Correlation between Early Government Interventions in the Northeastern United States and COVID-19 Outcomes

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Abstract : The effect of different state government interventions on COVID-19 health outcomes is currently unknown. Stay at home (SAH) orders, all non-essential business closures and school closures in the Northeastern US were examined. A linear correlation between the peak number of new daily COVID-19 positive tests, hospitalizations and deaths per capita and the elapsed time between government issued guidance and a fixed number of COVID-19 deaths in each state was performed. Earlier government interventions were correlated with lower peak healthcare burden. Statewide closures of schools and non-essential businesses showed significantly greater ($p<.001$) correlation to peak COVID-19 disease burden as compared to a statewide SAH. The implications of these findings require further study to determine the effectiveness of these interventions.