Review of the CDC Report, "Excess Deaths During COVID-19 Shutdown"

Health Freedom Ohio Research Team

The CDC recently released an analysis of excess deaths in the wake of the COVID-19 pandemic [1]. In this review of the CDC report, we will describe the model used and communicate significant findings based on our analysis of the data.

Description of the model

The purpose of this report by the CDC was to provide information about mortality potentially related to the COVID-19 pandemic. According to the technical description provided, counts of all causes of death, including COVID-19 were presented. "Excess deaths" were defined as the difference between the observed number of deaths in a specific time period and the expected number of deaths, the latter which was estimated using Bayesian methods, which allowed for some degree of uncertainty. The number of excess deaths with and without COVID-19 were compared. In the number of COVID-19 deaths that are reported by each state, "presumptive" deaths were included based on earlier CDC guidance [2]. The model estimates when a significant departure from 95% confidence intervals was observed, a standard practice in statistics. It is noted in the report that the weighting methods used to account for uncertainty might over-adjust for underreporting. However, the report also mentions that ICD10 code U07, which captures unknown but possible COVID deaths, were excluded. It is unclear what the combination of exclusion of certain ICD10 codes and weighting schemes would have on generalizability of findings.

As stated by this report, the number of excess deaths "could represent misclassified COVID-19 deaths, or potentially could be indirectly related to the COVID-19 pandemic (e.g., deaths from other causes occurring in the context of health care shortages or overburdened health care systems)." (emphasis ours). Also noted in the report, "the pandemic may have changed mortality patterns for other causes of death. Upward trends in other causes of death (e.g., suicide, drug overdose, heart disease) may contribute to excess deaths in some jurisdictions."

Results

Figure 1 below was generated [3] using the "Excess deaths with and without COVID-19" option. Note that the CDC report excludes deaths in New York City from the analysis presented in Figure 1. The points with red crosses indicate that the number of excess deaths was statistically significant, even after accounting for uncertainty parameters. There are two major points in history with significant excess deaths. The first peak of excess deaths occurs in early 2018, which coincides with a notably bad flu season [4]. The second peak starts at March 28, 2020, just a couple of weeks after states started shutting down. A closer view of that peak is in Figure 2.

Figure 1.

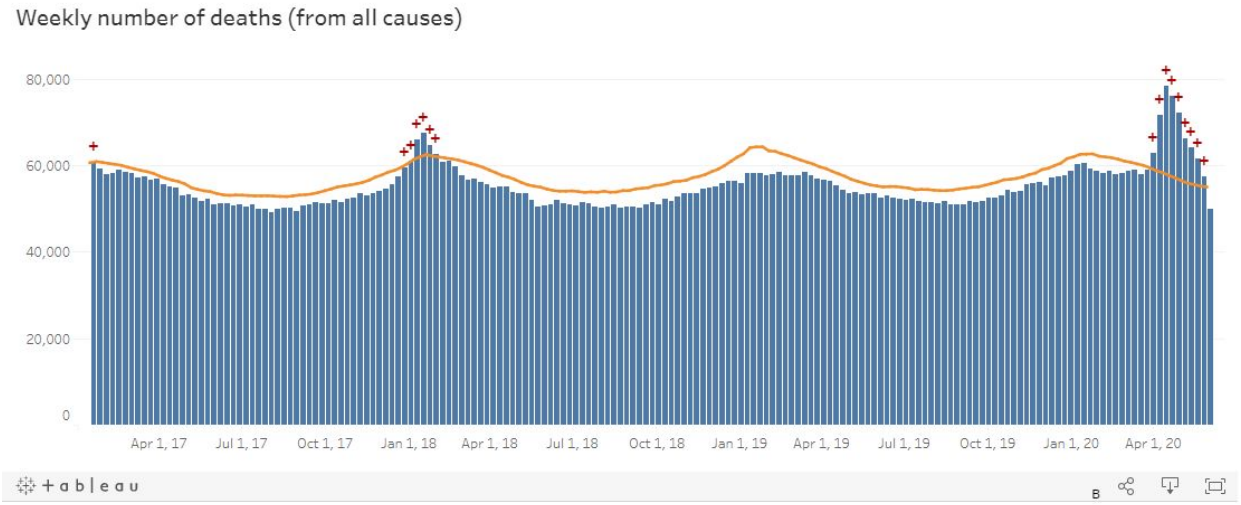
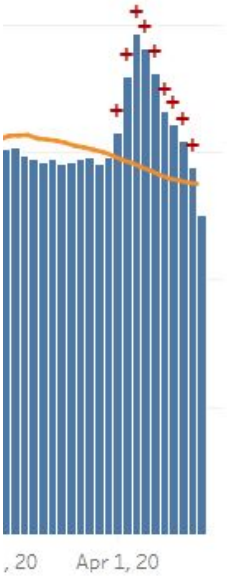


