LOCKDOWN LUNACY

THE THINKING PERSON'S GUIDE TO AN IMAGINARY WAR

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For anyone willing to look, there are so many facts that tell the true story, and it goes something like this:

Knowing what we know today about COVID-19's Infection Fatality Rate, asymmetric impact by age and medical condition, non-transmissibility by asymptomatic people and in outdoor settings, near-zero fatality rate for children, and the basic understanding of viruses through Farr's law, locking down society was a bone-headed policy decision so devastating to society that historians may judge it as the all-time worst decision ever made. Worse, as these clear facts have become available, many policy-makers haven't shifted their positions, despite the fact that every hour under any stage of lockdown has a domino-effect of devastation to society. Meanwhile, the media —with a few notable exceptions— is oddly silent on all the good news. Luckily, an unexpected group of heroes across the political landscape —many of them doctors and scientists— have emerged to tell the truth, despite facing extreme criticism and censorship from an angry mob desperate to continue fighting an imaginary war.

My goal is to engage in known facts. You, the reader, can decide if all of these facts, when you put them together, equate to the story above.

Fact #1: The Infection Fatality Rate for COVID-19 is somewhere between 0.07-0.20%, in line with seasonal flu

The Infection fatality Rate math of ANY new virus ALWAYS declines over time as more data becomes available, as any virologist could tell you. In the early days of COVID-19 where we only had data from China, there was a fear that the IFR could be as high as 3.4%, which would indeed be cataclysmic. On April 17th, the first study was published from Stanford researchers that should have ended all lockdowns immediately, as the scientists reported that their research "implies that the infection is much more widespread than indicated by the number of confirmed cases" and pegged the IFR between 0.12-0.2%. The researchers also speculated that the final IFR, as more data emerged, would likely "be lower." For context, seasonal flu has an IFR of 0.1%. Smallpox? 30%.

As the first study to peg the IFR, the Stanford study came under withering criticism, prompting the lead researcher, Dr. John Ioannidis to note,

> There's some sort of mob mentality here operating in which they just insist that this has to be the end of the world, and it has to be that the sky is falling. It's attacking studies with data based on speculation and science fiction. But dismissing real data in favor of mathematical speculation is mind-boggling.

The CDC's New 'Best Estimate' Implies a COVID-19 Infection Fatality Rate Below 0.3%

That rate is much lower than the numbers used in the horrifying projections that shaped the government response to the epidemic.

JACOB SULLUM | 5.24.2020 5:35 PM
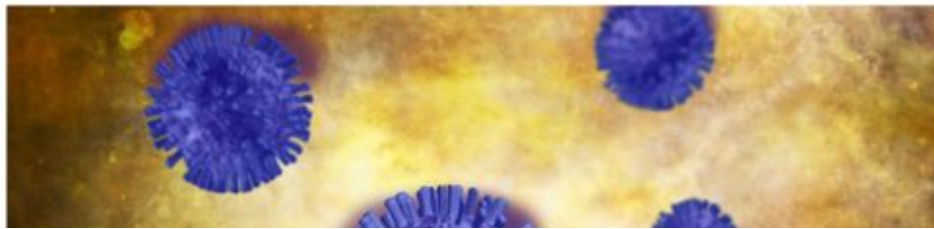
Like all good science, the Stanford data on IFR has now been replicated so many times that our own Centers for Disease Control came out this week to announce that their 'best estimate' showed an IFR **below 0.3%**. In this article on the CDC's new data, they also highlighted how the cascading declines in IFR has removed all the fears of doomsday:

> That "best estimate" scenario also assumes that 35 percent of infections are asymptomatic, meaning the total number of infections is more than 50 percent larger than the number of symptomatic cases. It therefore implies that the IFR is between 0.2 percent and 0.3 percent. By contrast, the projections that the CDC made in March, which predicted that as many as 1.7 million Americans could die from COVID-19 without intervention, assumed an IFR of 0.8 percent. Around the same time, researchers at Imperial College produced a worst-case scenario in which 2.2 million Americans died, based on an IFR of 0.9 percent.

If you're still unconvinced that the IFR of COVID-19 is roughly in line with a bad flu season, the most comprehensive analysis I have seen comes from Oxford University, who recently stated:

> "Taking account of historical experience, trends in the data, increased number of infections in the population at largest, and potential impact of misclassification of deaths, gives a presumed estimate for the COVID-19 IFR somewhere between 0.1% and 0.41%."

Finally, just last week, Stanford's Dr. Ioannidis published a meta-analysis (because *so* many IFR studies have been done around the world in April and early May) where he analyzed TWELVE separate IFR studies and his conclusion is so good, I'll just leave you with it:

*The infection fatality rate (IFR), the probability of dying for a person who is infected, is one of the most critical and most contested features of the coronavirus disease 2019 (COVID-19) pandemic. The expected total mortality burden of COVID-19 is directly related to the IFR. Moreover, justification for various non-pharmacological public health interventions depends crucially on the IFR. Some aggressive interventions that potentially induce also more pronounced collateral harms1 may be considered appropriate, if IFR is high. Conversely, the same measures may fall short of acceptable risk-benefit thresholds, if the IFR is low… Interestingly, despite their differences in design, execution, and analysis, most studies provide IFR point estimates that are within a relatively narrow range. Seven of the 12 inferred IFRs are in the range **0.07 to 0.20** (corrected IFR of 0.06 to 0.16) which are similar to IFR values of seasonal influenza. Three values are modestly higher (corrected IFR of 0.25-0.40 in Gangelt, Geneva, and Wuhan) and two are modestly lower than this range (corrected IFR of 0.02-0.03 in Kobe and Oise).*
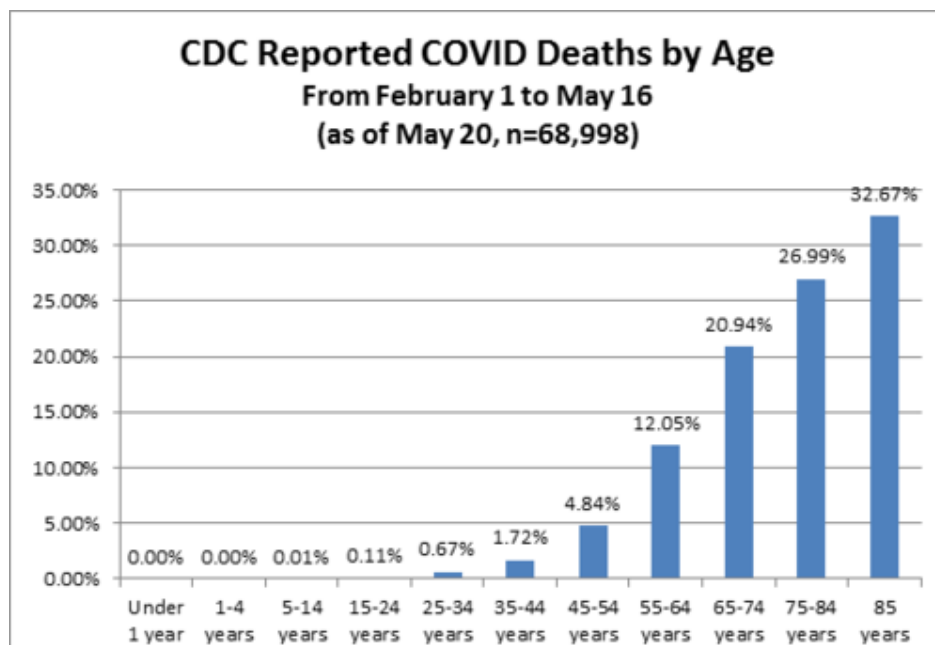
Opinion #1: Dr. Scott Atlas

Soon after the Stanford study released its data (he wasn't a study author), Stanford's Dr. Scott Atlas published an opinion piece in *The Hill* newspaper with the title, "[The data is in— stop the panic and end the total isolation](#)."
He wrote:

The recent [Stanford](#) University antibody study now estimates that the fatality rate if infected is likely 0.1 to 0.2 percent, a risk far lower than previous World Health Organization [estimates](#) that were 20 to 30 times higher and that motivated isolation policies… Let's stop underemphasizing empirical evidence while instead doubling down on hypothetical models. Facts matter.

Facts do matter, but no one listened. Dr. Atlas' article also helps frame Fact #2.

Fact #2: The risk of dying from COVID-19 is much higher than the average IFR for older people and those with co-morbidities, and much lower than the average IFR for younger healthy people, and nearing zero for children

CDC Reported COVID Deaths by Age
From February 1 to May 16
(as of May 20, n=68,998)

Age group	Percentage
Under 1 year	0.00%
1-4 years	0.00%
5-14 years	0.01%
15-24 years	0.11%
25-34 years	0.67%
35-44 years	1.72%
45-54 years	4.84%
55-64 years	12.05%
65-74 years	20.94%
75-84 years	26.99%
85 years	32.67%

In January 2020, Los Angeles had an influenza outbreak that was killing children, the *[LA Times](#)* noted that "an unlikely strain of influenza has sickened and killed an unusually high number of young people in California this flu season." COVID-19 is the opposite of that. Stanford's Dr. Ioannidis said, "Compared to almost any other cause of disease that I can think of, it's really sparing young people."

Italy reported three days ago that 96% of Italians who died from COVID-19 had "other illnesses" and were, on average, 80 years old. From Bloomberg:

"The latest numbers show that new cases and fatalities have a common profile: mostly elderly people with previous illnesses," ISS chief Silvio Brusaferro said at a news conference Friday.

The best age stratification data I have seen comes from [Worldometers. info](). Here's their chart estimating death rate by age group. Please note that death rate is MUCH higher than IFR because death rate uses confirmed COVID-19 cases as the denominator, but it still shows how different the fatality rates are by age:

COVID-19 Fatality Rate by AGE:

*Death Rate = (number of deaths / number of cases) = **probability of dying if infected by the virus** (%). This probability differs depending on the age group. The percentages shown below **do not have to add up to 100%**, as they **do NOT represent share of deaths by age** group. Rather, it represents, for a person in a given age group, the **risk of dying** if infected with COVID-19.

AGE	DEATH RATE confirmed cases	DEATH RATE all cases
80+ years old	21.9%	14.8%
70-79 years old		8.0%
60-69 years old		3.6%
50-59 years old		1.3%
40-49 years old		0.4%
30-39 years old		0.2%
20-29 years old		0.2%
10-19 years old		0.2%
0-9 years old		no fatalities

While this data is "crude", it's safe to extrapolate that an 80+ year-old person has a serious risk of dying from COVID-19 while a child faces almost no risk. This fact should drive policy, as Dr. Atlas explains:

Of all fatal cases in New York [state](), two-thirds were in patients over 70 years of age; more than 95 percent were over 50 years of age; and about 90 percent of all fatal cases had an underlying illness. Of 6,570 confirmed COVID-19 deaths fully investigated for underlying conditions to date, 6,520, or [99.2 percent](), had an underlying illness. If you do not already have an underlying chronic condition, your chances of dying are small, regardless of age. And young adults and children in normal health have almost no risk of any serious illness from COVID-19.

Consider this excellent article from the British Medical Journal, titled "[Shielding from covid-19 should be stratified by risk]()" written by Cambridge University professors:

Protecting those at most risk of dying from covid-19 while relaxing the strictures on others provides a way forward in the SARS-CoV-2 epidemic, given the virus is unlikely to disappear in the foreseeable future. Such targeted approaches would, however, require a shift away from the notion that we are all seriously threatened by the disease, which has led to levels of personal fear being strikingly mismatched to objective risk of death. Instead, the aim should be to communicate realistic levels of risk as they apply to different groups, not to reassure or frighten but to allow informed personal decisions in a setting of necessary uncertainty.

As one simple example: closing schools makes almost no sense given what we know about COVID-19, while protecting teachers over the age of 60 —to pick a somewhat defensible age boundary— may well make sense. This is why so many countries who seem to respect data more than we do here in the U.S. have already re-opened their schools. In fact, Denmark's schools have been open since mid-April!! And, for those keeping score,

Reuters just reported yesterday that, ["Reopening schools in Denmark did not worsen outbreak, data shows."](#) Here's a quote:

> *"You cannot see any negative effects from the reopening of schools," Peter Andersen, doctor of infectious disease epidemiology and prevention at the Danish Serum Institute told Reuters on Thursday. In Finland, a top official announced similar findings on Wednesday, saying that nothing so far suggested the coronavirus had spread faster since schools reopened in mid-May.*

Another great article on schools, titled ["It is fear –not science– that is stopping our children being educated"](#) in *The Telegraph* newspaper last week, here's a quote:

> *There is little about [coronavirus](#) we can be absolutely sure of – this is a brand new disease and our knowledge grows by the day— but most of the available evidence so far strongly suggests that children are neither suffering from coronavirus nor spreading it. Studies in South Korea, Iceland, Italy, Japan, France, China, the Netherlands and Australia all concur that youngsters are "not implicated significantly in transmitting Covid," not even to parents and siblings.*

[Adult paranoia](#), stoked by over-the-top government messaging, union intransigence and media conniptions, is now being inflicted on the youngest members of our society to whom the virus poses a threat so tiny scientists call it "statistically irrelevant". Instead of nursery rhymes, mixed infants may soon be invited to sing something called the "two-metre-song" as they stick their arms out to keep their friends at bay.

Brand new science (May 28) released from Northern Ireland clearly shows that schoolchildren do NOT serve as vectors for COVID-19. Titled [No evidence of secondary transmission of COVID-19 from children attending school in Ireland, 2020](#), the study could not be more clear:

> *These findings suggest that schools are not a high risk setting for transmission of COVID-19 between pupils or between staff and pupils. Given the burden of closure outlined by Bayhem [4] and Van Lanker [5], reopening of schools should be considered as an early, rather than a late, measure in the lifting of restriction.*

Finally, Dr. Scott Atlas took on the topic of schools in this recent interview:

> *"There's no science whatsoever to keep K-through-12 schools closed, nor to have masks or social distancing on children, nor to keep summer programs closed. What we know now is that the risk of death and the risk of even a serious illness is nearly zero in people under 18."*

Quick update: After I wrote this, the *Wall Street Journal* published this article titled [Is It Safe to Reopen Schools? These Countries Say Yes.](#) To me, this reads as a bit of a litmus test for countries that have independent and data-driven public health officials, and I give the U.S. an 'F" for our current approach:

> *But Denmark, Austria, Norway, Finland, Singapore, Australia, New Zealand and most other countries that [have reopened classrooms](#) haven't had outbreaks in schools or day-care centers… In Denmark, the opening of schools had no impact on the progress of the epidemic, said Tyra Grove Krause, a senior official with the State Serum Institute, the country's disease control agency… Since Austria reopened on May 18, no increase in infections has been observed in schools and kindergartens, a spokesman for the government said… In Norway, the government won't close schools again even if the number of cases starts rising in the country because there have been no negative consequences from reopening schools on April 20, said Education Minister Guri Melby.*

How many more countries need to re-open before the U.S. follows? Seriously, it's a little embarrassing to be American… IMO we look like total chumps.

