

Hello Everyone,

I've been promising for quite a while that I would send a summary of my thoughts about SARS-CoV-2 (the name of the virus that causes COVID-19). I am speaking as a board-certified physician with a nearly 40 year experience in public health and epidemiology in the USA and abroad. I have had close contact with both USAID and CDC during over 20 years in foreign service, and I am more aware than most of just how political health issues can become.

I've also been involved in true epidemics, such as the 2010 Cholera epidemic in Haïti where tens of thousands of persons perished in a short period of time from a bacterial disease that is both treatable and preventable. Viruses are somewhat treatable; but their spread, contrary to what has been suggested, is not preventable except through the development of herd immunity (the state where the majority of the population in a community have been infected and have become immune to a disease).

The bottom line: the SARS-CoV-2 outbreak resulting in COVID-19 has been mismanaged from a basic public health standpoint. The ultimate goal of saving lives is the same between the present approach and a more usual public health one, but that is the only similarity.

To be clear, I am not casting aspersions on governments or international agencies. Rather I am addressing a problem among the national and international health experts who have bowed under overwhelming political pressure. Although a serious public health threat, the mishandling of COVID-19 is first and foremost a political issue.

Very regrettably, lives will be lost to SARS-CoV-2 regardless of the approach; thus, our focus must be on minimizing death and/or serious side-effects. Make no mistake, a viral infection will continue to pass through a population until the majority become immune (herd immunity).

Thus, our response must assure the best and fastest way to reach herd immunity while protecting the 3% who are the most vulnerable to life-threatening disease. Quarantines, lockdowns, and other NPI methods (Non-pharmaceutical interventions) have impeded herd immunity from developing, not facilitated it. Plus, by not specifically protecting the 3% most vulnerable during much of this time, we've both prolonged the epidemic and increased the number of deaths.

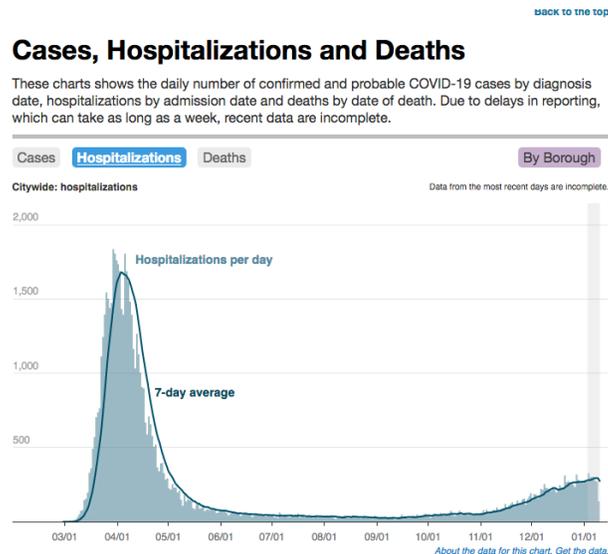
It's one thing to come down with a flu-like illness for a few days from SARS-CoV-2. It's quite another to be among the few who may lose their lives to it.

I will give some technical points at the end, but I'd like to first summarize my recommendations—as other public health specialists have already done but without much resonance. Understanding that just as the Hippocratic Oath to which we physicians swear, the prime objective in a response must always be *primum non nocere*, first of all do no harm.

With that in mind, I recommend the following:

1. Stop the quarantine of healthy individuals. It only slows the development of herd immunity. These individuals will not become seriously ill but will significantly help to protect the others who could.

2. Reopen businesses and other community-level activities, including all social gatherings, for those at low risk of a life-threatening infection. We must remove artificial barriers to social cohesion.
3. Likewise, remove the masks and stop social distancing. The evidence is now overwhelming that these have had no tangible effect on preventing the spread of SARS-CoV-2. See the comprehensive discussion at: <https://fee.org/articles/europes-top-health-officials-say-masks-arent-helpful-in-beating-covid-19/> Do, however, continue good air filtering, especially on airplanes and in other public places.
4. For those who are vulnerable, such as those over 65 with other health conditions, the elderly living in group settings, and others with health conditions that put them at risk:
  - a. Segregate these vulnerable individuals from the general population until herd immunity is reached in their community. If the virus is permitted normal passage through the low-risk population, this will take roughly 6-8 weeks.
  - b. Those who care for the vulnerable should wear PPE (personal protective equipment, including gloves and masks), and should be placed on sick leave with pay until they are fully recovered if they show any cold or flu-like symptoms.
  - c. While the community is in the process of developing herd immunity, a roughly 6-8 week period of time, family and friends should refrain from physical visits.
  - d. Below is a normal epidemiology curve that shows the more typical pattern of a Coronavirus infection—it's actually New York City's! Quarantine of the most vulnerable should begin on the upswing (early March on the chart); and continue until risk is markedly reduced (early May on the chart).