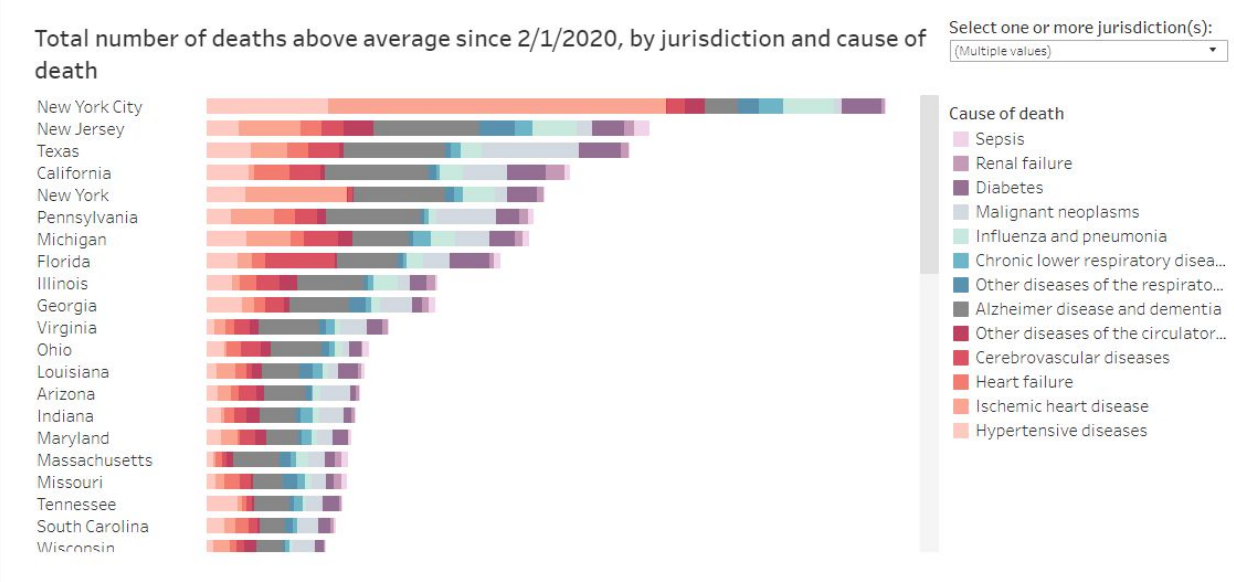
Figure 2.



In this second peak, the first date of statistically significant excess numbers of deaths occurs at March 28, which was a couple of weeks after the state-wide shutdowns of medical systems and "stay at home" orders. Scrolling over the plot, one can obtain specific values (which cannot be captured with a screenshot). On March 28, the estimated percentage excess was 6.3-10.1%. The peak occurs on April 1, where the percent excess ranges between 34.8%-39.6%.

There is also an option to plot the "total number above average by jurisdiction/cause". The initial plot generated appears below (Figure 3).

Figure 3.



This plot can be generated for specific states/jurisdictions. Not all states showed excess deaths. Below we provide Ohio, neighboring states, as well as New York/New York city, Florida, California, and Washington, where there has been considerable coverage of the COVID-19 outbreaks (Figure 4).

Figure 4.

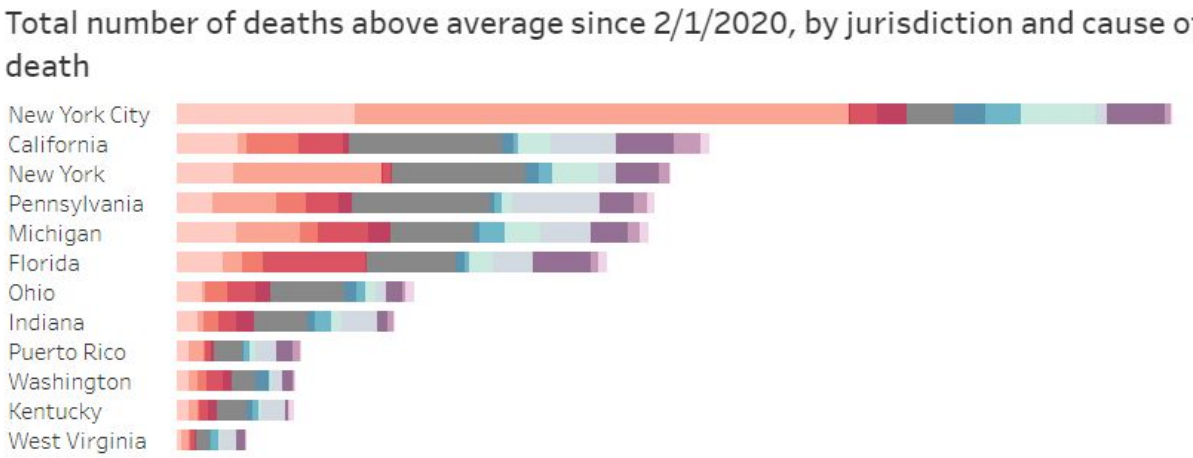


Figure 5 provides the figure legend, in a larger size, for ease of viewing.