Update #2: Dr. Scott Atlas doubled-down on June 1st with this great Op-Ed, once again in The Hill, titled [Science says: 'Open the schools'.](#) As usual, he's amazingly eloquent, here's an excerpt but well worth the time to read every word, he simply slays it:

All of this borders on the absurd, when we now know that social distancing and face coverings for children are completely unnecessary.

Never have schools subjected children to such an unhealthy, uncomfortable and anti-educational environment, so science cannot precisely define the total harm it will cause. But science does tell us that risks from COVID-19 are too minimal to sacrifice the educational, social, emotional and physical well-being – to say nothing of the very health – of our young people.

(Special note: there's a new boogeyman, Kawasaki disease, that some are trying to link to COVID-19. Here's a great article about that, or see the website of the UK's Kawasaki Disease Foundation where they discuss the "mishandling of information" about Kawasaki disease. Dr. Atlas' most recent post discusses this, too: "What about the new threat similar to Kawasaki disease, recently sensationalized as a COVID-19 association? In fact, the association is extremely low, and the incidence of the disorder is itself rare, affecting only 3,000 to 5,000 children in the United States each year. Importantly, the syndrome is typically treatable and never has been regarded previously as a risk so serious that schools must be shuttered.")

Fact #3: People infected with COVID-19 who are asymptomatic (which is most people) do NOT spread COVID-19

On January 13, 2020, a 22-year old female with a history of congenital heart disease went to the emergency room of Guangdong Provincial People's Hospital complaining of a variety of symptoms common to people with her condition, including pulmonary hypertension and shortness of breath due to atrial septal defect (hole in the heart). Little did she know her case would set off a cascade of events resulting in a recently published paper that should have ended all lockdowns around the world simultaneously. Three days into her hospital stay, her condition was improving. Routine tests were run, and to the clinicians alarm and surprise, she tested positive for COVID-19. As the physicians noted, "the patient never had fever, sore throat, myalgia or other symptoms associated with virus infection." Said differently, she was completely asymptomatic for COVID-19.

It's not that easy to find people who are infected with COVID-19 but asymptomatic, because they don't seek medical attention. Here in Oregon where I live, you can't even get a COVID-19 test unless you have symptoms. So, the stars aligned to put this woman in a hospital with researchers studying COVID-19, and she became the subject of an extensive contact study published on May 13 in Respiratory Medicine, titled "A study on infectivity of asymptomatic SARS-CoV-2 carriers."

The researchers wanted to find out whether this woman, with a COVID-19 infection but no symptoms, had infected anyone else, so they chose to look at every single contact they could identify within the previous 5 days prior to her positive test. So, how many people did they have to screen? 455. Not a small number, as the researchers explain:

455 contacts who were exposed to the asymptomatic COVID-19 virus carrier became the subjects of our research. They were divided into three groups: 35 patients, 196 family members and 224 hospital staffs. We extracted their epidemiological information, clinical records, auxiliary examination results and therapeutic schedules.

As you can see, being hospitalized led to the majority of the contacts this woman had, both with other patients and with many members of the hospital staff. Notably, all of these contacts took place indoors and one might argue many of the contacts —at least with hospital staff— would have involved relatively intimate contact. Amongst the patients, the average age was 62, arguably making them higher risk, and many of those patients were immunocompromised for a variety of reasons, including chemotherapy and cardiovascular disease. So how many of the 455 people were infected by the asymptomatic 22-year old woman?

"In summary, all the 455 contacts were excluded from SARS-CoV-2 infection. . ."

Said differently, **exactly zero people** were infected. The scientists, in typically understated fashion, offer up a

comment about the question I hope you are asking yourself right now (namely, why are we all on lockdown if asymptomatic people with COVID-19 can't spread the infection?), stating, "the result of this study may alleviate parts of the public concern about asymptomatic infected people."

If this study had been published in early March, the odds that the world would have locked down are very, very low. Yet, this study, published only two weeks ago, is nowhere to be found in the media, and is never mentioned by policy makers. It just sits there, sharing the truth for anyone willing to listen.

Quick Update on Fact #3: Of all the facts presented, this one has received the most pushback from skeptics who argue it's based on a single published study. Of course, science is something that accumulates with time, so the criticism is legitimate, which is why this announcement from the World Health Organization today —June 8th— is so devastating to anyone who still contends asymptomatic people can spread COVID-19:

The fallen state of experts

How can governments learn from their expert failings?

Unlike myself, the World Health Organization is privy to emerging data from all over the world of studies being done, which is why this quote from Maria Van Kerkhove, the WHO's technical lead for Coronavirus response, is such a big deal:

> *"From the data we have, it still seems to be rare that an asymptomatic person actually transmits onward to a secondary individual," Van Kerkhove said on Monday. "We have a number of reports from countries who are doing very detailed contact tracing. They're following asymptomatic cases, they're following contacts and they're not finding secondary transmission onward. It is very rare— and much of that is not published in the literature," she said. "We are constantly looking at this data and we're trying to get more information from countries to truly answer this question. It still appears to be rare that an asymptomatic individual actually transmits onward."*

Meanwhile, so many of the silly rules developed all other the place presume asymtptomatic people CAN spread COVID-19. In fact, I also read today that California's superintendent has issued guidance for opening schools in the Fall, which will likely include all students wearing masks… it's simply unbelievable how far public officials seem to be deviating from what the FACTS are telling us! Knowing that COVID-19 is not spread by asymptomatic people makes 99% of COVID-19 rules established completely useless and also makes public health guidance extremely simple: if you're sick, please stay home. Everyone else? Carry on. When will the facts on the ground and the absurd imposition of random rules somehow confront each other? Hopefully soon, and I'm rooting for the facts.

Fact #4: Emerging science shows no spread of COVID-19 in the community (shopping, restaurants, barbers, etc.)
We just learned that asymptomatic people infected with COVID-19 are very unlikely to be able to spread the infection to others. Emerging and published science shows transmission of COVID-19 in retail establishments is extremely unlikely. Professor Hendrik Streeck from the University of Bonn is leading a study in Germany on the hard-hit region of Heinsberg and his conclusions, from laboratory work already completed, is very clear:

"There is no significant risk of catching the disease when you go shopping. Severe outbreaks of the infection were always a result of people being closer together over a longer period of time.

"When we took samples from door handles, phones or toilets it has not been possible to cultivate the virus in the laboratory on the basis of these swabs…"

Uh oh. You mean closing parks, closing stores, wearing gloves and masks at the grocery store, fumigating our groceries, and just being generally paranoid wasn't necessary? As Dr. Streeck confirms:

"It is important to obtain this data in order to make sure that decisions are taken based on facts rather than assumptions. The data should serve as a basis of information for the government, so they can then think about their further course of action," he said.

And he continues:

"People could lose their jobs. They might not be able to pay their rent anymore and staying inside for a longer time can lead to weakening of our immune system."

"The goal is not a complete containment of the virus. We need to know where the actual capacity limits of our hospitals are. How many infections are too many? What do intensive care medics say?"

And, finally:

"It is important to start thinking about a 'rollback' strategy, and his hope is to "deliver the relevant facts so that people have a good foundation for their decisions."

Fact #5: Published science shows COVID-19 is NOT spread outdoors
No. Just no. — In a study titled Indoor transmission of SARS-CoV-2 and published on April 2, 2020, scientists studied outbreaks of 3 or more people in 320 separate towns in China over a five-week period beginning in January 2020 trying to determine WHERE outbreaks started: in the home, workplace, outside, etc. ? What'd they discover? Almost 80% of outbreaks happened in the home environment. The rest happened in crowded buses and trains. But what about outdoors? The scientists wrote:

"All identified outbreaks of three or more cases occurred in an indoor environment, which confirms that sharing indoor space is a major SARS-CoV-2 infection risk."

Said differently, there's really no science to support all the outdoor bans that my home state of Oregon and so many other states have put in place. I'll leave you with my favorite quote from the study because it's really quite infuriating to read when you consider some of the ways Governors here in the U. S have behaved (and some still do) by banning all sorts of outdoor activities, arresting paddle boarders on the water, etc.:

"The transmission of respiratory infections such as SARS-CoV-2 from the infected to the susceptible is an indoor phenomenon."

Quick Update: Apparently the health minister of British Columbia, Canada, got the memo about the lack of airborne risk, this article appeared on June 1:

VANCOUVER | News

'Absolutely no evidence' that COVID-19 is airborne, B.C. health official says

Alyse Kotyk Reporter, CTVNewsVancouver.ca
🐦 @AlyseKotyk | Contact

Published Monday, June 1, 2020 2:26PM PDT

The article says:

> One of B. C. 's top health officials, however, says medical professionals have a pretty clear picture of how the virus is transmitted. "There is absolutely no evidence that this disease is airborne, and we know that if it were airborne, then the measures that we took to control COVID-19 would not have worked," Dr. Reka Gustafson, BC's deputy provincial health officer, told CTV Morning Live Monday. "We are very confident that the majority of transmission of this virus is through the droplet and contact route… "The overwhelming majority of (COVID-19) transmissions occur through close, prolonged contact and that is not the pattern of transmission we see through airborne diseases."

I sure hope Major League Baseball, the National Football League, and the NCAA are all paying attention… not to mention all the people in Portland here still riding bikes and running with masks on.

Fact #6: Science shows masks are ineffective to halt the spread of COVID-19, and the WHO recommends they should only be worn by healthy people if treating or living with someone with a COVID-19 infection
[Just today](), the World Health Organization announced that masks should only be worn by healthy people if they are taking care of someone infected with COVID-19:

> "If you do not have any respiratory symptoms such as fever, cough or runny nose, you do not need to wear a mask," Dr. April Baller, a public health specialist for the WHO, says in a video on the world health body's website posted in March. "Masks should only be used by health care workers, caretakers or by people who are sick with symptoms of fever and cough."

Just before the COVID-19 madness, researchers in Hong Kong submitted a study for publication with the mouthful of a title, "[Nonpharmaceutical Measures for Pandemic Influenza in Nonhealthcare Settings— Personal Protective and Environmental Measures]()." Oddly, the study, just published this month, is actually housed on the CDC's own website, and directly contradicts [recent advice from the CDC]() about wearing a mask. Namely, the study states:

> "In our systematic review, we identified 10 RCTs that reported estimates of the effectiveness of face masks in reducing laboratory-confirmed influenza virus infections in the community from literature published during 1946–July 27, 2018…. In pooled analysis, we found no significant reduction in influenza transmission with the use of face masks…. Our systematic review found no significant effect of face masks on transmission of laboratory-confirmed influenza…. Proper use of face masks is essential because improper use might increase the risk for transmission."

English translation: there is no evidence that wearing masks reduces the transmission of respiratory illnesses and, if masks are worn improperly (like when people re-use cloth masks), transmission could actually INCREASE. Moreover, this study was a meta-analysis, which means it dug deep into the archive of science (all the way back to 1946!) to reach its conclusions. Said differently, **this is as comprehensive as science gets, and their conclusions were crystal clear: masks for the general population show no evidence of working to either slow the spread of respiratory viruses or protect people.**

This study is far from the only one to reach this conclusion (which makes the choice of a grocery store chain like my beloved New Seasons to make masks mandatory for all customers really quite unbelievable). The purpose of science is to arbitrate these thorny issues and while the science is clear, the hysteria continues. It turns out, the effectiveness of masks has a long history of debate in the medical community, which explains why so much science has been done on the topic. I will just highlight a few studies before you fall asleep:

My favorite article is actually a review of much of the science and it's a great place to start for anyone who likes to do their own research. Titled "[Why Face Masks Don't Work: A Revealing Review]()," it was written to challenge the need for dentists to wear face masks, but all the science quoted and conclusions drawn apply to airborne pathogens in any setting. Some of the best quotes:

> "The science regarding the aerosol transmission of infectious diseases has, for years, been based on what is now appreciated to be 'very outmoded research and an overly simplistic interpretation of the data.' Modern

studies are employing sensitive instruments and interpretative techniques to better understand the size and distribution of potentially infectious aerosol particles… The primary reason for mandating the wearing of face masks is to protect dental personnel from airborne pathogens. This review has established that face masks are incapable of providing such a level of protection."

And my favorite quote:

"It should be concluded from these and similar studies that the filter material of face masks does not retain or filter out viruses or other submicron particles. When this understanding is combined with the poor fit of masks, it is readily appreciated that neither the filter performance nor the facial fit characteristics of face masks qualify them as being devices which protect against respiratory infections."

Here's an article published in *ResearchGate* by noted Canadian physicist D. G. Rancourt, written directly in response to the COVID-19 outbreak, published last month. Titled Masks Don't Work: A review of science relevant to COVID-19 social policy.

"Masks and respirators do not work. There have been extensive randomized controlled trial (RCT) studies, and meta-analysis reviews of RCT studies, which all show that masks and respirators do not work to prevent respiratory influenza-like illnesses, or respiratory illnesses believed to be transmitted by droplets and aerosol particles. Furthermore, the relevant known physics and biology, which I review, are such that masks and respirators should not work. It would be a paradox if masks and respirators worked, given what we know about viral respiratory diseases: The main transmission path is long-residence-time aerosol particles (< 2.5 μm), which are too fine to be blocked, and the minimum-infective-dose is smaller than one aerosol particle."

To put this in simple terms: in order for a mask to really be effective that covered both your nose and mouth, you would asphyxiate. The minute the mask allows you to breathe, it can no longer filter the micro-particles that make you sick.
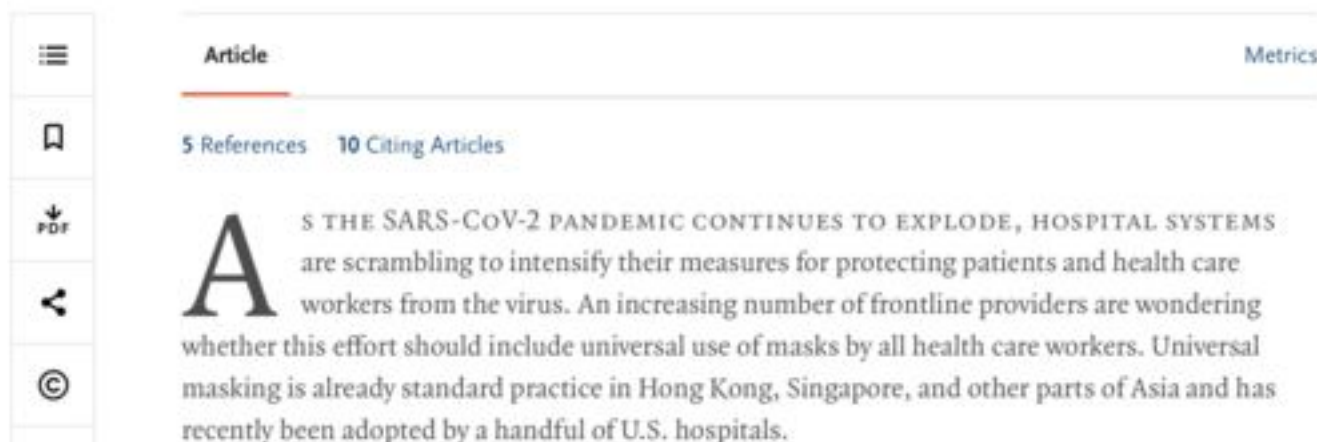
Finally, I often see this study from 2015 in the BMJ cited: "A cluster randomised trial of cloth masks compared with medical masks in healthcare workers", and it bears repeating, since MOST of the masks I see people wearing in the community right now are cloth masks. Not only are these masks 100% ineffective at reducing the spread of COVID-19, but they can actually harm you. As the researchers explain:

"This study is the first RCT of cloth masks, and the results caution against the use of cloth masks. This is an important finding to inform occupational health and safety. Moisture retention, reuse of cloth masks and poor filtration may result in increased risk of infection. Further research is needed to inform the widespread use of cloth masks globally."

