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RESEARCH BRIEF #88

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State COVID-19 Policies that Restricted In-Person Interaction and Provided Economic Support Saved Lives During the First Year of the Pandemic

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KEY FINDINGS

- U.S. states' policies to reduce the spread of COVID-19 and provide economic support were generally effective at reducing COVID-19 deaths.
- Over 29,000 lives could have been saved during the first year of the pandemic (from April 5 to December 13, 2020) if all states applied the most restrictive in-person interaction policies and most generous economic support policies.
- State policies (while still effective) were less effective at curbing COVID-19 deaths in counties with larger shares of Black and Hispanic residents.

COVID-19 death rates have varied dramatically across the United States. By the end of 2020, COVID-19 mortality rates varied from 840 per 100,000 population in Gove County, KS to zero deaths in 97 U.S. counties.[1] These large geographic disparities are due to differences in population-level vulnerabilities (e.g., age and racial/ethnic composition), health vulnerabilities (e.g., share of the population with chronic health conditions), socioeconomic disadvantage, health care resources, and preventive behaviors often influenced by political ideology.[2] States' COVID-19 policies might also have played important roles in shaping geographic disparities in COVID-19 mortality rates, as they varied tremendously across states during the early months of the pandemic.

This brief summarizes findings from our recent study[3] that examined how U.S. states' COVID-19 policies were related to COVID-19 mortality rates from April 5 to December 13, 2020. Our study included two groups of COVID-19 policies. *Stringency policies* included policies that restricted in-person interaction, such as stay-at-home orders, business closures, and gathering restrictions. *Economic support policies* included income supports (e.g., direct cash payments to those who lost their jobs) and household debt and contract relief (e.g., halting loan repayments and preventing utility shutoffs and evictions).

States with Policies that Restricted In-Person Interaction and Provided Economic Support Had Lower COVID-19 Death Rates

Figure 1 presents trends in state policy index scores and COVID-19 mortality during April 5—December 13, 2020. The orange lines represent scores on the economic support policy index. Higher scores represent more generous economic support policies. The blue lines represent scores on the stringency policy index. Higher scores represent stricter policies related to non-essential business closures and in-person interaction. The gray bars represent cumulative COVID-19 mortality rates.

Policy scores varied dramatically across states over the period. For example, New York was the most aggressive in implementing policies that restricted in-person interaction and generous economic support policies. New York enacted strong policies early and kept them in effect throughout the rest of the year. Although COVID-19 mortality rates surged early in New York State, the increases leveled off beginning in May 2020. Meanwhile, in Montana, COVID-19 mortality rates were low during the early months of the pandemic, but as the state started to lift its stringency and economic support policies after April, the COVID-19 mortality rate increased quickly in Montana. These two examples illustrate similar differences in mortality trends across the country between states that enacted strong policies and maintained them longer versus states that enacted weak policies and/or rescinded their policies earlier.