Figure 5.

There are some very important observations that can be made from this figure. First, one can observe the predominant cause of death in New York City is heart disease and heart issues. This is interesting because much has been made about why New York City is such an "epicenter" for the COVID-19 epidemic, and many scientists and doctors have stated this is due to a high prevalence of cardiovascular comorbidities, and the existence of those comorbidities is further demonstrated by this predominant cause of death. Looking at Ohio, we see that heart disease and associated cardiovascular issues is also the predominant cause of death. The second most common cause is Alzheimer's disease and dementia. This same pattern is seen in California, New York, and Pennsylvania. This is a striking finding, given the lockdowns in nursing homes and elder care settings, where COVID-19 is both highly prevalent with a high case fatality rate [5], but at the same time, families are unable to visit their relatives and supervise their care [6].

It must be stressed that this qualitative analysis does not provide proof of causality. In essence, this is an ecological analysis, where we are observing the timing of excess deaths and the cause of death after the COVID-19 shutdown. Still, as seen in Figure 1, the number of excess deaths is statistically significant, even after accounting for uncertainty. Moreover, these are likely an under-estimate. The CDC report clearly states that COVID-19 as the cause of death was assigned even in "probable" circumstances, in accordance to their earlier guidance [2] and when cause of death was not known with certainty, the models even allow for this to be COVID-19.

Still, this is noteworthy because of the impact of the shutdown on the healthcare system. At the beginning of healthcare system shutdown, when only "essential" care would be provided with a priority on increasing capacity for COVID-19 response, many doctors stopped providing regular care. There was considerable variability in this. Stories were reported of individuals with cancer and significant chronic conditions that were denied surgery and clinical care during this time. In some instances, elected officials intervened, but is unclear how many citizens of Ohio successfully sought this additional intervention. Hospital staff, and the impact on the healthcare system continues, evidenced by reported pay cuts for University Hospitals staff [6]. Also, because of the strong emphasis on "self-quarantine" and to "stay at home" / "shelter in place," many individuals may have had chronic conditions or illnesses that they

neglected because they were afraid to leave their homes or afraid to violate the orders. Furthermore, nursing homes and other congregate living settings denied access to family members. Often family members can detect health concerns because of their familiarity with their loved one, issues that might be missed by medical staff, and very commonly, family members are advocates for the patient. This has been lost during this time, and continues to be. Many such examples have been cited by the media [7].

Implications for present-day legislative action

The consequences of imposing statewide social, medical, and economic restrictions in exclusive consideration of a singular diagnosis has significant deleterious consequences on the population as other health and medical needs may not be able to be met under such restrictive circumstances. There have been lasting economic effects on the healthcare system [6]. This is important when considering proposed legislation that might restrict the powers of the Director of the Ohio Department of Health. If the restrictions hadn't been so strict, much of this could have been avoided. Regular care for individuals with chronic conditions should have been maintained. Nursing homes should have allowed some level of access to patients' loved ones.

There also continues to be speculation of a "second wave," which is based on conjecture only and no actual data [8]. We must remain vigilant to prevent unwarranted panic, as we detailed in our previous white paper [9], to induce an unnecessary shutdown and potentially cause a second wave of excess deaths. There are millions of viruses, bacteria and fungi that interface with the human body. Focus on a single virus and a single diagnosis can negatively affect other significant health outcomes, and this CDC report provides evidence of that.

Cited references

1. https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm?fbclid=IwAR035yFGOZe5IaK0Xd7pOzq1-GVeMVgK81m1JJTwO7ulhQNzCinuhl-dU0Q
2. https://www.cdc.gov/coronavirus/2019-ncov/covid-data/faq-surveillance.html
3. Figures accessed from [1] on June 13, 2020
4. https://www.cleveland.com/healthfit/2018/02/2018_flu_update_death_toll_rea_1.html
5. https://www.wmfd.com/article/governor-dewine-suppresses-data-disproving-covid-19-policies/3899
6. https://www.cleveland.com/metro/2020/06/university-hospitals-to-cut-pay-of-all-doctors-including-those-working-on-coronavirus-frontlines.html?fbclid=IwAR3BprU-T-LYzB0FTnQztOwJYLDOxSo7OJ4cbMRtgXZ9mSf1qRqRuRMuQyI
7. https://www.prageru.com/our-mother-did-not-die-of-covid-19-she-died-because-of-covid-19/?fbclid=IwAR0mY6V4FKCaRMnPcUCoLwOPgLZneKIg1mPcS3ufgTLD-s_ETgcwMQ5KZnQ
8. http://www.healthdata.org/covid/updates
9. https://healthfreedomohio.org/News-Views/8962174?fbclid=IwAR1AvhIrOwHEWjy_nObbRGedr2b3-XSFmDby5-kHUzM0hOJBaF44yVihQ7s