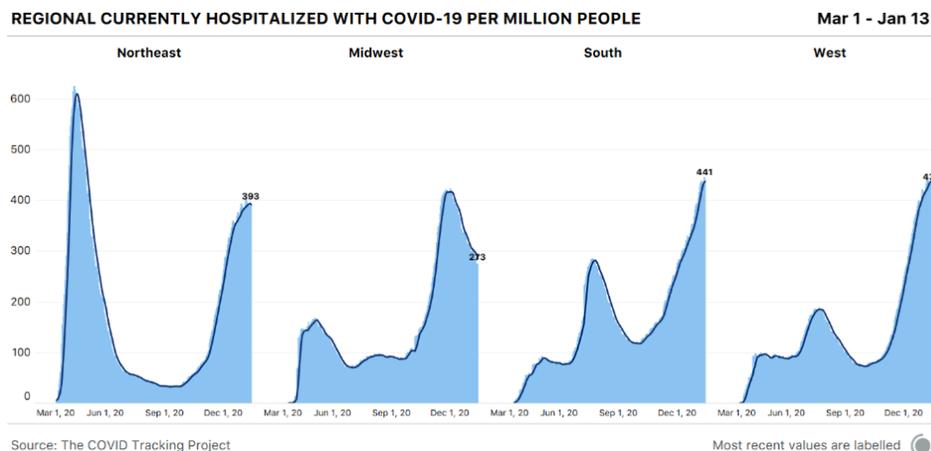


5. Please see my comments below about vaccination. In short, it is not recommended.

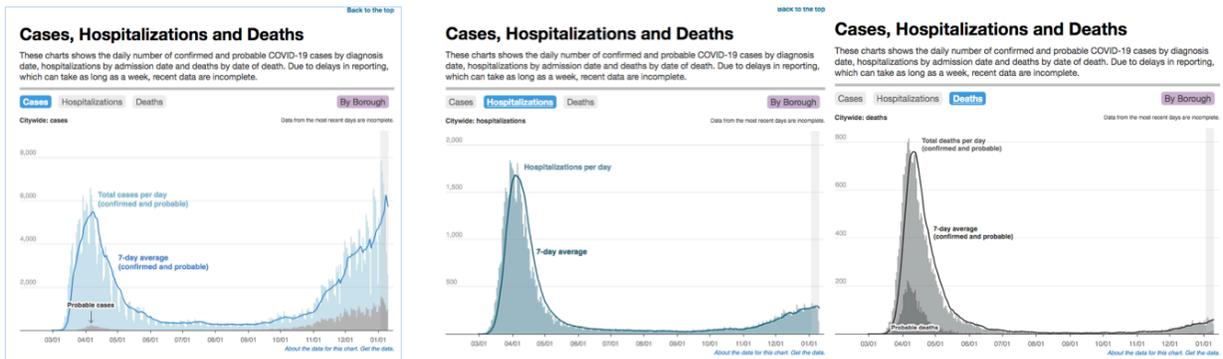
## Technical Summary

1. Coronaviruses are some of the most ancient known to mankind, and only some infect humans. There are four types that cause 25-30% of all colds, plus now SARS-CoV-1, MERS, and SARS-CoV-2 (COVID-19). The three SARS types are very likely manmade. Those who had become infected with SARS-CoV-1 and MERS have demonstrated long-term immunity.