Increased risk of infection? Yes, that's what it says. Other studies have also looked at the impact masks have on your oxygen levels (because you're are forced to re-breathe your own Co2) and it's not good. Scientists looked at oxygen levels of surgeons wearing masks while performing surgery and found: *"Our study revealed a decrease in the oxygen saturation of arterial pulsations (SpO2) and a slight increase in pulse rates compared to preoperative values in all surgeon groups."*

Universal Masking in Hospitals in the Covid-19 Era

Michael Klompas, M.D., M.P.H., Charles A. Morris, M.D., M.P.H., Julia Sinclair, M.B.A., Madelyn Pearson, D.N.P., R.N., and Erica S. Sh

AS THE SARS-CoV-2 PANDEMIC CONTINUES TO EXPLODE, HOSPITAL SYSTEMS are scrambling to intensify their measures for protecting patients and health care workers from the virus. An increasing number of frontline providers are wondering whether this effort should include universal use of masks by all health care workers. Universal masking is already standard practice in Hong Kong, Singapore, and other parts of Asia and has recently been adopted by a handful of U.S. hospitals.

Just this past week, this article came out in the New England Journal of Medicine, written by several doctors and public health officials with the title, "Universal Masking in Hospitals in the Covid-19 Era," and this statement seems a perfect way to end my discussion of masks:

> *We know that wearing a mask outside health care facilities offers little, if any, protection from infection. Public health authorities define a significant exposure to Covid-19 as face-to-face contact within 6 feet with a patient with symptomatic Covid-19 that is sustained for at least a few minutes (and some say more than 10 minutes or even 30 minutes). The chance of catching Covid-19 from a passing interaction in a public space is therefore minimal. In many cases, the desire for widespread masking is a reflexive reaction to anxiety over the pandemic.*

Fact #7: There's no science to support the magic of a six-foot barrier

Iceland has already made the two-meter (6 foot) rule optional, according to this article. The reason for the recommendation to keep 6-feet of distance from your fellow citizens during the pandemic dates back to 1930, explained here by the BBC. Back then scientists established that droplets of liquid released by coughs or sneezes will either evaporate quickly in the air or be dragged by gravity down to the ground. And the majority of those droplets, they reckoned, would land within one to two metres. That is why it is said the greatest risks come from having the virus coughed at you from close range or from touching a surface —and then your face— that someone coughed onto. How conclusive is that?

Are you impressed with that science? Me neither. As this wonderful article explains:

> *A few early studies suggest that contaminated droplets could stay airborne for a few hours and pose a risk. But that research comes with a caveat: "While this research indicates that viral particles can be spread via bioaerosols, the authors stated that finding infectious virus has proven elusive and experiments are ongoing to determine viral activity in collected samples," wrote Dr. Harvey Fineberg from the National Academies of Science, Engineering, and Medicine earlier this month.*

It goes further:

> *And the commonly held fear that a random passerby will infect a stranger? Here's more grade-school level talk from the CDC: "COVID-19 is thought to spread mainly through close contact from person-to-person in respiratory droplets from someone who is infected. People who are infected often have symptoms of illness. Some people without symptoms may be able to spread the virus [which science from China has proven is untrue]."*

Not only would that sort of conclusion warrant a failing grade in any post-doctoral program, I am pretty sure the average eighth-grade science teacher would take a big red pen to that passage. "Thought." "Some?" "May?" Keep in mind, there are no links to any scientific studies or papers for the average thinking person to review to decide whether those claims are legitimate.

The CDC also can't quite make up its mind about the safety of large gatherings in the COVID-era. In mid-March, the agency asked Americans to limit gatherings of 250 people or more. A few weeks later, the White House, at the behest of the CDC, urged Americans to avoid gatherings of more than 10 people. There is no science, however, to support either number. (What is so fateful about 250 people? Why not 175? And why 10? Why not 16 or 17?)

The article takes dead aim at so many Governors who are absolutely running with these completely unsupportable recommendations:

> *Even that fuzzy advice has been bastardized by the petty tyrant lurking inside every big state governor, small-town mayor, and homeowners' association president. Over the weekend, Michigan Governor Gretchen Whitmer banned people from going to a neighbor's house.* "All public and private gatherings of any size are prohibited," *Whitmer announced.* "People can still leave the house for outdoor activities . . . recreational activities are still permitted as long as they're taking place outside of six feet from anyone else."... *There will be plenty of soul-searching after this crisis abates: demanding to know the scientific rationale for keeping us six feet apart when people needed each other most should be at the top of the list.*

Recently, one of the top scientific advisors in the UK to Prime Minister Boris Johnson has made the same point, his statements covered in the Daily Mail last week in an article titled Government scientific adviser says Britain's two metre social distancing rule is unnecessary and based on 'very fragile' evidence. Professor Robert Dingwall stated:

> *"I think it will be much harder to get compliance with some of the measures that really do not have an evidence base," he said. "I mean, the two-metre rule was conjured up out of nowhere."*

When you digest all of the facts we now know about COVID-19, the simplest policy recommendation actually makes the most sense in my opinion: If you have COVID-19, stay home; or if you must go out, wear a mask. Everyone else, wash your hands, and get on with your life. It should have been that easy, but instead we chose to lockdown society, an unprecedented step. Why?

Oh, and this is a real headline. God help us all.

Stormtroopers Used to Enforce Social Distancing at Disney World

By KEVIN BURWICK — May 29, 2020 in MOVIE NEWS

"The Lockdowns Were the Black Swan"

Indeed, why did we lockdown society, and has it worked? I stole the phrase above from an [opinion piece](#) in the *Wall Street Journal* written by Editorial Board member Holman W. Jenkins, Jr. , I believe he captured it perfectly:

> *We started off sensibly.* "This is not something [American families] generally need to worry about," *said CDC's Dr. Nancy Messonnier in mid-January.* "It's a very, very low risk to the United States," *said Dr. Anthony Fauci a week later. Bill de Blasio, mayor of New York, urged residents to go about their business normally as recently as March 11. As coldblooded as it seems, these were the right statements at the time. Under "flatten the curve," changes in public behavior aren't needed until they are needed. Roll that around in your mind a bit. The better we do at equipping local hospitals, the less we need to bankrupt local businesses and their workers, to slow the virus as it runs its course through society. That was the idea we started with. Not even the U. K. Imperial College study that so alarmed the world's policy makers recommended indiscriminate lockdowns and shelter-in-place orders. If we meant what we said, we've overshot in many places. Beds are empty. A ventilator shortage did not materialize. We failed to set aside enough capacity to treat other medical conditions like strokes and heart attacks. This is costing lives.*

What happened? From Bill Gates to your local editorialist, a new priority waddled to the fore. We decided that, whatever contributes to killing Americans at a routine total rate of 8,000 or so a day, it shouldn't be the coronavirus.   Accidents, yes – 6% of deaths. Heart disease, yes – 23%. Flu and pneumonia, yes – 2%.

These deaths are allowed, but not deaths from the coronavirus, even at the cost of economic ruin for millions. Of course, the media and public are free to decide now they never wanted flatten the curve; they wanted to be spared the virus altogether. But explain how this is to be done. And explain why. *The Economist* magazine says we can't restart the economy without an "unprecedented" $180 billion testing regime. Unprecedented is an interesting word because China, a country of 1.4 billion people with eight cities larger than New York, either must have developed such a system with nobody noticing or hasn't found it necessary.

Why did we lockdown in the first place? Here are the facts.

Fact #8: The idea of locking down an entire society had never been done and has no supportable science, only theoretical modeling

In fact, the first time the idea was ever raised to lockdown everyone was in 2006, in this paper titled [Targeted Social Distancing Designs for Pandemic Influenza](#). The paper detailed "how social contact network–focused mitigation can be designed" and modeled various outcomes (more on that in a moment!) based on how people behaved. At the time, cooler heads prevailed and criticized the ideas in the paper, notably this critique from Dr. D. A. Henderson, the man who led the public effort to eradicate smallpox. According to the New York Times:

> *Dr. Henderson was convinced that it made no sense to force schools to close or public gatherings to stop. Teenagers would escape their homes to hang out at the mall. School lunch programs would close, and impoverished children would not have enough to eat. Hospital staffs would have a hard time going to work if their children were at home.*

> *The measures embraced by Drs. Mecher and Hatchett would "result in significant disruption of the social functioning of communities, and result in possibly serious economic problems," Dr. Henderson wrote in his own academic paper responding to their ideas.*

> *The answer, he insisted, was to tough it out: Let the pandemic spread, treat people who get sick and work quickly to develop a vaccine to prevent it from coming back.*

Soon after, Dr. Henderson and several other prescient colleagues penned an important paper encapsulating many of these ideas, [Disease Mitigation Measures in the Control of Pandemic Influenza](#), including this astonishing (given what just happened) conclusion:

There are no historical observations or scientific studies that support the confinement by quarantine of groups of possibly infected people for extended periods in order to slow the spread of influenza. A World Health Organization (WHO) Writing Group, after reviewing the literature and considering contemporary international experience, concluded that "forced isolation and quarantine are ineffective and impractical."[2] Despite this recommendation by experts, mandatory large-scale quarantine continues to be considered as an option by some authorities and government officials.[35,43]

The interest in quarantine reflects the views and conditions prevalent more than 50 years ago, when much less was known about the epidemiology of infectious diseases and when there was far less international and domestic travel in a less densely populated world. It is difficult to identify circumstances in the past half-century when large-scale quarantine has been effectively used in the control of any disease.

And they ended with a sentence so important I'm going to use really big font:

The negative consequences of large-scale quarantine are so extreme (forced confinement of sick people with the well; complete restriction of movement of large populations; difficulty in getting critical supplies, medicines, and food to people inside the quarantine zone), that this mitigation measure should be eliminated from serious consideration.

If you'd like to read more about the origins of the lockdown idea and how it continued to circulate in public health circles, check out, "The 2006 Origins of the Lockdown Idea." If you'd like to read more about Dr. D. A. Henderson, check out, "How a Free Society Deals with Pandemics, According to Legendary Epidemiologist and Smallpox Eradicator Donald Henderson." Both articles are awesome and will make you sick to your stomach when you realize how many good scientists knew that a lockdown would be a disaster, and cost more lives than it could ever save.

You're likely equally shocked to see that as late as 2019, the World Health Organization DIDN'T EVEN LIST the idea of a total lockdown in their report titled "Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza." Here's their table of 18 possible non-pharmaceutical measures for countries to take in a pandemic. Note all the things listed under the "Not recommended in any circumstances" row that are now happening every day!

Table 1. Recommendations on the use of NPIs by severity level

SEVERITY	PANDEMIC*	EPIDEMIC
Any	Hand hygiene Respiratory etiquette Face masks for symptomatic individuals Surface and object cleaning Increased ventilation Isolation of sick individuals Travel advice	Hand hygiene Respiratory etiquette Face masks for symptomatic individuals Surface and object cleaning Increased ventilation Isolation of sick individuals Travel advice
Moderate	*As above, plus* Avoiding crowding	*As above, plus* Avoiding crowding
High	*As above, plus* Face masks for public School measures and closures	*As above, plus* Face masks for public School measures and closures
Extraordinary	*As above, plus* Workplace measures and closures Internal travel restrictions	*As above, plus* Workplace measures and closures
Not recommended in any circumstances	UV light Modifying humidity Contact tracing Quarantine of exposed individuals Entry and exit screening Border closure	UV light Modifying humidity Contact tracing Quarantine of exposed individuals Entry and exit screening Internal travel restrictions Border closure

NPI: non-pharmaceutical intervention; UV: ultraviolet.

Obvious question: If there was no science to support a lockdown and we'd never actually done one before and many in public health said it would be a terrible idea, why did it happen? There are really two answers as best I can tell. The first answer is that the World Health Organization, early on in the pandemic, chose to praise the Chinese response of locking down Hubei Province, which effectively served to legitimize the practice, despite the extreme limitations of data available to anyone about the Chinese lockdown's actual effectiveness. This article discusses the issue, and raises the question:

> *What changed the WHO's mind and prompted it to praise the response of the Chinese authorities in Hubei province, which included the virtual incarceration of 60 million people? It was this, more than anything else, that persuaded governments across the world to lockdown their citizens.*

The second answer is that newly-created disease models scared the living daylights out of world leaders, and the modelers stood ready to offer a simple solution to their made-up numbers: lock everything down, NOW!

Fact #9: The epidemic models of COVID-19 have been disastrously wrong, and both the people and the practice of modeling has a terrible history
While many disease models have been used during the COVID-19 pandemic, two have been particularly influential in the public policy of lockdowns: Imperial College (UK) and the IHME (Washington, USA). They've both proven to be unmitigated disasters.
Imperial College: It's safe to say that the reason the United States locked down, and the reason the White House extended their lockdowns was almost exclusively due to the models created by Imperial College Professor Neil Ferguson. As the Washington Post explained:

> *Officials have said the Imperial College's eye-popping 2.2 million death projection convinced Trump to stop dismissing the outbreak and take it more seriously. Similarly, officials said, the new projection of 100,000 to 240,000 deaths is what convinced Trump to extend restrictions for 30 days and abandon his push to reopen parts of the country by Easter, which many health experts believe could have worsened the outbreak.*

Oddly, Professor Ferguson has a history of massive overestimation of pandemics, but apparently no one bothered to consider that in taking his advice. The Spectator spelled out his incredibly bad calls on three previous emerging diseases (he actually has more terrible calls, I'm just highlighting three):

2002, Mad Cow Disease— In 2002, Ferguson predicted that between 50 and 50,000 people would likely die from exposure to BSE (mad cow disease) in beef. He also predicted that number could rise to 150,000 if there was a sheep epidemic as well. In the UK, there have only been 177 deaths from BSE.

