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Pandemic lockdowns had little effect on COVID-19 mortality, study finds

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Pandemic lockdown measures may have had little-to-no effect on COVID-19 mortality, a new comprehensive review and analysis carried out by The Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise has found, sharing the results in a study entitled "A literature review and meta-analysis of the effects of lockdowns on COVID-19 mortality."

The study was carried out by special advisor at the Center for Political Studies in Copenhagen, Jonas Herby, former chairperson of the Swedish Fiscal Policy Council Lars Jonung, and Steve H. Hanke, Professor of Applied Economics and the institute's founder and co-director. Its aim was to determine whether there is empirical evidence to support the belief that the various lockdowns imposed worldwide since the start of the pandemic in early 2020 had any significant impact on COVID19 mortality.

A lockdown, as defined by the study, is the "imposition of at least one compulsory, non-pharmaceutical intervention (NPI)." This definition includes "any government mandate that directly restricts peoples' possibilities, such as policies that limit internal movement, close schools and businesses, and ban international travel."

In order to conduct the study, the research group identified 18,590 studies that could potentially address the hypothesis. After three levels of screening, a total of 34 studies were chosen for further research. Ultimately, 24 of those 34 studies qualified for inclusion in the meta-analysis.

The studies were then sorted into three groups: lockdown stringency index studies, shelter-in-place order studies, and specific NPI studies. Lockdown stringency index studies

Seven studies were sorted into the category examining the stringency of various lockdowns and the correlation between stringency and mortality. All of them were based on the COVID-19 government response tracker's stringency index, which did not take into account the expected effectiveness of the lockdowns or the expected costs. Instead, it measured stringency according to nine equally weighted parameters, which are identified as follows:

Schools closing, workplace closing, cancellation of public events, restrictions on gathering, closure of public transport, stay-at-home requirements, restrictions on internal movement, international travel regulations, and public information campaigns.

Through examining the lockdown policies of the United States and Europe between March 16 and April 15, 2020, and comparing them to later policies which worked solely based on recommendations and not explicitly enforced regulations, the researchers found that the total effect of lockdown in comparison to recommendations was -6.37 deaths per million people in Europe and -5.91 deaths per million in the United States. This amounts to around 4,766 averted COVID-19 deaths in Europe and 1,969 in the US.

However, the study explains, by May 20, 2020, a total of 164,600 people had died with COVID-19 in Europe and a further 97,081 in the United States. Therefore, the number of deaths averted through lockdown measures amounted to 2.8% and 2% of COVID-19 deaths respectively.

"Compared to a policy based solely on recommendations, we find little evidence that lockdowns

had a noticeable impact on COVID-19 mortality. Only one study, Fuller et al. (2021), finds a substantial effect, while the rest of the studies find little to no effect," concludes the section on stringency indexes.

Shelter-in-place order (SIPO) studies

13 studies were found to be eligible for analysis while estimating the effect of SIPOs on COVID-19 mortality. The research team found that 42 states had issued such orders in the spring of 2020, but usually only after other restrictions, such as school and workplace closures, had already been implemented. Only one state, Tennessee, issued orders to stay indoors before schools and workplaces closed.

On average, the study found, SIPOs reduced COVID-19 mortality in the US by roughly 2.9%, leading the research team to conclude that there was no clear evidence that SIPOs had a noticeable impact on pandemic mortality rates.

Furthermore, several studies found that orders to stay indoors actually contributed to mortality rates. Although this appears to be counterintuitive, the study explains, this is likely due to cases in which a person isolating at home with COVID19 can infect their family members with a higher viral load, leading to more severe illness.

Studies of specific NPIs

Finally, the research team examined 11 studies on the subject of multiple specific NPIs independently or just comparing lockdown data to data from periods without a lockdown policy.

While these were difficult to analyze and compare due to the differences between the various NPIs and the amount that were implemented, the researchers explain, they were able to collect enough consistent data to show that there was no evidence of the most-used NPIs having a significant impact on COVID-19 mortality.

"Overall, lockdowns and limiting gatherings seem to increase COVID-19 mortality, although the effect is modest (0.6% and 1.6%, respectively) and border closures have little to no effect on COVID-19 mortality," the study said. Face mask mandates, however, which were introduced only later in the pandemic, seemed to have a more noticeable effect on limiting COVID-19 mortality, with an estimated reduction of 21.2% according to two separate studies. Overall, the most successful limitation that was implemented in early 2020 was that of business closures, particularly the closure of bars and restaurants, with a reduction of mortality estimated to be between 28%50%, depending on the study.

"Because of the heterogeneity in NPIs across studies, it is difficult to draw strong conclusions based on the studies of multiple specific measures," the researchers explained.

"We find no evidence that lockdowns, school closures, border closures, and limiting gatherings have had a noticeable effect on COVID-19 mortality," they wrote. "There is some

evidence that business closures reduce COVID-19 mortality, but the variation in estimates is large and the effect seems related to closing bars. There may be an effect of mask mandates, but just two studies look at this, one of which one only looks at the effect of employee mask mandates."

So did lockdown have any impact on mortality?

Overall, the study concludes that although public health experts and politicians worldwide have embraced lockdown as an effective method of slowing the pandemic based on various epidemiological studios and forecasts, the meta-analysis has failed to confirm that lockdowns have a large, significant effect on mortality rates.

However, the study's authors stress, findings contained in similar studies have shown the opposite.

"The findings contained in Johanna et al. (2020) are in contrast to our own," the study reported. "They conclude that 'for lockdown, ten studies consistently showed that it successfully reduced the incidence, onward transmission, and mortality rate of COVID-19." But why didn't lockdowns significantly reduce mortality?

While the study does not investigate why lockdowns apparently had little impact despite forecasts saying that they would, it offers four potential reasons as to why this happened.

"First, people respond to dangers outside their door. When a pandemic rages, people believe in social distancing regardless of what the government mandates. So, we believe that Allen (2021) is right, when he concludes, 'The ineffectiveness [of lockdowns] stemmed from individual changes in behavior: either non-compliance or behavior that mimicked lockdowns.'"

The second reason, they continue, could be that mandates only regulate "a fraction of our potential contagious contacts," and cannot regulate or enforce other factors such as hand washing, coughing etiquette and the like.

Third, "even if lockdowns are successful in initially reducing the spread of COVID-19, the behavioral response may counteract the effect completely, as people respond to the lower risk by changing behavior," the study states, explaining that any gains are likely reversed upon to the end of lockdown.

The final reason is that "unintended consequences may play a larger role than recognized," citing the example of a COVID-19 positive person being isolated with family members, thereby passing on a larger viral load to them and increasing the severity of their illness.

"While this meta-analysis concludes that lockdowns have had little to no public health effects, they have imposed enormous economic and social costs where they have been adopted, the researchers concluded. "In consequence, lockdown policies are ill-founded and should be rejected as a pandemic policy instrument."