Brief Synopsis of: **Certificate-of-Need Laws and Healthcare Utilization during the COVID-19 Pandemic**

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Abstract: This paper investigates the impact of state-level Certificate-of-Need (CON) laws on COVID and non-COVID deaths in the United States during the SARS-CoV-2 pandemic. CON laws limit the expansion and acquisition of new medical services. The coronavirus pandemic created a surge in demand for medical services, which might be exacerbated in some states that have CON laws. Our investigation focuses on mortality due to COVID and non-COVID reasons, and in understanding how these laws affect access to healthcare for illnesses that might require similar medical equipment to COVID patients. Our baseline results suggest that mortality rates are higher in states with CON laws relative to that in states without CON laws. We also find that states with high healthcare utilization due to COVID that reformed their CON laws during the pandemic saw a reduction in mortality resulting from natural death, Septicemia, Diabetes, Chronic Lower Respiratory Disease, Influenza or Pneumonia, and Alzheimer's Disease in addition to reduction in COVID deaths.

Data Used: Mortality and morbidity files were provided through the National Center of Health Statistics within the Center for Disease Control from January to late-June 2020 were used to understand state-level trends in death reporting. Notice this does only include the early months. After this some states changed their reporting, and we want to test all state reporting validity before extending this out to future dates. Certificate of Need suspensions and repeals were hand collected from executive orders for every state. Hospital capacity and COVID hospitalization and ICU rates were obtained through Torch Insight Healthcare Analytics which was created from data collected through John Hopkins University.

Methodology: We use various empirical methods to mathematically compare the trends of COVID cases before and after the temporary CON law suspensions and compare this to the behavior of states that never suspended CON laws and states that never had a CON law. We further split our analysis into comparing states that had high hospital and ICU bed utilization before for the policy change to states that changed early on when they had low-hospital and ICU bed use.

Results:

- In the most naive and basic models we find that suspending CON had no significant effect either direction, but we found that this noise in the data was created by a few states that changed their rules long before COVID had affected their hospital use.
- We then incorporate data on if the hospitals had a high use of beds at the time of the policy change. This accounts for states that changed their laws once COVID had started to spread through their communities, like Alaska.
- Once we mathematically control for the variation in the timing of policy changes, we notice that states that repeal their CON laws when they had a high number of beds being used in hospitals, allowed hospitals the flexibility to adjust purchasing and bed locations quicky when needed.
- The results of our mathematical model find that in the most conservative case (so the smallest number of all the results we find), changing these CON laws when COVID cases were high in the state led to 10 fewer death from COVID and 16-18 fewer deaths every week in the early pandemic from other diseases that use similar medical equipment such as respirators. In or least conservative estimates these numbers are closer to 50 lives saved a week.
- Outside of this research, we are starting to conduct these tests over longer periods of data and are finding that they are consistent through the rest of 2020. I will send you this second working paper as soon as it is finished.