2005, Bird Flu— In 2005, Ferguson said that up to 200 million people could be killed from **bird flu**. He told the Guardian that *'around 40 million people died in 1918 Spanish flu outbreak… There are six times more people on the planet now so you could scale it up to around 200 million people probably.'* In the end, only 282 people died worldwide from the disease between 2003 and 2009.

2009, Swine Flu— In 2009, Ferguson and his Imperial team predicted that swine flu had a case fatality rate 0.3 per cent to 1.5 per cent. His most likely estimate was that the mortality rate was 0.4 per cent. A government estimate, based on Ferguson's advice, said a 'reasonable worst-case scenario' was that the disease would lead to 65,000 UK deaths. In the end swine flu killed 457 people in the UK and had a death rate of just 0.026 per cent in those infected.

I don't know… don't you think that history should have mattered more before relying on his model to lock down our entire country? It actually gets worse. From the National Review:

> *Johan Giesecke, the former chief scientist for the European Center for Disease Control and Prevention, has called Ferguson's model "the most influential scientific paper" in memory. He also says it was, sadly, "one of the most wrong."*

And more:

> Jay Schnitzer, an expert in vascular biology and a former scientific direct of the Sidney Kimmel Cancer Center in San Diego, tells me: "I'm normally reluctant to say this about a scientist, but he dances on the edge of being a publicity-seeking charlatan."

One simple example of how wrong the Imperial College model was would be Sweden. Here mare the details:

> Indeed, Ferguson's Imperial College model has been proven wildly inaccurate. To cite just one example, it saw Sweden paying a huge price for no lockdown, with 40,000 COVID deaths by May 1, and 100,000 by June. Sweden now has 2,854 deaths and peaked two weeks ago. As Fraser Nelson, editor of Britain's Spectator, notes: "Imperial College's model is wrong by an order of magnitude."

And, finally:

> Indeed, Ferguson has been wrong so often that some of his fellow modelers call him "The Master of Disaster."

Oh, and Professor Ferguson recently resigned from his position because he broke lockdown curfew… to have an affair with a married woman. I'll end with a quote from the man who I believe will emerge as the biggest hero of this whole mess, Sweden's Anders Tegnell, the epidemiologist who's been advising the Swedish Government and, skeptical of Professor Ferguson's modeling, chose not to lock his country down:

> "It's not a peer-reviewed paper," he said, referring to the Imperial College March 16th paper. "It might be right, but it might also be terribly wrong. In Sweden, we are a bit surprised that it's had such an impact."

ANOTHER SCIENTIST WHO DOESN'T BELIEVE A WORD HE SAYS

ME? LOCKDOWN? NOT EFFING LIKELY!

MOVE ALONG! NOTHING TO SEE HERE!

JOSH '20

NEIL FERGUSON, FAMOUS ALARMIST PANDEMIC MODELLER, CAUGHT HAVING AFFAIR DURING LOCKDOWN. A BIT LIKE CLIMATE SCIENTISTS PREACHING DOOM AND CATASTROPHE WHILE FLYING TO EXOTIC SPOTS AROUND THE WORLD

IHME: If the Imperial College model was really the motivation for both President Trump, Boris Johnson, and then many other world leaders to lockdown, the IHME models have almost always been the "science" state Governors cite to demonstrate how many lives their lockdowns are saving. It's a nice gig, really. Find a model that massively overestimates the deaths in your state, lock it down, and then have the modelers show you how many lives you have saved. Luckily, other scientists have been watching, and the IHME model has received one of the most ferocious beat-downs I have ever seen in the scientific literature from Professors at the University of Sydney, Northwestern, and UTEP. Titled Learning as We Go— An Examination of the Statistical Accuracy of COVID-19 Daily Death Count Predictions and released last week, the study effectively says that the IHME model is dangerously inaccurate, but in a somewhat cordial, scientific way. The authors write:

Specifically, the true number of next day deaths fell outside the IHME prediction intervals as much as 76% of the time, in comparison to the expected value of 5%. Regarding the updated models, our analyses indicate that the April models show little, if any, improvement in the accuracy of the point estimate predictions.

And then they land the big punch:

Our analysis calls into question the usefulness of the predictions to drive policy making and resource allocation.

In English: the IHME models are so bad at forecasting they shouldn't be relied upon for anything. Need more? National Review's Andrew McCarthy was very eloquent all the way back on April 9th in criticizing the IMHE models' inaccuracy and uselessness:

The model on which the government is relying is simply unreliable. It is not that social distancing has changed the equation; it is that the equation's fundamental assumptions are so dead wrong, they cannot remain reasonably stable for just 72 hours. And mind you, when we observe that the government is relying on the models, we mean reliance for the purpose of making policy, including the policy of completely closing down American businesses and attempting to confine people to their homes because, it is said, no lesser measures will do."

And how does Mr. McCarthy, a senior fellow at the National Review Institute, think these models have performed?

"To describe as stunning the collapse of a key model the government has used to alarm the nation about the catastrophic threat of the coronavirus would not do this development justice."

My own Governor here in Oregon, Kate Brown, is fond of invoking the phrase that she is "following the science." Recently, a Circuit Court overturned her lockdown order after a lawsuit was filed from a number of churches. Governor Brown released this statement:

From the beginning of this crisis, I have worked within my authority, using science and data as my guide, heeding the advice of medical experts. This strategy has saved lives and protected Oregonians from the worst of the COVID-19 pandemic.

What "science" is Governor Brown relying upon? The IHME model. Still think that's "science"?

Finally, Michael Fumento wrote an excellent article arguing that "After Repeated Failures, It's Time To Permanently Dump Epidemic Models." As he explains:

The models essentially have three purposes: 1) To satisfy the public's need for a number, any number; 2) To bring media attention for the modeler; and 3) To scare the crap out of people to get them to "do the right thing." That can be defined as "flattening the curve" so health care systems aren't overridden, or encouraging people to become sheeple and accept restrictions on liberties never even imposed during wars. Like Ferguson, all the modelers know that no matter what the low end, headlines will always reflect the high end. Assuming it's possible to model an epidemic at all, any that the mainstream press relays will have been designed to promote panic.

Opinion #2: Roger Koppl, inside the mind of a disease modeler

I just thought this was such a great description of the human side of being a disease forecaster, written by Professor of Finance Roger Koppl from Syracuse:

Think if it were you. You're an epidemiologist and the prime minister calls to ask you how many will die if we don't have a lockdown. What do you tell him? You can't just look up the number. The pandemic is only now taking off and your knowledge of it is correspondingly sketchy. It's hard to say. Every number is a guess. If you give the prime minister a low number, there will be no lockdown. What if he accepts your

low number and we have no lockdown? Maybe everything will be fine. But maybe there will be many more deaths than you predicted. You will get blamed. People will shame you as a bad scientist. And, because you are a good and decent person, you will feel guilty. Blame, shame, guilt. This is a bad outcome.

If you give him a high number, there will be lockdown. No one will ever be able to say that your estimate was too high, because your estimate assumed no lockdown. Even if a lot of people die during the lockdown you can say, "See? Think how much worse it would have been without the lockdown." Thus, if you give the prime minister a high number, you will get credit for saving lives. You will be able to take pride in your sterling reputation as a scientist. And you won't have to feel guilty about lost lives. Praise, pride, and innocence. This is a good outcome. The logic of the situation is clear. You have every incentive to predict doom and gloom if no lockdown is ordered.

Makes sense, and I think most American Governors who locked down are running with this: the model said we'd have X number of deaths. Now the model says the lockdown ensured a fraction of X deaths— I'm your savior!

Fact #10: The data shows that lockdowns have NOT had an impact on the course of the disease.
This is certainly the fact that people will have the hardest time with: who wants to believe that all this suffering and isolation was for no reason? But, there are more than enough states and countries that didn't lockdown, or locked down for a much shorter time, or in a much different manner, to provide plenty of data. Perhaps the simplest explanation for why lockdowns have been ineffective is the easiest: COVID-19 was in wide circulation much [EARLIER than experts thought](#). This alone would explain why lockdowns have been so ineffective, but whatever the final explanation, let's see what the data says.

I'm going to start with a source that you might consider unusual, the global bank JP Morgan. Of all the facts I have covered, this one about the ineffectiveness of lockdowns has become the most politicized, because it's being used to begin playing the blame game. JP Morgan, on the other hand, creates their analysis to do something very nonpartisan: make money. Their analysts crunch data to see which economies are likely to restart first, and you shouldn't be surprised at this point to discover three things: 1) the least damaged economies are the ones that did the least onerous lockdowns, 2) lifting lockdowns has had no negative impact on deaths or hospitalizations, and 3) lifting lockdowns had not increased viral transmission. Reading the JP Morgan conclusions is profoundly depressing, because here in the U.S. many communities are STILL being put through many different lockdown mandates, despite overwhelming evidence to their ineffectiveness. Consider this chart from JP Morgan that shows "[that many countries saw their infection rates fall rather than rise again when they ended their lockdowns - suggesting that the virus may have its own 'dynamics' which are 'unrelated' to the emergency measures](#)."

Figure 2: The vast majority of countries had decreased COVID-19 infection rates after national lockdowns were lifted
Daily infection rate post-lockdown
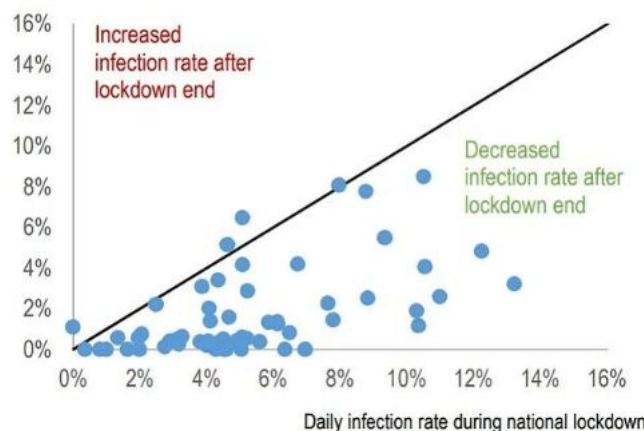
Source: J.P. Morgan Quantitative and Derivatives Strategy. Infection rate measured with a 7-day lag to allow for testing lags

JP Morgan strategist and paper author Marko Kolanovic is another one of my heroes, because… well, he says everything I wish many other people were saying. Consider this quote:

> 'Unlike rigorous testing of new drugs, lockdowns were administered with little consideration that they might not only cause economic devastation but potentially more deaths than Covid-19 itself."

Kolanovic and his team also show that transmissibility of the virus has actually DECREASED after lockdowns have been lifted in U.S. states, through the measurement known as "RO". As the Daily Mail explains, "many states saw a lower rate of transmission (R) after full-scale lockdowns were ended."

Figure 1: R_0 during lockdown vs. after lockdown end by US state
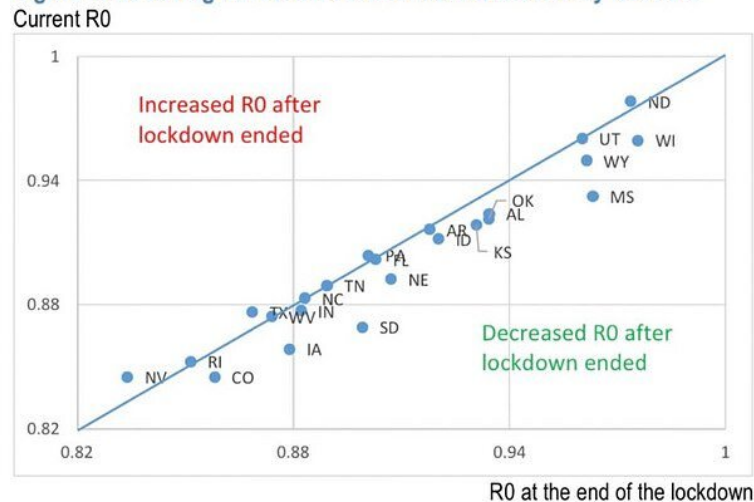
Source: J.P. Morgan Quantitative and Derivatives Strategy

TJ Rogers, the founder of Cypress Semiconductor, and a team of his engineers also analyzed the data, and published their results in this piece in the *Wall Street Journal* titled "Do Lockdowns Save Many Lives? In Most Places, the Data Say No." They explain:

> We ran a simple one-variable correlation of deaths per million and days to shutdown, which ranged from minus-10 days (some states shut down before any sign of Covid-19) to 35 days for South Dakota, one of seven states with limited or no shutdown. The correlation coefficient was 5.5%— so low that the engineers I used to employ would have summarized it as "no correlation" and moved on to find the real cause of the problem.

Translation: something other than lockdowns must explain the course of the virus (see Fact #14). Thomas A. J. Meunier of the *Woods Hole Oceanographic Institution* released this report in early May titled "Full lockdown policies in Western Europe countries have no evident impacts on the COVID-19 epidemic." Like JP Morgan's report, his conclusion is depressing:

> Our results show a general decay trend in the growth rates and reproduction numbers two to three weeks before the full lockdown policies would be expected to have visible effects. Comparison of pre and post lockdown observations reveals a counter-intuitive slowdown in the decay of the epidemic after lockdown.

And, the clincher:

> Estimates of daily and total deaths numbers using pre-lockdown trends suggest that no lives were saved by this strategy, in comparison with pre-lockdown, less restrictive, social distancing policies.

Bloomberg's Elain He and colleagues also analyzed the data in this article titled "The Results of Europe's Lockdown Experiment Are In." Their conclusion is unlikely to surprise you:

> But, as our next chart shows, there's little correlation between the severity of a nation's restrictions and whether it managed to curb excess fatalities — a measure that looks at the overall number of deaths compared with normal trends.

Speaking of Europe, we should all thank God for Sweden. By choosing NOT to lockdown, the Swedes have proven that society can survive without a strict lockdown, and hopefully their results will prevent lockdowns from ever happening again. If you have followed this story closely, you know that naysayers were [predicting doom for Sweden](#) (and for Florida and Georgia, more on them in a moment), and none of that has ever come to pass. Conveniently, the World Health Organization went from praising the response of the Chinese lockdown in Wuhan —which likely ignited the lockdown mania— to holding up Sweden as the model for how to combat an epidemic. (Read: "[WHO reverses course, praises lockdown-ignoring Sweden](#)".)