2. A large percentage of persons infected with SARS-CoV-2 have no symptoms during their disease. These are the true 'asymptomatics'; and since they have very low levels of virus in their bodies, they are not likely to be contagious.
  - a. Persons who do go on to symptomatic disease but have not yet developed signs of illness ARE contagious (in fact, these are among some of the most, because they carry a great deal of virus at this stage).
  - b. These two groups have not been well separated during reporting, yet they have a very different risk of viral contagion.
  - c. The individuals with true asymptomatic disease strongly suggest that there is cross-immunity to SARS-CoV-2 within the population at large, most likely from previous infections with one of the four types that cause many of the common colds. The same is probably true for the low rate of symptomatic infection among children.
  - d. Mild cases also suggest partial cross-immunity from previous Coronavirus infections.
3. Only about 3% of the general population is at risk for a life-threatening infection from SARS-CoV-2. This is true of most infections, especially viruses like Influenza. The overall death rate, if we could properly identify all of those who have had asymptomatic and/or mild disease, would most likely be like Influenza, or 0.1% of those infected (one person among 1,000 infected). Like with Influenza, those over 65 and those with co-morbidities are the most likely to develop life-threatening disease.
  - a. 80-82% of all of those who have been diagnosed with COVID-19 and have died were over age 65—internationally and not just in the USA.
  - b. Despite the increased risk of death, those over 65 still have at least a 95% chance of survival if infected. Even the most elderly, the most at risk, still have a 91% chance of survival (according to a study of 45 nations, including USA; data on the Infection Fatality Rate [IFR] for those  $\geq 80$  is not yet available from the CDC).
  - c. The co-morbidities that increase the risk of death from COVID-19 are the same as those for Influenza.
  - d. Unlike Influenza, however, small children are not at risk for death, most likely due to a cross-immune effect from the other Coronaviruses that cause the common cold.
4. SARS-CoV-2 behaves much like Seasonal Influenza within the general population. But a head-to-head comparison with the latter is not possible since many states are not obliged to report adult influenza cases; thus annual rates and outcomes are merely estimations made by CDC using algorithms. These estimates suggest a yearly influenza attack rate of 10% of the population; but SARS-CoV-2, as a new virus, probably has an attack rate that is several times more—which would explain the higher number of deaths, especially since many at risk for life-threatening disease have not been properly protected during much of this time.
5. SARS-CoV-2 did not spread uniformly throughout the USA when it first arrived, thus the data has shown multiple peaks. These most likely represent spread to new communities.

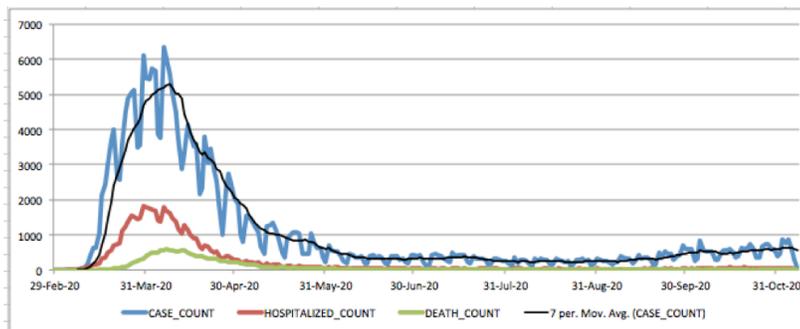


Now compare the charts above with New York City below, which had reached herd immunity during the same time period. There is only one main peak:



6. Note that the data in the charts seem to suggest that Cases (chart on the left), Hospitalizations and Deaths (charts in middle and right, respectively) are of the same magnitude; but their ranges are actually very different. The graph below shows these three categories when placed within the same range:

COVID-19 Cases Hospitalizations + Deaths NYC 2020



7. Also note that there is a large difference in the New York City data concerning cases vs. hospitalizations and deaths starting in the late Fall 2020. Why?
  - a. The main test used to detect and diagnose COVID-19 is the PCR. The PCR was not designed for this use, yet it has become the conventional test employed.
  - b. The standard PCR protocol is entirely too sensitive to separate true infections from mere viral particle remnants, the latter of which may be quite common (but not infectious) once a virus has passed through a population.
  - c. A head-to-head comparison of the older antigen test (ELISA) against the PCR showed that the antigen test has a much higher ability to detect true infection via viral culture (the gold standard) than the PCR. This, coupled with low infection rates (prevalence) in many areas of the country, may have led to large numbers of false positive results with the PCR, which is the most likely cause of the disconnect seen between positive PCR test results and true infection evidenced in the hospitalizations and among the deaths.

