 for coverage changes by state in our scenarios with higher responsiveness). The changes in health insurance coverage account for differential coverage patterns among individuals without employer-based coverage across states.
### Table 4. Estimated Changes in ESI Coverage, Medicaid Enrollment, Marketplace Coverage, and Uninsurance with 15, 20, and 25 Percent Unemployment Rates, Main Scenarios, by State

<table>
<thead>
<tr>
<th>State</th>
<th>15% Unemployment</th>
<th>20% Unemployment</th>
<th>25% Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US Total</strong></td>
<td>US Total: -17,689,000</td>
<td>US Total: -16,653,000</td>
<td>US Total: -16,636,000</td>
</tr>
<tr>
<td><strong>Expansion States</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alaska</strong></td>
<td>-37,000</td>
<td>-55,000</td>
<td>-77,000</td>
</tr>
<tr>
<td><strong>Arizona</strong></td>
<td>-371,000</td>
<td>-535,000</td>
<td>-692,000</td>
</tr>
<tr>
<td><strong>Arkansas</strong></td>
<td>-157,000</td>
<td>-225,000</td>
<td>-293,000</td>
</tr>
<tr>
<td><strong>California</strong></td>
<td>-2,110,000</td>
<td>-3,085,000</td>
<td>-4,019,000</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>-338,000</td>
<td>-475,000</td>
<td>-612,000</td>
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<td><strong>Connecticut</strong></td>
<td>-184,000</td>
<td>-268,000</td>
<td>-351,000</td>
</tr>
<tr>
<td><strong>Delaware</strong></td>
<td>-50,000</td>
<td>-72,000</td>
<td>-94,000</td>
</tr>
<tr>
<td><strong>District of Columbia</strong></td>
<td>-35,000</td>
<td>-52,000</td>
<td>-70,000</td>
</tr>
<tr>
<td><strong>Hawaii</strong></td>
<td>-83,000</td>
<td>-116,000</td>
<td>-149,000</td>
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<tr>
<td><strong>Idaho</strong></td>
<td>-99,000</td>
<td>-139,000</td>
<td>-180,000</td>
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<tr>
<td><strong>Illinois</strong></td>
<td>-666,000</td>
<td>-529,000</td>
<td>-686,000</td>
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<tr>
<td><strong>Indiana</strong></td>
<td>-372,000</td>
<td>-241,000</td>
<td>-315,000</td>
</tr>
<tr>
<td><strong>Iowa</strong></td>
<td>-185,000</td>
<td>-131,000</td>
<td>-168,000</td>
</tr>
<tr>
<td><strong>Kentucky</strong></td>
<td>-233,000</td>
<td>-208,000</td>
<td>-248,000</td>
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<tr>
<td><strong>Louisiana</strong></td>
<td>-230,000</td>
<td>-187,000</td>
<td>-268,000</td>
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<tr>
<td><strong>Maine</strong></td>
<td>-72,000</td>
<td>-53,000</td>
<td>-131,000</td>
</tr>
<tr>
<td><strong>Maryland</strong></td>
<td>-336,000</td>
<td>-229,000</td>
<td>-326,000</td>
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<tr>
<td><strong>Massachusetts</strong></td>
<td>-387,000</td>
<td>-351,000</td>
<td>-601,000</td>
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<tr>
<td><strong>Michigan</strong></td>
<td>-518,000</td>
<td>-432,000</td>
<td>-950,000</td>
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<tr>
<td><strong>Minnesota</strong></td>
<td>-335,000</td>
<td>-253,000</td>
<td>-601,000</td>
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<td><strong>Montana</strong></td>
<td>-61,000</td>
<td>-37,000</td>
<td>-109,000</td>
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<tr>
<td><strong>Nevada</strong></td>
<td>-159,000</td>
<td>-98,000</td>
<td>-301,000</td>
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<td><strong>New Hampshire</strong></td>
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<td><strong>New Jersey</strong></td>
<td>-489,000</td>
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<td><strong>New Mexico</strong></td>
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<td><strong>New York</strong></td>
<td>-1,056,000</td>
<td>-923,000</td>
<td>-1,983,000</td>
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<td><strong>North Dakota</strong></td>
<td>-48,000</td>
<td>-18,000</td>
<td>-85,000</td>
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<td><strong>Ohio</strong></td>
<td>-625,000</td>
<td>-499,000</td>
<td>-1,165,000</td>
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<td><strong>Oregon</strong></td>
<td>-226,000</td>
<td>-167,000</td>
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<td><strong>Pennsylvania</strong></td>
<td>-676,000</td>
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<td>-1,262,000</td>
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<td><strong>Wyoming</strong></td>
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</table>

In California, which expanded Medicaid under the ACA, we estimate that more than 3 million people will lose ESI under a 20 percent unemployment rate. More than half of people losing ESI would gain Medicaid coverage (1.7 million), about 724,000 would obtain marketplace or other private coverage, and 649,000 would become uninsured. In Texas, which has not expanded Medicaid, we estimate that nearly 2.3 million people would lose ESI coverage if the state’s unemployment rate reaches 20 percent, of which about half (1.2 million) would become uninsured.