Fact #11: Florida locked down late, opened early, and is doing fine, despite predictions of doom

The best article I have read about Florida's Governor Ron DeSantis comes from [this one](#) on the National Review on May 20th. I was pleasantly surprised by what a rational student of history Governor Desantis was, as he explains:

> *"One of the things that bothered me throughout this whole time was, I researched the 1918 pandemic, '57, '68, and there were some mitigation efforts done in May 1918, but never just a national-shutdown type deal. There was really no observed experience about what the negative impacts would be on that."*

Unlike many of his peers, Governor Desantis found doomsday models to be unhelpful:

> *The DeSantis team also didn't put much stock in dire projections. "We kind of lost confidence very early on in models," a Florida health official says. "We look at them closely, but how can you rely on something when it says you're peaking in a week and then the next day you've already peaked?" Instead, "we started really focusing on just what we saw."*

Instead, they took a rifle shot approach on the citizens most at-risk: nursing home residents, of which Florida has the most in the nation:

> *Inspectors and assessment teams visited nursing homes. The state homed in on facilities where, Mayhew says, "we had historically cited around infection control. We used that to prioritize our visits to those facilities, understanding that the guidance from CDC was changing frequently. So our initial focus was to be an effective resource education, to provide guidance to these facilities to make sure they understood how to request personal protective equipment from the state."*

> *Florida, DeSantis notes, "required all staff and any worker that entered to be screened for COVID illness, temperature checks. Anybody that's symptomatic would just simply not be allowed to go in." And it required staff to wear PPE. "We put our money where our mouth is," he continues. "We recognized that a lot of these facilities were just not prepared to deal with something like this. So we ended up sending a total of 10 million masks just to our long-term-care facilities, a million gloves, half a million face shields."*

> *Florida fortified the hospitals with PPE, too, but DeSantis realized that it wouldn't do the hospitals any good if infection in the nursing homes ran out of control: "If I can send PPE to the nursing homes, and they can prevent an outbreak there, that's going to do more to lower the burden on hospitals than me just sending them another 500,000 N95 masks."*

> *It's impossible to overstate the importance of this insight, and how much it drove Florida's approach, counter to the policies of New York and other states. ("I don't want to cast aspersions on others, but it is incredible to me, it's shocking," says the Florida health official, "that Governor Cuomo [and others] are able to kind of just avoid real questions about their policies early on to actually send individuals into the nursing home, which is completely counter to the real data.")*

Which brings us to New York, the state that every other Governor who locked their people down points to, and says something to the effect of, "by locking down early, we avoided being New York." Is that really true?

Special note: There are MANY other states —and countries— with data similar to Florida's, including Georgia, Texas, Arkansas, Utah, Japan, and of course, Sweden, to name just a few. In ALL cases, the media predicted doom, and even [President Trump criticized Georgia's early opening](#) by their courageous Governor Brian Kemp, and Georgia's numbers today look great.

Fact #12: New York's above average death rate appears to be driven by a fatal policy error combined with aggressive intubations.

Forbes recently published an article explaining just how concentrated COVID-19 deaths really are in a single population, titled "[The Most Important Coronavirus Statistic: 42% Of U.S. Deaths Are From 0.6% Of The Population](#)," the article explains:

> *2.1 million Americans, representing 0.62% of the U.S. population, reside in nursing homes and assisted living facilities… According to an analysis that Gregg Girvan and I conducted for the [Foundation for Research on Equal Opportunity](#), as of May 22, in the 43 states that currently report such figures, an astounding 42% of all COVID-19 deaths have taken place in nursing homes and assisted living facilities.*

Forbes also points out that the risk coronavirus-type illnesses represent to nursing home populations is nothing new:

> *The tragedy is that it didn't have to be this way. On March 17, as the pandemic was just beginning to accelerate, Stanford epidemiologist John Ioannidis warned that "even some so-called mild or common-cold-type coronaviruses have been known for decades [to] have case fatality rates as high as 8% when they infect people in nursing homes." Ioannidis was ignored.*

In his [recent meta-analysis](#) on the real Infection Fatality Rate of COVID-19, Dr. Ioannidis explained the policy error in New York that likely contributed to thousands of preventable deaths:

> *Massive deaths of elderly individuals in nursing homes, nosocomial infections, and overwhelmed hospitals may also explain the very high fatality seen in specific locations in Northern Italy and in New York and New Jersey. A very unfortunate decision of the governors in New York and New Jersey was to have COVID-19 patients sent to nursing homes.*

Dr. Ioannidis also mentions the choice by medical personnel in New York to quickly put patients on ventilators, which doctors now realize likely does more harm than good (Read: [80% of NYC's coronavirus patients who are put on ventilators ultimately die, and some doctors are trying to stop using them](#).):

> *Use of unnecessarily aggressive management (e. g. mechanical ventilation) may also have contributed to worse outcomes.*

[The New York Post](#) was particularly harsh in criticizing New York's nursing home policy:

> *The carnage started in March, when hospitals inundated with COVID-19 patients insisted on clearing out elderly patients, even if they were still infected, [and sending them to whatever nursing homes had empty beds](#). To swing that, they had to get rid of a safety regulation requiring patients to test negative twice for COVID-19 before being placed in a home. The state Health Department willingly complied.*

> *On March 25, Gov. Cuomo's Health Department mandated that nursing homes had to accept COVID patients and barred requiring any COVID tests for admission. Facilities like Newfane had to fly blind, not knowing which incoming patients had it.*

> *The American Health Care Association called it a "recipe for disaster." The Committee to Reduce Infection Deaths urged Cuomo to change course… Bottom line: 11,000 to 12,000 nursing-home and assisted-living residents [have died from COVID-19](#), half of all the virus deaths statewide… That awful death toll didn't have to happen. It's six times the number of nursing-home fatalities as in Florida or California, both more populous states.*

When your Governor tries to tell you that their destructive decision to lock everyone down saved you from being New York, remember Florida and Sweden. Oh, and don't forget the country no doomsday folks want to even discuss: [Japan](#).

> *On May 25th, Japan declared at least a temporary victory in its battle with COVID-19, and it triumphed by following its own playbook. It drove down the number of daily new cases to near target levels of 0.5 per 100,000 people with voluntary and not very restrictive social distancing and without*

large-scale testing… The dwindling numbers of new cases led the government to start to lift the state of emergency for much of Japan on May 14, ahead of the intended May 31 schedule. Yesterday's announcement completed the lift, relieving Tokyo and four other prefectures.

Fact #13: Public health officials and disease epidemiologists do NOT consider the other negative societal consequences of lockdowns

If you asked me for how a suggestion for how to lose a few pounds and I said, "Stop eating or drinking anything," would you take my advice? It would work to achieve your goals, but you may not like the side effects. That's basically what has happened here. Rather than being ONE input on policy, public health officials were handed the keys to the convertible without their license, and off they sped! Look what Dr. Anthony Fauci said to Congress earlier this month:

> *I'm a scientist, a physician, and a public health official. I give advice, according to the best scientific evidence. There are a number of other people who come into that and give advice that are more related to the things that you spoke about, the need to get the country back open again, and economically. I don't give advice about economic things. I don't give advice about anything other than public health.*

The Wall Street Journal actively criticized this single-dimensional thinking by American public health officials, noting, *"Dr. Fauci is clear on the fact that Americans should not rely on him to conduct cost-benefit analysis of the policies he is recommending."* This excellent critique of the Imperial College model makes a similar point: *"The Imperial College paper is a one-sided analysis. It looks at the benefits of a lockdown without going into the costs."*

So wait, all these models that predicted doom from COVID-19 didn't consider deaths caused by the lockdowns from suicide, skipped doctors appointments, and unemployment? So who should be making these complex policy decisions? At least in the United States, I hold 51 people responsible: the President and 50 state Governors. And, if you expect any of them to issue a mea culpa for a terrible decision, don't hold your breath, from the Issues & Insights Editorial Board:

> *Don't expect anyone to admit they were wrong. The public health community —which has been peddling wildly exaggerated predictions of deaths— will never do so. Nor will Democrats and the press— which are committed to the narrative that every death in the U.S. is President Donald Trump's fault. Trump isn't likely to, either, since he agreed to shutting down the economy after he started taking his cues from public health doomsayers.*

Opinion #3: Yoram Lass, former director of Israel's Health Ministry

Unlike American public health officials, who seem wed to the idea of preventing COVID-19 *no-matter-what-the-cost*, I have been heartened to see public health officials in other countries with a much more complete understanding of the TOTAL cost to society than any public health decision causes. And of all the international straight-talking public health officials, no one puts it any more directly than my favorite: Yoram Lass of Israel. In this excellent interview with Spiked Online —which you should really read in full— Dr. Lass offers up the following nugget:
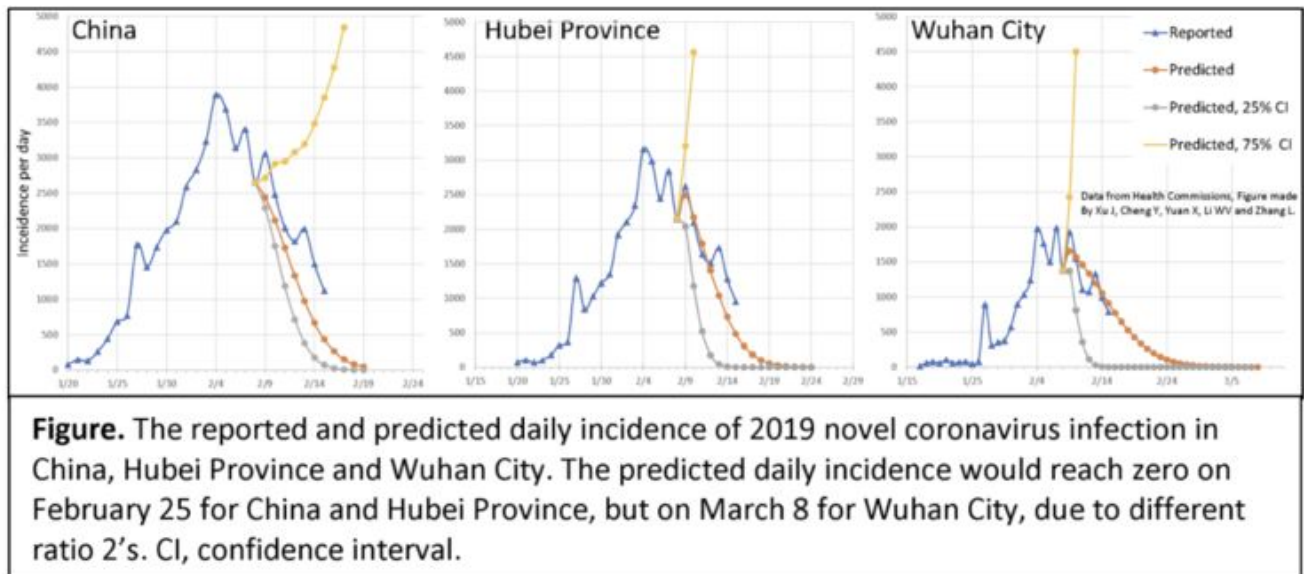
> *It is the first epidemic in history which is accompanied by another epidemic— the virus of the social networks. These new media have brainwashed entire populations. What you get is fear and anxiety, and an inability to look at real data. And therefore you have all the ingredients for monstrous hysteria… Compared to that rise, the draconian measures are of biblical proportions. Hundreds of millions of people are suffering. In developing countries many will die from starvation. In developed countries many will die from unemployment. Unemployment* Is *mortality. More people will die from the measures than from the virus. And the people who die from the measures are the breadwinners. They are younger. Among the people who die from coronavirus, the median age is often higher than the life expectancy of the population. What has been done is not proportionate. But people are afraid. People are brainwashed. They do not listen to the data. And that includes governments.*

Fact #14: There is a predictive model for the viral arc of COVID-19, it's called Farr's Law, and it was discovered over 100 years ago

Dr. Lass, in the interview highlighted above, also made a point that we knew long before the lockdowns— how COVID-19 was likely to behave, because… well, we've been dealing with new viruses since the dawn of man:

> *If you look at the coronavirus wave on a graph, you will see that it looks like a spike. Coronavirus comes very fast, but it also goes away very fast. The influenza wave is shallow as it takes three months to pass, but coronavirus takes one month.*

That ALL viruses follow a natural bell curve, with slopes roughly equal on the way up and down, was discovered by Dr. William Farr more than 100 years ago, and it's known as Farr's law. Recently, Chinese and American scientists published a study to see if COVID-19 would behave according to Farr's law, and here's the chart from their recent paper:

Figure. The reported and predicted daily incidence of 2019 novel coronavirus infection in China, Hubei Province and Wuhan City. The predicted daily incidence would reach zero on February 25 for China and Hubei Province, but on March 8 for Wuhan City, due to different ratio 2's. CI, confidence interval.

As you can see, the predicted path of the virus in China (orange dotted line) and the actual path of the virus (blue dotted line) are a match. This paper, created all the way back on February 8th, could have saved policy-makers much heartache. A renowned Israeli scientist made this same point about the natural arc of the virus more than a month ago, in the middle of Israel's lockdown:

> *A prominent Israeli mathematician, analyst and former General claims that simple statistical analysis demonstrates that the spread of COVID-19 peaks after about 40 days and declines to almost zero after 70 days— no matter where it strikes, and no matter what measures governments impose to try to thwart it.*
>
> *Prof Isaac Ben-Israel, head of the Security Studies program in* Tel Aviv University *and the chairman of the* National Council for Research and Development, *told Israel's (Hebrew) Channel 12 Monday night that research he conducted with a fellow professor, analyzing the growth and decline of new cases in countries around the world, showed repeatedly that "there's a set pattern" and "the numbers speak for themselves."*
>
> *While he said he supports social distancing, the widespread shuttering of economies worldwide constitutes a demonstrable error in light of those statistics. In Israel's case, he noted, about 140 people normally die every day. To have shuttered much of the economy because of a virus that is killing one or two a day is a radical error that is unnecessarily costing Israel 20% of its GDP, he charged.*

(Dr. Ben-Israell, FYI, is arguably Israel's most famous scientist, read his resume for yourself.) I put the Farr's law idea to the test with the local data I have here in Oregon, and what you can clearly see is that COVID-19 was ALREADY following a natural, expected viral arc BEFORE our Governor Kate Brown imposed a lockdown. (Note: Lockdown order issued on March 23rd, it would take 2 weeks to see a positive impact on hospitalization numbers, but the virus was already on the decline, much as both Dr. Lass and Dr. Ben-Israel predicted.)
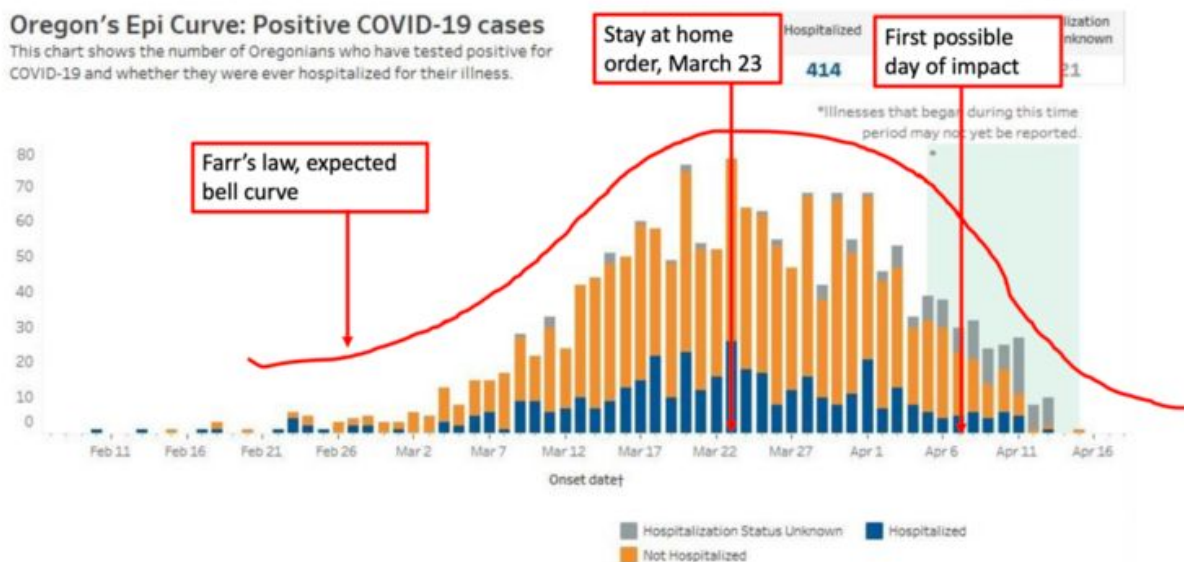
Oregon COVID-19 Daily Update
Summary as of Thursday 04/16/2020

I really enjoyed this [explanation of Farr's law](#) by Michael Fumento:

> *The only "model" with any success is actually quite accomplished and appeared in 1840, when a "computer" was an abacus. It's called Farr's Law, and is actually more of an observation that epidemics grow fastest at first and then slow to a peak, then decline in a more-or-less symmetrical pattern. As you might guess from the date, it precedes public health services and doesn't require lockdowns or really any interventions at all. Rather, the disease grabs the low-hanging fruit (with COVID-19 that's the elderly with co-morbid conditions) and then finds it progressively harder to get more fruit.*

Fact #15: The lockdowns will cause more death and destruction than COVID-19 ever did

My final fact is the most depressing. Of course, it's impossible today to find all the data to show how destructive unnecessary lockdowns have been, but many people are already trying. Economically, the costs to the United States will be measure in the multi-trillions. It didn't have to be this way, Sweden [just reported](#) that GDP grew in their first quarter!