- d. In other viral infections, like HIV for example, the laboratories are required to use two different types of tests to confirm a positive diagnosis. This is not happening in COVID-19 cases, and perhaps it should—particularly on an investigational basis to help separate the rate of true infections from false positive results.
8. The absolute impact of SARS-CoV-2 on the American population is not yet clear. It takes about one year for CDC to clean, analyze, and present mortality data; thus, the real picture of COVID-19 and its influence on US deaths during 2020 may not be available until the end of 2021.
    - a. Nevertheless, the initial readings do not suggest the huge levels of increased deaths that have been predicted.
    - b. A true epidemic would have increased the overall mortality rate for the USA by much more than COVID-19 seems to have done—and the following will also need to be taken into account during the final analysis:
      - i. the large increase in the size of the population over 65 (26% since 2010, very large!), which is the main population at risk for life-threatening disease. Thus, the population at risk has greatly expanded over the last 10 years.
      - ii. the mild seasonal influenza in 2018-2019, which decreased the ‘expected’ number of deaths for 2020 (measured as an average of deaths over the previous three years).
      - iii. the very probably inflated number of deaths assigned to COVID-19, which include both the persons INFECTED and AFFECTED by the virus. Affected cases mean those who were found to be COVID-19 positive but who did not actually die as a result of the disease. Only those who died of a full-blown infection from SARS-CoV-2 count as true deaths from COVID-19.
  9. I do not recommend vaccination, because:
    - a. At best, it will confer a very temporary immunity, and that will not aide in either long-term protection of the individual or the production of true herd immunity.
    - b. Without herd immunity, the virus will continue to cycle through a population once the immunity from the vaccine wanes; thus, there will be no real gain either for those who had been immunized and/or for those who are the most at risk.
    - c. However, natural immunity, which has been proven to be long-term in SARS-CoV-1 and MERS, will most likely lead to both permanent protection and long-term herd immunity.
    - d. The long-term side effects to this completely new type of vaccine, which basically hijacks the vaccinated person’s cellular genetic apparatus in the protoplasm (and one version, in the nucleus) in vaccine-attached cells to produce foreign protein that the body is to react against to create antibodies, are unknown. No vaccine of this kind has ever been used before in the general population.

### **What can YOU do?**

Many of you have been personally affected by the deaths of loved ones and friends—and it is the welfare of each person that is my main reason for sending this information.

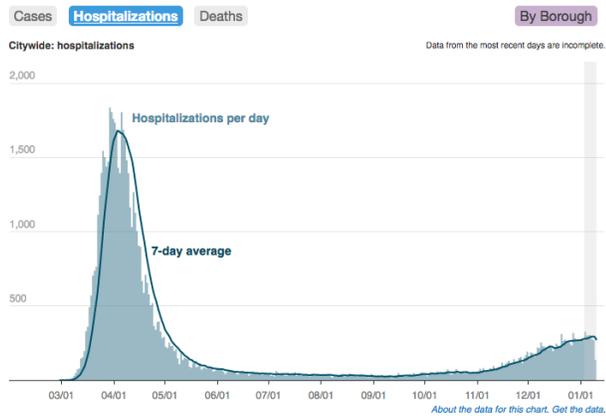
I am sure that most of you are wondering what you can do personally to best protect family and other loved ones who are still at risk for life-threatening disease from COVID-19. Here are my thoughts:

1. Consider this as if dealing with Seasonal Influenza instead of the trigger word COVID; and make your decisions based on what you would or would not do if a strong influenza virus were circulating.
2. Follow the epidemiology curve of your state. Once you see that the curve resembles New York’s (below), then you can be reasonably confident that herd immunity has been established. Herd

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## Cases, Hospitalizations and Deaths

These charts show the daily number of confirmed and probable COVID-19 cases by diagnosis date, hospitalizations by admission date and deaths by date of death. Due to delays in reporting, which can take as long as a week, recent data are incomplete.



Immunity does not necessarily mean the eradication of the virus, however; but it will dramatically decrease its risk among the most vulnerable.

Here are a couple websites where you can follow the curves of your state: <https://www.usatoday.com/in-depth/graphics/2020/03/10/us-coronavirus-map-tracking-united-states-outbreak/4945223002/>

OR

<https://covidtracking.com/data/charts/all-metrics-per-state>

I suggest that you follow either Hospitalizations or Deaths and not Cases. As discussed above, these more closely reflect the real level of disease.

I have done considerable research to develop this summary, and I would be most happy to dialog with you and/or provide the references behind these comments. In the meantime, you may be interested in watching a very well done interview discussing the present vs. a more traditional public health approach and their ramifications, <https://www.youtube.com/watch?v=1Ybp7q-PEOw>

You may share this summary, but please do so by calling me “PH Specialist, MD, MPH”. Thanks!

20 January 2021