As a share of the number of people expected to lose ESI in the state, former workers and their dependents in Massachusetts (11 percent), the District of Columbia (12 percent), Hawaii (15 percent), and Vermont (15 percent) are least likely to become uninsured, whereas such individuals are most likely to become uninsured in Texas (50 percent), Georgia (44 percent), Oklahoma (44 percent), and Wyoming (42 percent). Massachusetts, the District of Columbia, and Vermont all have programs that provide subsidized coverage beyond the levels provided under the ACA.

Discussion

As more workers lose their jobs and incomes in the wake of the COVID-19 pandemic, the number of people qualifying for Medicaid and subsidized marketplace coverage will climb. However, the increase in Medicaid coverage will be uneven across the country. As our results show, more workers and their dependents losing ESI will be eligible for Medicaid in states that expanded Medicaid under the ACA than in the 15 states that have not. We estimate that more than half of workers losing ESI coverage in expansion states will gain Medicaid coverage. In nonexpansion states, workers losing ESI are more likely to become uninsured than to gain Medicaid coverage (or marketplace coverage).

Though our estimation approach is designed to capture differences in coverage patterns across states after ACA implementation, some uncertainty surrounds what share of workers losing ESI would gain other coverage or become uninsured. Former workers with little past exposure to Medicaid or the marketplaces may not know whether they are eligible for benefits or subsidies, and state Medicaid administrative systems may not be able to handle the large, sudden influx of new applicants. For these reasons, our results could underestimate the share of workers losing ESI who become uninsured. Alternatively, former workers accustomed to having insurance coverage for themselves and their dependents and who may have heightened concerns regarding their potential need for medical care may be highly motivated to seek out other forms of insurance and determine whether they are eligible. In this case, our estimates could overstate the share of those losing ESI who become uninsured.

Enabling temporary (at a minimum) and speedy Medicaid expansions in nonexpansion states and expanding the income range for eligibility for premium subsidies in the ACA marketplaces could help mitigate the rise in uninsurance. Providing subsidies for COBRA coverage could help make previously held ESI coverage options affordable for those who are unemployed but ineligible for Medicaid or marketplace subsidies. Finally, enhancing Medicaid matching rates beyond those mandated under the Families First Coronavirus Response Act and the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act, would help secure states’ finances as they prepare to provide Medicaid coverage to what will likely be record-setting numbers of new enrollees, especially in Medicaid expansion states. Additional funding for and staffing of enrollment assisters for both Medicaid and marketplace coverage will be necessary to keep up with the increasing need for these programs.

Testing for the virus and isolating those who have been exposed and/or infected are critical to limiting the spread of the virus and having adequate medical providers and supplies available for people who contract COVID-19. The recently enacted Families First Coronavirus Response Act requires state Medicaid programs to cover COVID-19 testing without cost sharing and allows states to extend Medicaid coverage to uninsured people for COVID-19 testing. Still, current legislation does not address comprehensive coverage that would include both general medical care and COVID-19 treatment for the uninsured. Lack of coverage for medical services for other illnesses unrelated to COVID-19 may dissuade uninsured people with COVID-19 symptoms from visiting their providers for proper testing.

Some people who lose their jobs and access to employer-based insurance may be newly eligible for Medicaid or marketplace-based subsidized coverage but not realize it, which could contribute to increasing uninsurance. Several strategies could help prevent this, including increasing state resources directed to outreach and enrollment assistance for Medicaid, CHIP, and the marketplaces; increasing awareness that people losing their ESI coverage may be eligible for subsidized coverage through one of these programs; creating a national special open enrollment period, regardless of whether a person had prior insurance coverage (currently in effect in 11 states), and providing sufficient staffing to enroll the increased number of people applying midyear; and expediting Medicaid expansion in the current 15 nonexpansion states.