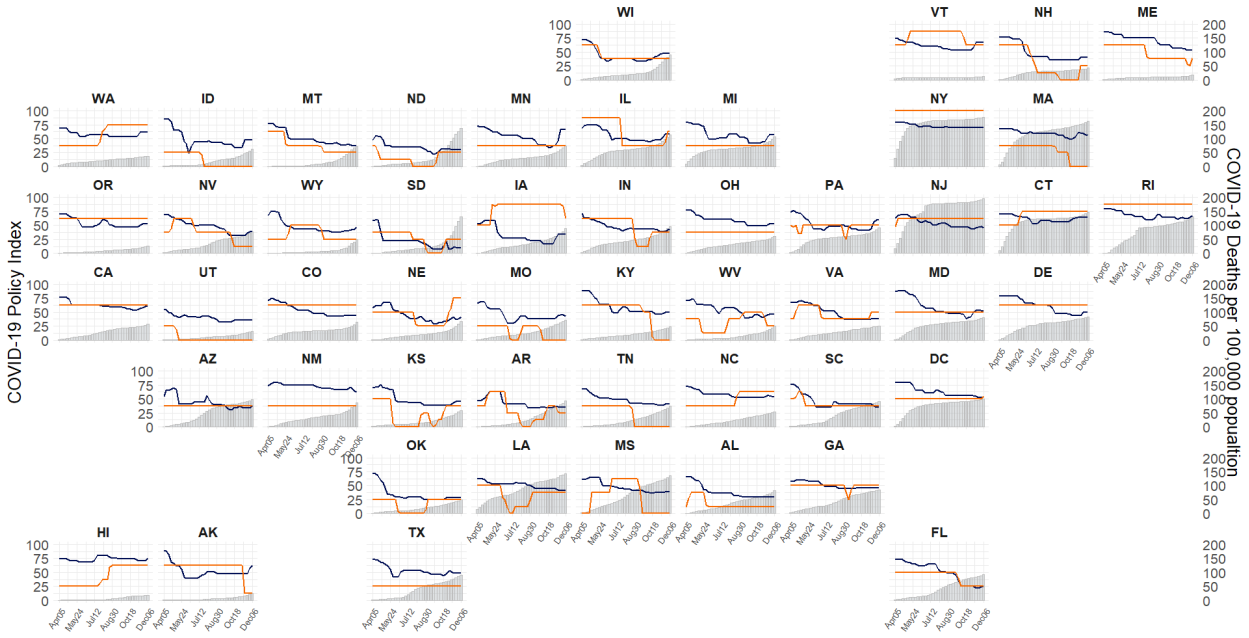

Figure 1: Trends in State Policy Index Scores and Cumulative COVID-19 Mortality Rates during April 5—December 13, 2020

Note: Blue lines represent the stringency policy index. Orange lines represent the economic support policy index. Grey bars represent cumulative COVID-19 mortality rates.
Data Source: COVID-19 death data (April 5—December 13, 2020) are from USA Facts. COVID-19 policy indices (April 5—December 13, 2020) are from the Oxford COVID-19 Government Response Tracker.

Overall, our findings show that stringency policies (policies that restricted in-person interaction) curbed COVID-19 deaths. This suggests that stay-at-home orders, business closures, and gathering restrictions effectively slowed the spread of COVID-19. Our simulations show that if all states applied stringency policies at the most restrictive

level, COVID-19 deaths could have been reduced by 7.3%, and 21,784 lives could have been saved from April 5 to December 13, 2020.

More generous economic support policies also curbed COVID-19 deaths, potentially by moderating the economic adversity that came along with COVID-19 business closures and job losses. Income supports and enacting moratoria on loan payments, evictions, and utility shutoffs relieved some of the economic stressors that were caused by the COVID-19 pandemic and associated business closures. This may have made staying home when sick (rather than going to work because one needed the income) and using delivery services (rather than shopping in person) more accessible and affordable. If all states applied economic support policies at the most generous level, 2,143 lives could have been saved over our study period.

Overall, simulations from our models show that changing both stringency policies and economic support policies in all states to the most restrictive and most generous levels, respectively, might have saved 29,055 lives from April 5 to December 13, 2020.

COVID-19 Policies were Less Effective at Reducing Deaths in Counties with Larger Shares of Black and Hispanic Residents

Figure 2 compares the predicted reductions in COVID-19 deaths across quantiles of county percent non-Hispanic Black and Hispanic. Q1-Q4 represent counties with between 0 and 25 percent Black/Hispanic residents, 25 to 50 percent Black/Hispanic residents, 50 to 75 percent Black/Hispanic residents, and over 75 percent Black/Hispanic residents.

As shown in Figure 2, changing stringency policies to the most restrictive level and economic support policies to the most generous level would have reduced the overall COVID-19 mortality rate by 13% and 9% respectively in counties in the bottom quantile of percent Black (i.e., counties with the lowest Black population shares). If both sets of policies were set to the strongest levels at the same time, the overall COVID-19 mortality rate could have been reduced by 17% in counties with the smallest shares of Black residents (Q1). However, the protective effect of strong policies declines as the share of the Black population in a county increases. These patterns are consistent when considering mortality reductions across quantiles of county percent Hispanic.

The reduced effectiveness of COVID-19 policies that restricted movement and provided economic support in counties with larger shares of Black and Hispanic residents might be due to structural racism. Structural racism refers to the many ways racial inequality is fostered through multiple interlocking policies and institutions, such as housing, employment, health care, and more.[4] Because of these structural inequities, the COVID-19 pandemic exacerbated existing racial/ethnic disparities.[5] For example, although policies that restricted in-person interaction slowed the spread of COVID-19, they might have been less effective among Blacks and Hispanics who were more likely to be essential workers, could not afford unpaid leave, or who experienced workplace discrimination. Economic support policies may have been less effective Blacks and Hispanics if they faced institutional barriers to using those supports within their counties. For example, receiving income support may not have been as helpful for reducing the spread of COVID-19 among Blacks and Hispanics since they were more likely to be deemed essential workers (and therefore could not stay home) during the height of the pandemic.[6]