I'll highlight a number of different takes so you get the basic picture… but it's really ugly. Last week, writing in *The Hill*, a group of professors from Stanford, Duke, University of Chicago, and Hebrew University penned a sobering piece titled [The COVID-19 shutdown will cost Americans millions of years of life](#), where they explained:

> *Although well-intentioned, the lockdown was imposed without consideration of its consequences beyond those directly from the pandemic… The policies have created the greatest global economic disruption in history, with [trillions of dollars](#) of lost economic output. These financial losses have been falsely portrayed as purely economic. To the contrary, using numerous National Institutes of Health Public Access publications, Centers for Disease Control and Prevention (CDC) and Bureau of Labor Statistics data, and various actuarial tables, we calculate that these policies will cause devastating non-economic consequences that will total millions of accumulated years of life lost in the United States, far beyond what the virus itself has caused… Considering only the losses of life from missed health care and unemployment due solely to the lockdown policy, we conservatively estimate that the national lockdown is responsible for at least 700,000 lost years of life every month, or about 1.5 million so far— already far surpassing the COVID-19 total.*

One of the lead authors of the study, the aforementioned Dr. Scott Atlas, went on [Fox News](#) to further explain the results of their analysis:

> "I think one thing that's not somehow receiving attention is the CDC's recent release of their fatality rates," Atlas said. "And lo and behold, they verify what people have been saying for over a month now, including my Stanford epidemiology colleagues and everyone else in the world who's done this analysis— that the infection fatality rate is less than one-tenth of the original estimate. The policy itself is killing people. I mean, I think everyone's heard about 650,000 people on cancer, chemo, half of whom didn't come in. Two thirds of cancer screenings didn't come in. 40 percent of stroke patients urgently needing care didn't come in," Atlas said.

Remember how the lockdown was supposed to keep hospitals open to manage a surge of patients? Well, now the healthcare system is facing disaster: [Doctors face pay cuts, furloughs and supply shortages as coronavirus pushes primary care to the brink](#) CNBC reports:

SCIENCE & NATURE

The Totality of the Evidence

As policymakers debate the right response to COVID-19, they must take seriously the harms of pandemic policies, not just their benefits.

JOHN P. A. IOANNIDIS

> It's not just doctors' offices in New York —the epicenter of the coronavirus epidemic in the U.S.— that are experiencing financial hardship. Some 51% of primary-care providers are uncertain about their financial future over the next four weeks, and 42% have either laid off or furloughed staff, according to a [survey of 2,700 practices across the U.S.](#) by the nonprofit Primary Care Collaborative and Larry A. Green Center. In addition, 13% predict closure within the next month.

Stanford's Dr. John Ioaniddis penned an excellent article for the Boston Review, spelling out the catastrophic impact the lockdown is having on healthcare:

Why US hospitals are going bankrupt

PUBLISHED MON, MAY 11 2020-9:51 AM EDT

Shawn Baldwin

At the same time, we should not look away from the real harms of the most drastic of our interventions, which also disproportionately affect the disadvantaged. We know that prolonged lockdown of the entire population has delayed cancer treatments and has made people with serious disease like heart attacks avoid going to the hospital. It is leading hospital systems to furlough and lay off personnel, it is devastating mental health, it is increasing domestic violence and child abuse, and it has added at least 36.5 million new people to the ranks of the unemployed in the United States alone. Many of these people will lose health insurance, putting them at further risk of declining health and economic distress. Prolonged unemployment is estimated to lead to an extra 75,000 deaths of despair in the United States alone over the coming decade. At a global level, disruption has increased the number of people at risk of starvation to more than a billion, suspension of mass vaccination campaigns is posing a threat of resurgence of infectious diseases that kill children, modeling suggests an excess of 1.4 million deaths from tuberculosis by 2025, and a doubling of the death toll from malaria in 2020 is expected compared with 2018. I hope these modeling predictions turn out to be as wrong as several COVID-19 modeling predictions have, but they may not. All of these impacts matter, too. Policymakers must consider the harms of restrictive policies, not just their benefits.

Heck, more than 600 doctors recently appealed to President Trump to lift the lockdowns, according to *Forbes*:

More than 600 of the nation's physicians sent a letter to President Trump this week calling the coronavirus shutdowns a "mass casualty incident" with "exponentially growing negative health consequences" to millions of non-COVID patients.

> *"The downstream health effects. . . are being massively under-estimated and under-reported. This is an order of magnitude error," according to the letter initiated by Simone Gold, M. D. , an emergency medicine specialist in Los Angeles.*

It's no surprise that suicides are on the rise in localities that locked down, and that prescriptions for sleep and anti-anxiety medications have skyrocketed. And it was just reported that, "Social isolation can increase a person's risk of dying early by up to 50 per cent, a new study has suggested." Even Dr. Fauci, arguably the lockdown's most enthusiastic supporter, has gotten religion recently, as CNBC reported:

> *Stay-at-home orders intended to curb the spread of the coronavirus could end up causing "irreparable damage" if imposed for too long, White House health advisor Dr. Anthony Fauci told CNBC on Friday.*

"I don't want people to think that any of us feel that staying locked down for a prolonged period of time is the way to go," Fauci said during an interview with CNBC's Meg Tirrell on "[Halftime Report](#)."

Dr. Fauci, you are very, very late to the party. In fact, one of my biggest issues with this entire mess, is how Dr. Fauci and others like him have done almost NOTHING to educate the American public about the new science and information we now have about COVID-19, which would have not only meaningfully reduced panic but also perhaps given Governors more support to re-open more quickly…

Fact #16: All these phased re-openings are utter nonsense with no science to support them, but they will all be declared a success

I found this *Wall Street Journal* [article](#) about Washington's Governor Jay Inslee to be particularly telling:

Mr. Inslee's "Covid-19 dashboard," which is supposed to provide a science-based path for Washington's recovery, is much the same story. The online dashboard includes "dials" for five public-safety variables but gives no indication of how each is calculated or where the dials need to be to begin the various phases of reopening. When will builders be allowed to start new construction? When will small stores be able to open like Home Depot is open? The dashboard is designed to imply science but lacks meaningful data.

Yup, still waiting for your Phase 1 or Phase 2 re-opening? Trust me, whomever conjured up your state's plan is quite literally making things up as they go along. And, given the extreme range of plans taking place —even in neighboring counties— the odds that they have ANYTHING to do with the arc of the virus is exactly ZERO, but you already knew that if you read this far. The good news is they will ALL succeed, because we never needed to lockdown in the first place— MISSION ACCOMPLISHED.

(It's interesting to look back to early May at the headlines where public health officials predicted disaster for Florida— *Miami Herald*: [How safe is Florida's reopening plan? Public health experts give a candid critique](#). Are other Governor's ever going to think for themselves the way Ron DeSantis did?)

This week, I was really struck by [this headline](#) from the Foundation for Economic Education:

Epidemiologist: Sweden's COVID Response Isn't Unorthodox. The Rest of the World's Is

While nations today appear comfortable instituting mass lockdowns to prevent the spread of a deadly respiratory virus, the practice appears to be unprecedented.

Thursday, May 28, 2020

As Sweden's top infectious disease expert recently explained, Sweden's approach to the pandemic is more orthodox than the current lockdown approach, at least compared to historical standards.

"Are the people closing society completely, which has really never been done before, more or less orthodox than Sweden?" Anders Tegnell [asked recently](#). "[Sweden is doing] what we usually do in public health: giving lots of responsibility to the population, trying to achieve a good dialogue with the population, and achieve good results with that."

Tegnell's point deserves attention. While nations today appear comfortable instituting mass lockdowns to prevent the spread of a deadly respiratory virus, the practice appears to be unprecedented.

Stanford's Dr. Scott Atlas is, IMO, one of the true heroes of this quagmire, and I found his essay about the lack of leadership by American public health officials during this crisis to be one of his best. While the public health officials have done a great job scaring the daylights out of Americans, they've done very little to update us on the emerging science that has proved many of our initial fears to be unsupported by science. We still have MILLIONS of Americans who are scared to leave their home, and my guess is that many think COVID-19's IFR is closer to smallpox (30%) than to the seasonal flu. As Dr. Atlas wrote on May 3 in *The Hill*:

> **The basis of reassuring the public about re-entry is repeating the facts about the threat and who it targets.** *By now, studies from Europe and the U.S. all suggest that the overall fatality rate is far lower than early estimates. And we know who to protect, because this disease – by the evidence – is not equally dangerous across the population. In Michigan's Oakland County, 75 percent of deaths were in those over 70 years old; 91 percent were in people over 60, similar to what was noted in New York. And younger, healthier people have virtually zero risk of death and little risk of serious disease; as I have noted before, under one percent of New York City's hospitalizations have been patients under 18 years of age, and less than one percent of deaths at any age are in the absence of underlying conditions.*

I still struggle to make sense of how the hell we got here. I think one of the best essays you will ever read on this topic is a 2-part series written by bioengineer Yinon Weiss:

> **Part 1:** How Fear, Groupthink Drove Unnecessary Global Lockdowns. Excerpt:

> *In the face of a novel virus threat, China clamped down on its citizens. Academics used faulty information to build faulty models. Leaders relied on these faulty models. Dissenting views were suppressed. The media flamed fears and the world panicked. That is the story of what may eventually be known as one of the biggest medical and economic blunders of all time. The collective failure of every Western nation, except one, to* question groupthink *will surely be studied by economists, doctors, and psychologists for decades to come.*

> **Part 2:** How Media Sensationalism, Big Tech Bias Extended Lockdowns. Excerpt:

> *Epidemiologists created faulty lockdown models. The media promoted fear. Politicians assumed worst-case scenarios, and big tech suppressed dissenting views. This is how people's fears grew disproportional to reality and how seemingly short-term lockdowns stretched into months.*

I'll end these thoughts with a final quote from Israel's Yoram Lass, who neatly summarized what just happened (and is still happening in many places):

> *It is what is known in science as positive feedback or a snowball effect. The government is afraid of its constituents. Therefore, it implements draconian measures. The constituents look at the draconian measures and become even more hysterical. They feed each other and the snowball becomes larger and larger until you reach irrational territory. This is nothing more than a flu epidemic if you care to look at the numbers and the data, but people who are in a state of anxiety are blind. If I were making the decisions, I would try to give people the real numbers. And I would never destroy my country.*

Now what?

What should be done is so damn simple, IMO, but it will never happen because too many people would have to admit they were wrong. But I'll say it anyway. My policy recommendation: remove 100% of newly created lockdown rules, secure nursing homes using Florida's approach, tell everyone with an active COVID-19 infection to stay home until symptoms resolve or wear a mask if they need to go out in public, and encourage everyone else to wash their hands. Done deal.

I saved one of my favorite quotes for last, from *Karolinska Institute*'s Johan Giesecke (no surprise he's Swedish), from an essay that appeared in early May in *The Lancet*:

These facts have led me to the following conclusions. Everyone will be exposed to severe acute respiratory syndrome coronavirus 2, and most people will become infected. COVID-19 is spreading like wildfire in all countries, but we do not see it— it almost always spreads from younger people with no or weak symptoms to other people who will also have mild symptoms. This is the real pandemic, but it goes on beneath the surface, and is probably at its peak now in many European countries. There is very little we can do to prevent this spread: a lockdown might delay severe cases for a while, but once restrictions are eased, cases will reappear. I expect that when we count the number of deaths from COVID-19 in each country in 1 year from now, the figures will be similar, regardless of measures taken.

Measures to flatten the curve might have an effect, but a lockdown only pushes the severe cases into the future— it will not prevent them. Admittedly, countries have managed to slow down spread so as not to overburden health-care systems; and yes, effective drugs that save lives might soon be developed, but this pandemic is swift, and those drugs have to be developed, tested, and marketed quickly. Much hope is put in vaccines, but they will take time, and with the unclear protective immunological response to infection, it is not certain that vaccines will be very effective.

In summary, COVID-19 is a disease that is highly infectious and spreads rapidly through society. It is often quite symptomless and might pass unnoticed, but it also causes severe disease, and even death, in a proportion of the population. Our most important task is not to stop spread, which is all but futile, but to concentrate on giving the unfortunate victims optimal care.

If you made it this far, thank you. You now share my burden in knowing the facts about Lockdown Lunacy. And, thank you to the many courageous medical professionals and scientists who are taking serious risk to their careers to publicly tell the truth. If you'd like to stay abreast of this complex topic, I recommend the Twitter feeds of both Aaron Ginn and Alex Berenson, they are a welcome respite from "Team Apocalypse."

See next blog post: LOCKDOWN LUNACY 2.0: Second wave? Not even close.