Finally, the Supreme Court will soon consider California v. Texas, which could completely overturn the ACA. Depending on the outcome, expanded eligibility for Medicaid, premium subsidies for nongroup insurance coverage, and marketplace plans could be eliminated, along with current regulations requiring enrollment of all applicants regardless of health status and coverage of essential health benefits. If the ACA is reversed, unemployment would likely lead to much more uninsurance than currently projected, as well as underinsurance, because the benefits covered through nongroup insurance would decrease while cost-sharing requirements would increase. Reversing the ACA, and thereby strengthening the relationship between joblessness and uninsurance, would counteract efforts to contain the virus, improve public health, and stabilize the economy.
Appendix. Modeling Approach and Sources of Uncertainty

Our estimates contain three main sources of uncertainty. First, it is unknown how high unemployment rates will climb over the next several months or at what level and over what time frame they will stabilize. Further, the changes in unemployment rates will likely vary across states. Rather than incorporate specific unemployment rate forecasts into our coverage estimates, we provide estimates for multiple scenarios over a range of possible unemployment rates (15, 20, and 25 percent). Our estimated coverage changes are best interpreted as those that would result if unemployment rates hold at a particular rate for several months to a year, allowing time for adjustment.

Second, there is uncertainty around our main parameter: the percentage-point change in employer-sponsored health insurance rates resulting from a 1 percentage-point change in the unemployment rate. For our main scenarios, we estimate this parameter separately for nonelderly adults and children (as in prior work) and use the same national values for all states. It is not clear that this parameter should vary systematically across states, nor is it clear that the parameter should be different now, after the ACA, than in earlier years. Nonetheless, we use updated estimates of the parameter using ACS data from 2008 to 2018, which includes years of recession and recovery and five years of implementation of the ACA’s main coverage provisions for our main scenarios. The ACS did not measure health insurance coverage before 2008.

As we show in Appendix Table 2, different time periods and estimation methods yield somewhat different values for this parameter. We present three sets of estimates: The first are our individual-level regression estimates using ACS data from 2008 to 2018. The second are estimates from state-year-level regression models reported in previous work using data from 1990 to 2003, which spans years before the ACA and the Great Recession, but also spans two periods of rising unemployment (1990–92 and 2000–03) and the implementation of the State Children’s Health Insurance Program. The third set of estimates uses national-level, annual data on ESI coverage rates for the nonelderly population from 1998 to 2018 matched to annual unemployment rates from the Bureau of Labor Statistics. Though only at the aggregate level, these data cover a long period extending to recent years and spanning two recessions (including the Great Recession), years of economic recovery, and five years after ACA implementation. With these data, we estimate time series regression models using the ESI rate as the dependent variable and the contemporaneous unemployment rate, one-year-lagged unemployment rate, and a linear time trend as explanatory variables. The linear time trend picks up the long-standing secular trend of falling ESI rates (likely attributable to health care costs and insurance premium growth exceeding income growth over decades), and the lag allows rising unemployment rates to affect ESI rates with a delay (all of our parameter estimates sum the contemporaneous and lagged effect). We estimate the time series models using three alternative periods (the full sample covering 1998 to 2018, 2008–18 to coincide with our ACS data, and 2007–18 to include the year before unemployment began to rise during the Great Recession, which officially began December 2007 and ended June 2009). Finally, as a simple check, we directly compute the change in the ESI rate divided by the change in the unemployment rate from trough (2007) to peak (2010) unemployment during the Great Recession and its immediate aftermath.

The parameter estimates in Appendix Table 2 all show the expected negative effect and range from -0.99 to -0.52. We make six observations. First, the ACS-based estimates we use for our base scenarios are the most conservative in that they imply the smallest overall coverage changes of all the estimates. Second, in the first two sets of estimates (ACS-based estimates and estimates from prior work), there is not much difference between the estimated parameters of the ESI effect for nonelderly adults and children. Third, the time series estimate using data from 1998 to 2018 (-0.99) is nearly identical to estimates from previously mentioned work. Fourth, estimates based on more recent data tend to be smaller in magnitude. Fifth, the individual-level regressions using the ACS are similar to (though somewhat smaller than) the time series estimate we obtain with aggregate National Health Interview Survey/Bureau of Labor Statistics data over the same period (-0.61 for adults and -0.52 for children, compared with -0.74 for all nonelderly people combined). And sixth, the effect we directly calculate from the 2007–10 period, which includes the Great Recession (-0.88), lies between the ACS-based estimates and the full-sample time series estimates.

Accordingly, we believe the full-sample time series parameter estimate of -0.99, applied to both nonelderly adults and children, provides a reasonable, high-end estimate of the potential coverage changes to complement our ACS-based estimates. We use this larger parameter value in our higher responsiveness estimates in Table 2 and Appendix Table 2. Our national estimates of ESI coverage changes in Table 2 is 70 percent larger in magnitude than the main scenario estimates reported in Table 1. Whereas the ACS models underlying our base scenarios are fully based on data since 2008 and allow us to control for individual-level factors related to ESI rates that may shift over time and thereby produce arguably less-biased estimates of unemployment rate effects, the time series model draws on a longer historical record of how ESI rates vary over economic cycles at the aggregate level. Both provide a plausible basis for making estimates of how coverage could change in the current recession.