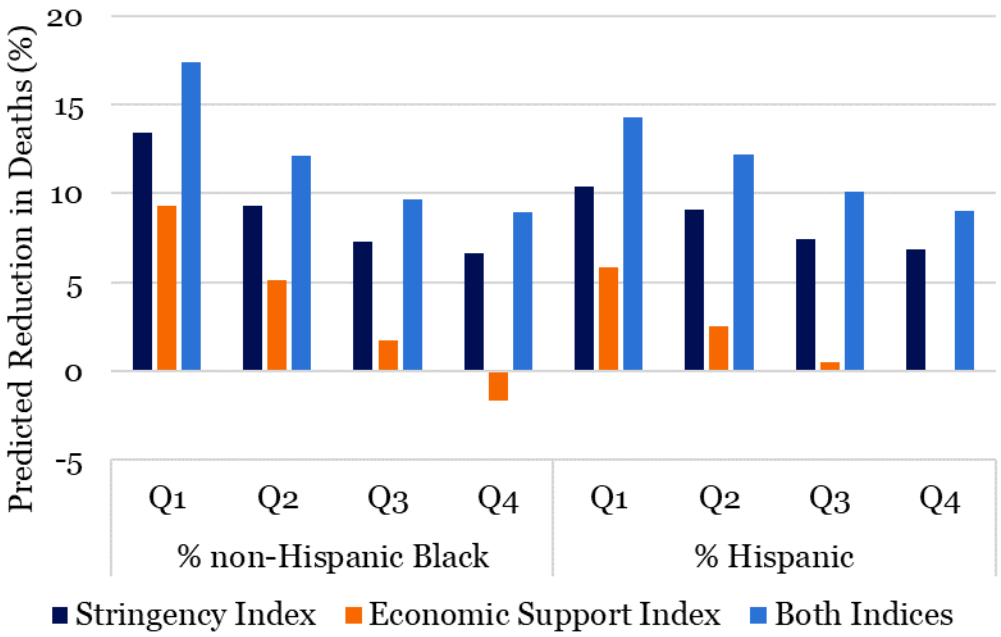

Figure 2: Estimated Changes in County-Level COVID-19 Deaths across Quantiles of County Percent Black and Percent Hispanic if COVID-19 State Policy Indices Changed to the Strongest Levels

Note: Q=quantile. The unit of analysis is the county. The predicted reduction represents the collective reduction in COVID-19 deaths across all counties in the respective quantile.
Data Source: COVID-19 death data (April 5—December 13, 2020) are from USA Facts. COVID-19 policy indices (April 5—December 13, 2020) are from the Oxford COVID-19 Government Response Tracker. Racial-ethnic composition data are from the 2016-2020 American Community Survey.

Structural Changes and Progressive Policies are Required to Protect Population Health

Our estimates suggest that state enactment of stricter policies restricting in-person interaction and more generous economic support policies in the early months of the COVID-19 pandemic saved lives. States that did not enact such policies could have saved more than 29,000 lives between April and December 2020 had they done so.

We recommend two strategies for reducing deaths in future pandemics and other major public health crises. First, the federal government should not only move much more swiftly to provide guidance and enact universal income supports and policies that reduce disease transmission, but they should also enact policies that will improve population health equity in general right now, such as universal health care, a higher minimum wage, and expanded social safety net programs. Such supports would help make our most vulnerable populations more resilient in the face of future crises. Second, in the absence of a strong federal government response, such as what we saw during the COVID-19 pandemic, state governments must quickly enact protective policies if they want to save lives.

Data and Methods

COVID-19 death data (April 5—December 13, 2020) are from USA Facts. COVID-19 policy indices (April 5—December 13, 2020) are from the Oxford COVID-19 Government Response Tracker. Racial-ethnic composition data are from the 2016-2020 American Community Survey. The unit of

analysis is the county. We used multilevel negative binominal regression models to estimate the results. We controlled for metropolitan status, percentage of older adults (65+), percentage of residents age 25+ with a bachelor's degree or more, a per capita measure of social capital promoting institutions (such as civic clubs and recreational facilities), percentage of residents without health insurance, number of physicians per capita, and percentage of residents who voted for Donald Trump in the 2020 Presidential election. Full methodological details are available in the published paper.

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