About the author:
J. B. Handley is the best-selling author of *How to End the Autism Epidemic.*
He graduated with honors from Stanford University, and currently serves
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A personal note

Compared to the topic I usually write about —the scientific fact that vaccines can trigger autism in a vulnerable sub-set of children— writing about the lockdown madness is a walk in the park, because so many intelligent people have reached the same conclusion I have reached. I wish many of them would see the parallels to the roaring autism epidemic: good science is shunned or censored, the media browbeats dissenters, special interests prevail, parents are never listened to and doctors who speak up are labeled as "Quacks"… and the autism epidemic continues unabated.

LOCKDOWN LUNACY 2.0
Second wave? Not even close.
By J. B. Handley | June 29, 2020

Why did politicians ever lockdown society in the first place? Can we all agree that the stated purpose was to "flatten the curve" so our hospital system could handle the inevitable COVID-19 patients who would need care? At that point, at least, back in early March, people were behaving rationally. They accepted that you can't eradicate a virus, so let's postpone things enough to handle it. The fact is, we have done that, and so much more. The headlines are filled with dire warnings of a "second wave" and trigger-happy Governors are rolling back regulations to try to stem the tide of new cases. But is any of it actually true, and should we all be worried?

No, it's not a second wave. The COVID-19 virus is on its final legs, and while I have filled this post with graphs to prove everything I just said, this is really the only graph you need to see, it's the CDC's data, over time, of deaths from COVID-19 here in the U.S., and the trend line is unmistakable:
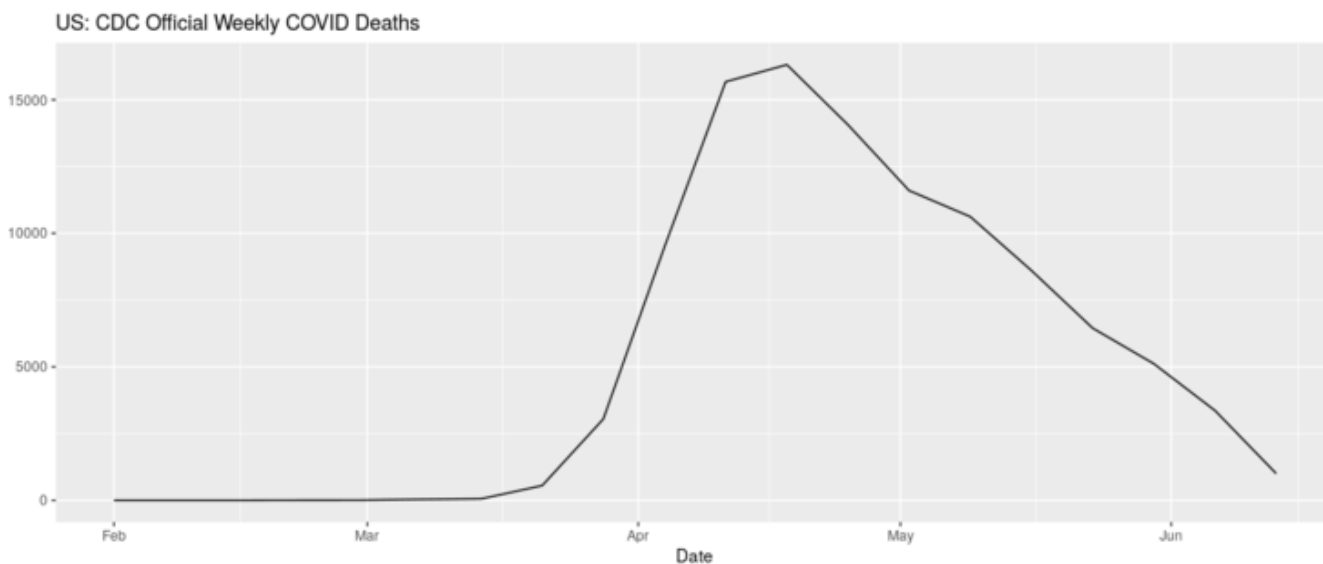
If virologists were driving policy about COVID-19, rather than public health officials, we'd all be Sweden right now, which means life would effectively be back to normal. The only thing our lockdowns have done at this point is prolong the agony and encourage Governors to make up more useless rules. Sweden's health minister understood that the only chance to beat COVID-19 was to get the Swedish population to a Herd Immunity Threshold against COVID-19, and that's exactly what they have done. So let me start there.

The Herd Immunity Threshold ("HIT") for COVID-19 is between 10-20%
This fact gets less press than any other. Most people understand the basic concept of herd immunity and the math behind it. In the early days, some public health officials speculated that COVID-19's HIT was 70%. Obviously, the difference between a HIT of 70% and 10-20% is dramatic; and the lower the HIT, the quicker a virus will burn out as it loses the ability to infect more people, which is exactly what COVID-19 is doing everywhere, including the U. S, which is why the death curve above looks the way it looks. Scientists from Oxford, Virginia Tech, and the Liverpool school of Tropical Medicine, all recently explained the HIT of COVID-19 in this paper:

> *We searched the literature for estimates of individual variation in propensity to acquire or transmit COVID-19 or other infectious diseases and overlaid the findings as vertical lines in Figure 3. Most CV estimates are comprised between 2 and 4, a range where naturally acquired immunity to SARS-CoV-2 may place populations over the herd immunity threshold once as few as 10-20% of its individuals are immune.*

Calculations from this study of data in Stockholm showed a **HIT of 17%**, and if you really love data check out this great essay by *Brown* Professor Dr. Andrew Bostom titled COVID-19 'herd immunity' without vaccination? Teaching modern vaccine dogma old tricks. I'm going to share his summary with you, because it's so good:

> *Naturally acquired herd immunity to COVID-19 combined with earnest protection of the vulnerable elderly —especially nursing home and assisted living facility residents— is an eminently reasonable and practical alternative to the dubious panacea of mass compulsory vaccination against the virus. This strategy was successfully implemented in Malmo, Sweden, which had few COVID-19 deaths by assiduously protecting its elder care homes, while "schools remained open, residents carried on drinking in bars and cafes, and the doors of hairdressers and gyms were open throughout."*

One of the most vocal members of the scientific community discussing COVID-19's HIT is Stanford's Nobel-laureate Dr. Michael Levitt. Back on May 4, he gave this great interview to the *Stanford Daily* where he advocated for Sweden's approach of letting COVID-19 spread naturally through the community until you arrive at HIT. He stated:

> *If Sweden stops at about 5,000 or 6,000 deaths, we will know that they've reached herd immunity, and we didn't need to do any kind of lockdown. My own feeling is that it will probably stop because of herd immunity. COVID is serious, it's at least a serious flu. But it's not going to destroy humanity as people thought.*

Guess what? That's exactly what happened. As of today, 7 weeks after his prediction, **Sweden has 5,280 deaths.** In this graph, you can see that deaths in Sweden PEAKED when the HIT was halfway to its peak (roughly 7.3%) and by the time the virus hit 14% it was nearly extinguished. (Shoutout to Gummi Bear on Twitter, a scientist who makes great graphs.)
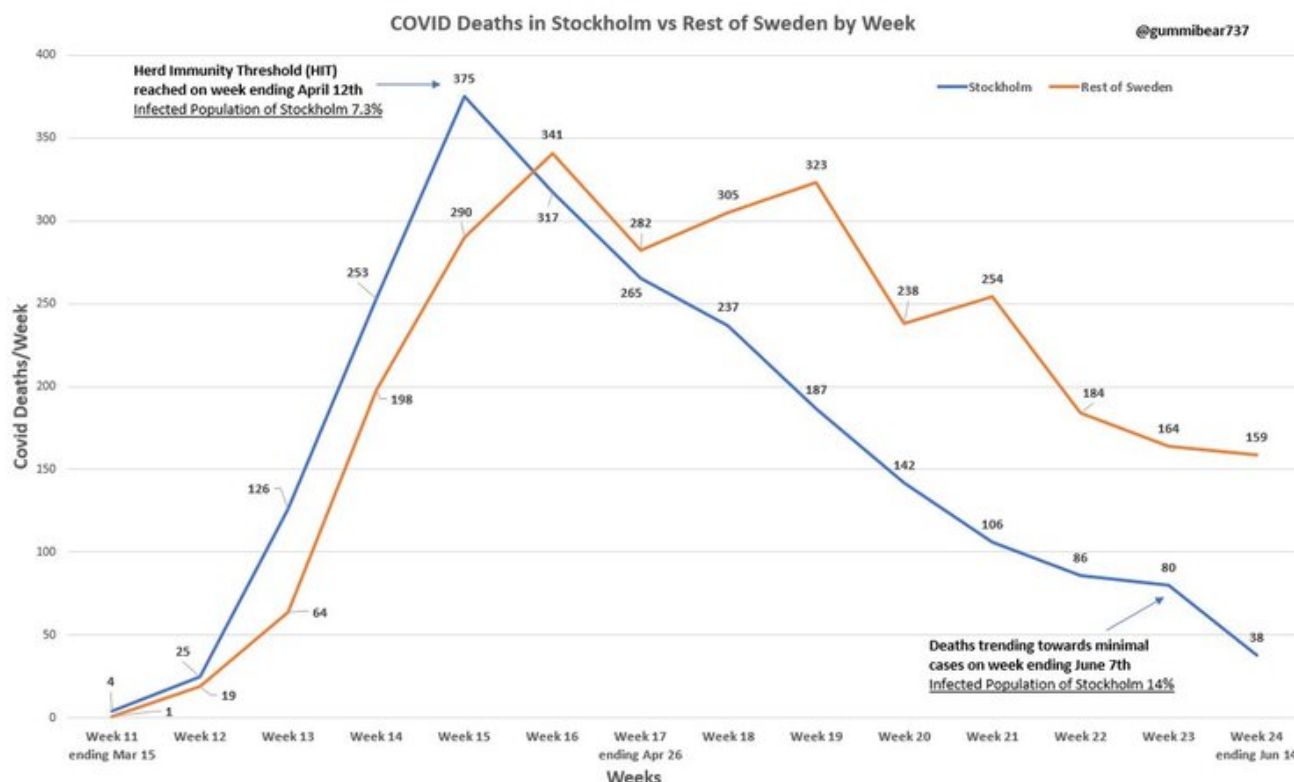
How could Dr. Levitt have predicted the death range for Sweden so perfectly 7 weeks ago? Because he had a pretty solid idea of what the HIT would be. (If you'd like to further geek-out on HIT, check out: Why herd immunity to COVID-19 is reached much earlier than thought.) I absolutely LOVE Dr. Levitt (and as a Stanford alum, so proud he is a professor there). Watch this incredible video from just yesterday, go to 10:59 and just listen to this remarkable man!! Thrilled with his brand-new paper, released today, Predicting the Trajectory of Any COVID19 Epidemic From the Best Straight Line.

By the way, as a quick aside, and something else the press won't touch: COVID-19 is a coronavirus, and we have ALL been exposed to MANY coronaviruses during our lives on earth (like the common cold). Guess what? [Scientists are now showing evidence](#) that up to 81% of us can mount a strong response to COVID-19 without ever having been exposed to it before:

> Cross-reactive SARS-CoV-2 T-cell epitopes revealed preexisting T-cell responses in 81% of unexposed individuals, and validation of similarity to common cold human coronaviruses provided a functional basis for postulated heterologous immunity

This alone could explain WHY the HIT is so much lower for COVID-19 than some scientists thought originally, when the number being talked about was closer to 70%. Many of us have always been immune! If that's not enough for you, a [similar study](#) from Sweden was [just released](#) and shows that "roughly twice as many people have developed T-cell immunity compared with those who we can detect antibodies in." (We kind of knew this from the data on the Diamond Princess when [only 17% of the people on board](#)tested positive, despite an ideal environment for mass spread, implying 83% of the people were somehow protected from the new virus.)

Quick Update: [This article](#) came out one day after I wrote mine, and validated everything I just said, except the author is wrong about COVID-19's HIT; it's 10-20%, not 60%, which is even better news:

Is Covid immunity more common than we think?
spectator.co.uk

> "However, it does provide a possible explanation for why the Covid-19 epidemic seems to have died away in many places once it had infected around 20% of the local population (as judged by the presence of antibodies). If people are developing some kind of immunity to Covid-19 via their T cells, then it could mean that a far higher percentage of the population has been exposed to than previously thought. Antibodies and T cells combined, it is conceivable that some places, such as London or New York, are already at or near the 60% infection level required to achieve herd immunity."

Back to death rates over time. We actually have our own Sweden here in the U.S. It's called New York City. In our case, we accidentally created a Sweden scenario, in that we took our medicine quickly, because: 1) New York locked down so late that they didn't flatten anything, 2) they have the highest population density in the U.S., and 3) the public health officials and Governors there made the [bone-headed decision to send COVID-positive nursing home residents back to their nursing home](#), accelerating deaths of the most vulnerable. What's their death curve look like today? For this, I borrowed the graph from the NYC public health website:

Daily Reported Death Totals

New York City's first confirmed COVID-19 death was reported on March 11.

Due to delays in reporting, recent data are incomplete.

Daily number of COVID-19 deaths among NYC residents

Get the data · Created with Datawrapper
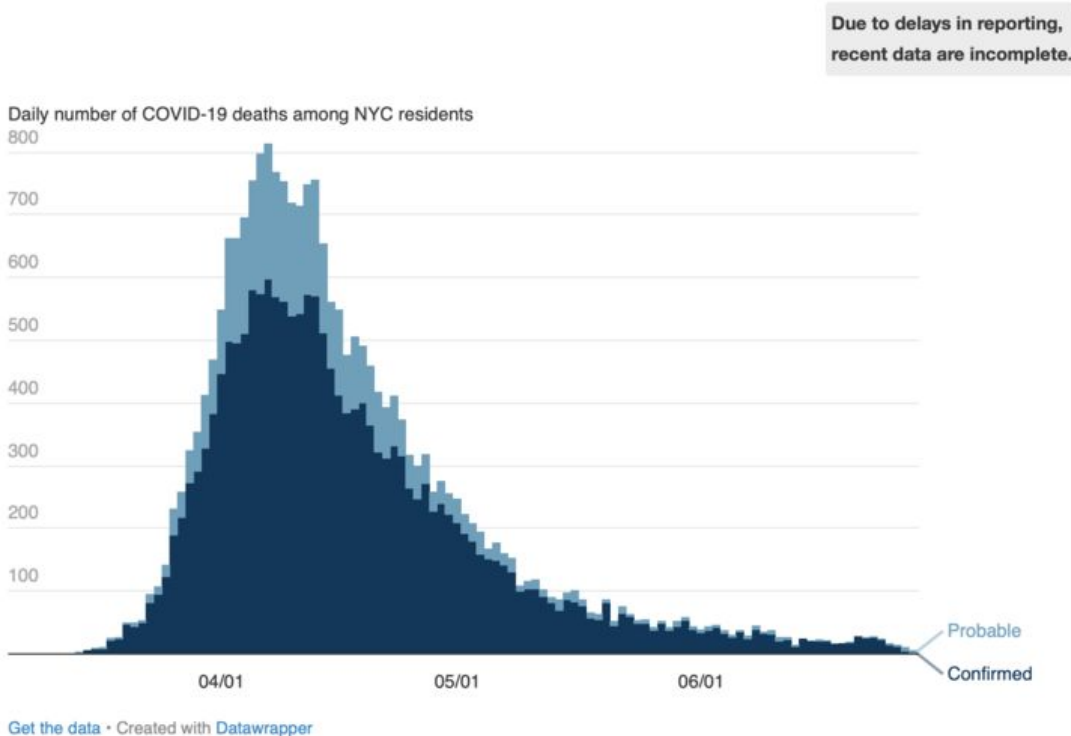
What the end of a virus looks like. Notice anything about the chart or its slope? The reason deaths from COVID-19 are dwindling down to nothing isn't because Governor Cuomo is a policy genius —in fact, he likely created more unnecessary deaths than any other Governor with the nursing home decision— it's because the virus (like every virus in the history of mankind) is running out of people to infect. The virus has a HIT of 10-20% and 70% of people are likely naturally immune. Hosts are in short supply! That's what viruses do, and wait until you see what New York's likely HIT is today.