Thus, even drawing on historical data, there is uncertainty in this key parameter. If people becoming unemployed because of the pandemic are less (or more) likely to have had ESI before the crisis, our estimates of lost ESI could be overstated (or understated). Potential
policy responses, such as subsidizing COBRA coverage, could also affect coverage changes, including how many people lose ESI, in ways not accounted for in our modeling.

For people predicted to lose ESI, we estimate what other types of coverage they obtain or whether they become uninsured. Because the ACA substantially expanded Medicaid eligibility and altered the private health insurance market by introducing means-tested subsidies to purchase marketplace coverage (among other changes), pre-ACA evidence measuring how Medicaid and private nongroup enrollment and unemployment rates respond to changes unemployment need to be updated, particularly for adults. But there is insufficient post-ACA variation in state unemployment rates (i.e., since 2014) to obtain good, updated parameters for these coverage types using econometric models that rely on within-state variation in unemployment rates, as done in earlier work.

Instead, we use the distribution of coverage within each state, separately for adults and children, to estimate the coverage distribution of those without ESI. Including those with ESI, the coverage distribution of unemployed, out-of-the-labor-force, and employed populations are quite different. But among those without ESI, the coverage distribution across these three groups is much more similar, indicating it is reasonable to apply these groups’ pooled coverage distributions to people estimated to have lost ESI. This approach generates estimates that capture post-ACA implementation differences in coverage patterns across states and by age group, but it does not directly model eligibility for Medicaid/CHIP or marketplace subsidies for any unemployed worker or family member. Additionally, people newly losing their jobs may obtain other coverage or become uninsured in ways that differ from precrisis patterns among people previously without ESI. Thus, uncertainty remains among these estimates.

### Appendix Table 1. Estimated Changes in ESI Coverage, Medicaid Enrollment, Marketplace Coverage, and Uninsurance with 15, 20, and 25 Percent Unemployment Rates, High Scenarios, by State

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### Appendix Table 1. Estimated Changes in ESI Coverage, Medicaid Enrollment, Marketplace Coverage, and Uninsurance with 15, 20, and 25 Percent Unemployment Rates, High Scenarios, by State (cont.)

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<th>Data source/study</th>
<th>Data years</th>
<th>Method</th>
<th>Population</th>
<th>Parameter estimate</th>
<th>Estimated number losing ESI under 20% unemployment rate</th>
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</table>

ENDNOTES


11. We use national rates of ESI among the non-elderly calculated by the Kaiser Family Foundation’s analysis of data from the National Health Interview Survey. For more information, see: [https://www.healthsystemtracker.org/brief/long-term-trends-in-employer-based-coverage].

12. For detailed information on the health insurance edits applied by the Integrated Public Use Microdata Series, see [https://usa.ipums.org/usa/acs_healthins.shtml].


14. Additional edits to address potential misclassification of coverage in the ACS were not applied in this analysis (see Lynch V, Kenney GM, Haley J, Resnick D. *Improving the Validity of the Medicaid/CHIP Estimates on the American Community Survey: The Role of Logical Coverage Edits*. Washington: U.S. Census Bureau; 2011. [https://www.census.gov/content/dam/Census/library/working-papers/2011/demo/improving-the-validity-of-the-medicaid-chip-estimates-on-the-acs.pdf]). Accessed April 22, 2020. For adults, such edits would slightly reduce estimates of employer-sponsored and nongroup coverage and slightly increase estimates of Medicaid coverage. However, these edits’ effects are relatively small for adults and are therefore unlikely to meaningfully affect assessments of changes over time or variation across subgroups presented here.

15. The adult model controls for age group, sex, race/ethnicity, education, marital status, parental status, disability status (measured as an indicator for whether an individual is receiving Supplemental Security Income), and citizenship. The child model is similar but excludes controls for education, marital status, parental status, or disability status. Instead, specifications for children control for the highest level of educational attainment in the household, the number of adults in the household, and an indicator for whether anyone in the household was disabled (because only people ages 15 or older are asked about receipt of Supplemental Security Income).


17. Individuals with incomes between 100 and 138 percent of FPL are eligible for premium subsidies for marketplace plans in nonexpansion states only. In Medicaid expansions states, nonelderly adults with incomes below 138 percent of FPL are eligible for Medicaid.


21. Estimating analogous national time series models with the ACS data from 2008 to 2018, we obtain parameters of -0.78 for adults and -0.69 for children, which are very similar to the National Health Interview Survey time series for all nonelderly people and somewhat higher than the individual-level regression model results we obtain using the ACS.
How the COVID-19 Recession Could Affect Health Insurance Coverage

ABOUT THE AUTHORS & ACKNOWLEDGMENTS

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