**US Covid-19 Deaths – Project Scope**

**Questions to Investigate:**

1. How much does positively reported Covid-19 deaths under-report probable Covid-19 deaths?
   1. On a national level?
   2. State level?
   3. [Data sets: (1) Covid-19 deaths positively identified by state, (3) probable Covid-19 deaths based on excess expected deaths.]
   4. [Methodology may need to explain how excess deaths are calculated, which means that variation in deaths reported (seasonally adjusted) may need to be calculated so as to explain confidence level in excess deaths calculations]
2. Is there any correlation between this reporting disparity and state-level partisan control?
   1. If one party controls both state houses and the governorship?
   2. If one party controls both state houses but not the governorship?
   3. If the state houses are split by party?
   4. [Data sets: (1) above data analysis, (2) party control by state]
3. To what degree are there disparities by race and ethnicity?
   1. Prima facii thought: Certain non-white Americans constitute a disproportionate percentage of lower-paid service workforce whose work requires them to work outside of the home, often in conditions where they can come into closer contact with many others, often in enclosed areas, sometimes with poor air circulation, and/or commuting in conditions where they are similarly exposed. Hence, they might
   2. Contra argument: Certain portions of the non-white American population have developed support infrastructure in the form of grandparents and/or siblings living under the same roof who can tend to children. As a result, they may be intrinsically better equipped to shelter in place, provided the parents are careful in taking adequate preventive measures commuting to and working at their places of employment.
   3. Further, it is possible that certain portions of the white-collar population have not taken Covid-19 seriously enough and/or may be itching to get their kids to school and/or is less patient and more inclined to go “stircrazy,” and may prematurely lower their guard. This could obviate their natural advantages in terms of often being able to work from the home and to sustain themselves without frequently going marketing.
   4. [Data sets: TBA]
4. Are more densely populated areas of the country proportionately harder hit, or vice versa? More densely populated areas could be considered proxies for partisan leanings (maybe to be tackled in another study).
   1. [Data sets: US country level Covid-19 positively identified deaths, excess deaths by county if available]
5. Retirement facilities analysis:
   1. What percentage of the US retirement age population lives in nursing homes? What percentage of the US retirement age population of comparable age lives independently?
   2. For a population already vulnerable to Covid-19, how much worse is it for the living in elderly retirement facilities than for those living independently? This can be derived by subtracting the number of nursing home deaths due to Covid-19 from the number of deaths from Covid-19 among US retirement age population.
   3. [Data sets: Nursing home data set, census data]
6. Prison population analysis:
   1. Not sure how well it’s tracked
   2. Not sure what slices might be available (e.g., age, race, ethnicity, category of prison)
   3. Perhaps this is also available for ICE detention and separated families facilities
   4. [Will need to establish availability of data]
7. College and universities analysis:
   1. Look for correlation between keeping common eating facilities open and Covid-19 outbreaks or some other comparable correlation. The idea is that they are problematic because students may be most vulnerable when they unmask to drink and eat.
   2. Another analysis I have heard anecdotally is that even universities with acclaimed Covid-19 tracking and gating systems fall down when even just a few students, notoriously some kids in fraternities and sororities, decide to circumvent clearly defined rules. Perhaps this can be tested. I suspect that it may not be easy and that the data represents only a very small percentage of the US college and university population.
   3. Colleges and universities are hemorrhaging red ink during this pandemic, even with their doors open. It might be worthwhile searching for data as to how badly they are faring economically (e.g., profit/loss, or something along those lines), and then seeing if there is a correlation to their determination to keep their campus open. The facilities they keep open are expensive to maintain, and having kids paying to be on campus represents an important financial offset. It is certainly possible that colleges and universities are making questionable public health decisions to keep their dorms open on the basis of their financial bias.
   4. [Not sure how systematically the data is tracked across the US college and universities systems]
8. How much worse is Covid-19 than influenza? Just how disingenuous was POTUS when (on the date(s)) he compared Covid-19 to Influenza?
   1. [Data sets: Covid-19 positive deaths, Covid-19 probable deaths, flu deaths, pneumonia deaths]
   2. [Research: need to understand direct vs. indirect cause of death issues]
9. Epidemiologists have suggested that it would take at least 60% of the population to have been exposed to both known strains of Covid-19 before the nation might experience achieve something like herd immunity. Define herd immunity here […]. Based on reported positively identified Covid-19 cases, positively identified Covid-19 deaths, excess deaths, US census population data, and credible estimates of probable total population Covid-19 exposure (something like 40% are estimated to show no symptoms), how many Americans would likely die to reach herd immunity in the US?
   1. [Data sets: some already mentioned above, others TBA]
10. We suspect there isn’t much larger, more robust data sets on populations of people who survive Covid-19 infections but end up suffering long-term life-altering effects. We suspect this could be almost as big a story as the number of Covid-19-related deaths.
    1. There are the human dimensions, in terms of personal suffering.
    2. And there are the likely considerable health care cost burdens that may last for months or years.
    3. [Data sets: Not sure we’re going to find anything comprehensive, but it is possible we can extrapolate something.]
11. And while we’re at it, what is happening to US GDP as a result of Covid-19? And what is the actual health care cost of so many people needing treatment?
    1. [Data sets: US Commerce Department GDP data]
12. Is it possible to estimate the impact on the US economy of the Republican Party-controlled senate and POTUS having demurred on the second stimulus package for political purposes?