We can get a crude, but helpful proxy for whether or not a state (or region) has achieved their own Herd Immunity Threshold if we know the following things: the size of the population, the number of deaths from COVID-19, and the virus's Infection Fatality Rate (IFR). In my first blog post late last month, [LOCKDOWN LUNACY: the thinking person's guide](#), I discussed Infection Fatality Rate in detail, so I am just going to give a very quick summary here. Stanford's Dr. John Ioannidis [published a meta-analysis](#) (because so many IFR studies have been done around the world in April and early May) where he analyzed TWELVE separate IFR studies and his conclusion lays out the likely IFR for COVID-19:

> *The infection fatality rate (IFR), the probability of dying for a person who is infected, is one of the most critical and most contested features of the coronavirus disease 2019 (COVID-19) pandemic. The expected total mortality burden of COVID-19 is directly related to the IFR. Moreover, justification for various non-pharmacological public health interventions depends crucially on the IFR. Some aggressive interventions that also potentially induce more pronounced collateral harms1 may be considered appropriate, if IFR is high. Conversely, the same measures may fall short of acceptable risk-benefit thresholds, if the IFR is low…*

> *Interestingly, despite their differences in design, execution, and analysis, most studies provide IFR point estimates that are within a relatively narrow range. Seven of the 12 inferred IFRs are in the range **0.07 to 0.20** (corrected IFR of 0.06 to 0.16) which are similar to IFR values of seasonal influenza. Three values are modestly higher (corrected IFR of 0.25-0.40 in Gangelt, Geneva, and Wuhan) and two are modestly lower than this range (corrected IFR of 0.02-0.03 in Kobe and Oise).*

The data on IFR has now been replicated so many times that our own *Centers for Disease Control* announced that their 'best estimate' showed an IFR **below 0.3%**. In this article on the CDC's new data, they also highlighted how the cascading declines in IFR has removed all the fears of doomsday:

> That "best estimate" scenario also assumes that 35 percent of infections are asymptomatic, meaning the total number of infections is more than 50 percent larger than the number of symptomatic cases. It therefore implies that the IFR is between 0.2 percent and 0.3 percent. By contrast, the projections that the CDC made in March, which predicted that as many as 1.7 million Americans could die from COVID-19 without intervention, assumed an IFR of 0.8 percent. Around the same time, researchers at Imperial College produced a worst-case scenario in which 2.2 million Americans died, based on an IFR of 0.9 percent.

In order to be as bullet-proof as possible, and because the IFR is an important part of the math I will do right now, I've decided to pick a simple and defensible number, the final number pegged by the CDC for **COVID-19's IFR: 0.26%** (As an aside, if we'd known this 3 months ago, no one in the public health world would have panicked. It's a bad flu, and the rates for younger people are dramatically below 0.26% and approaching zero for children.) Now that you understand COVID's IFR and the likely HIT, it's much easier to talk about the second wave, the data, and the implications.

Here's the deal. Yes, certain states are having an uptick in three measurements: COVID-19 tests administered, positive COVID-19 tests, and hospitalizations. All three of these measurements are dubious. Hopefully, some of the rise in cases is *real* because then the U.S. will arrive at Herd Immunity Threshold ("HIT"), which has been slightly delayed by lockdowns, sooner. Based on the "death curve" in the US, we are very close to being done.

Take population, COVID Deaths, and IFR to find HIT
C'mon stay with me! This math is basic, junior high level stuff. And, it's going to give us the most important, but very crude, number we need to understand all this second wave nonsense: the approximate HIT already attained by state and by the United States. If you know how many people have died from COVID-19 in any one region, you can quickly calculate how many people have had COVID-19 in that same region. All you do is divide deaths by the IFR. Let's use NY as the example. As of today, there have been 31,137 deaths from COVID-19. Take 31,137/.0026, you get 11,975,969 people infected with COVID-19. Take those 12 million people divided by New York's population of 19.45 million, you get a HIT of... 65%. *(Data geek comment: New York's HIT is clearly OVER-stated, because total deaths drives HIT, and NY has a much higher rate of nursing home deaths due to bad policy.)*

Huge disclaimer: This math is crude, but it's also directionally accurate, and the comparisons BETWEEN states helps explain what's going on. Importantly, the HIT required to snuff out the virus in any one region could be lower than Sweden's number of 17%, for a million reasons, most notably better medical knowledge today than a few months ago about how to keep a vulnerable person alive. Still, just look at this table I created using the math above:

State	Population	COVID Deaths	IFR	Infected poulation	Implied HIT
New York	19,450,000.00	31,137.00	0.0026	11,975,769	62%
Florida	21,480,000.00	3,418.00	0.0026	1,314,615	6%
Texas	29,000,000.00	2,407.00	0.0026	925,769	3%
Arizona	7,279,000.00	1,594.00	0.0026	613,077	8%
New Jersey	8,882,000.00	14,975.00	0.0026	5,759,615	65%
U.S.	328,200,000.00	128,000.00	0.0026	49,230,769	15%

Notice anything? New York is WELL PAST Herd Immunity Threshold (as is New Jersey), the southern states in the news are BELOW the implied HIT, while the U.S. overall is nearly there with 15%. This is why the death curve from the CDC (and NYC!) that I opened this blog post with looks the way it looks: **we are basically done with the virus.** Just like Sweden. Oh, and Italy:

Daily Deaths
Deaths per Day
Data as of 0:00 GMT+8
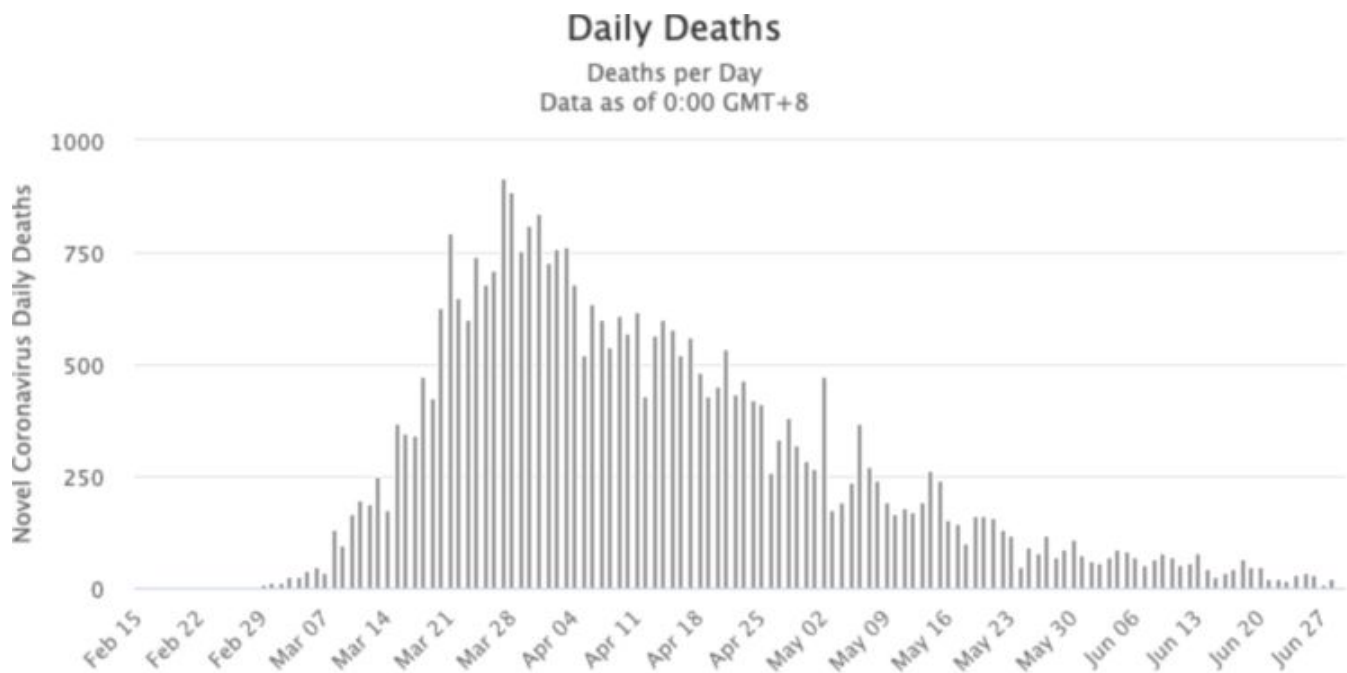
Quick update: Mount Sinai doctors just released a study showing a seroprevalence study of a random sample of 5,000 New Yorkers, it states that "by the week ending April 19, the seroprevalence in the screening group reached 19.3%." If you take that 19.3% number, and consider what we just learned from Sweden —that half of people with immunity won't show it with this test— and then consider how many more people have been exposed since April 28, it's entirely plausible that NY is **well past 40% or more people**, which starts to look closer to the 65% number my math shows. Either way, let's just keep it simple: New York, and especially NYC, are *well past* HIT of 10-20%, which explains why their death curve looks the way it looks.

Florida details

While HIT matters more than anything else in explaining the trajectory of the virus, and tells us that the U.S. is very close to being done with COVID-19, I wanted to take a closer look at one state, Florida, the current whipping boy of the press. They also have great data. No one seems to be listening to the Governor, the health department, or the hospitals in Florida, who all seem to be saying the same thing, which is basically that everything is fine. On June 20, Florida's department of health produced a presentation that explained how their testing had changed over time. Check out this slide:

COVID-19 TESTING EVOLUTION IN FLORIDA:

February and early March: test if symptomatic and traveled to China (or other international location)

Mid-March through April: test if 65+ and symptomatic regardless of travel history (age limit gradually lowered as April wore on)

May (re-opening): test regardless of age and symptoms

So, as the state re-opened, they began to test everyone, "regardless of age and symptoms." What do you think would happen when they did that? Obviously, more positives. So, here's my first fact:

Fact #1: All of the "second wave" states have dramatically increased their testing. This alone causes cases to rise, and is the single biggest reason they have.

Still not convinced? Check out this eye-opener of a chart that shows per-capita testing in the U.S. versus other countries. Notice anything about June? Not only do we do MORE testing than any other country, but our testing spiked in June, right as all the headlines about more cases came out. Hmmm…

Yes, cases are up because more testing is being done. But it's not quite that simple. Cases have never, ever been a reliable indicator of ANYTHING. But hospitalizations have been. And, unexpectedly, there was an uptick in hospitalizations for COVID-19 beginning around June 6th in Florida, as you can see here:

The most obvious reason COVID-19 hospitalizations are going up is because of what's happening in the hospital system. Patients are returning to the hospitals for elective surgery that were all delayed during the lockdown. EVERY patient is screened for COVID-19. A patient who is undergoing elective knee surgery and tests positive for COVID-19, even though they are asymptomatic, will be classified as "hospitalized with COVID-19." This was explained in a recent NY Times article:

> One-third of all patients admitted to Miami's main public hospital over the past two weeks after going to the emergency room for car-crash injuries and other urgent problems have tested positive for the coronavirus.

Fact #2: Hospitalizations for COVID-19 are up slightly because of how COVID-19 positive patients are tracked. They'll be included in the number even if they didn't go to the hospital *because* of COVID-19.
Still, there is something else going on. It's not just more tests and the way hospitalizations are happening. Many states re-opened on May 1 and their trend lines were flat to down for weeks. It's as if some super-spreader event happened in certain states towards late May/Early June. It's really clear that something unique is going on if you look at data from Minnesota (the state where George Floyd was tragically murdered), where positive cased are stratified by age:
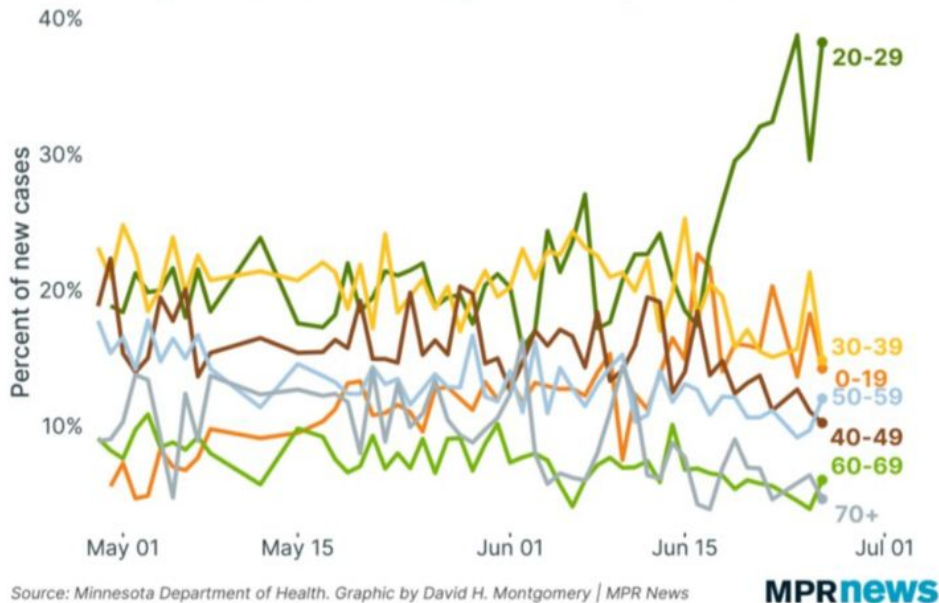
As you can see, in Minnesota, the percentage of positive cases by people age 20-29 really spiked in mid to late June, which means infections likely happened in early June or late May. Yes, obviously, the densely-packed protests for racial equality and social justice —which I personally applaud— appear to have caused a REAL uptick in cases and hospitalizations. See this article, Houston Protesters Begin to Fall Ill With Coronavirus After Marching for George Floyd. Just look at the median age of NEW cases in Florida for mid-June (used to be in the mid-60s):
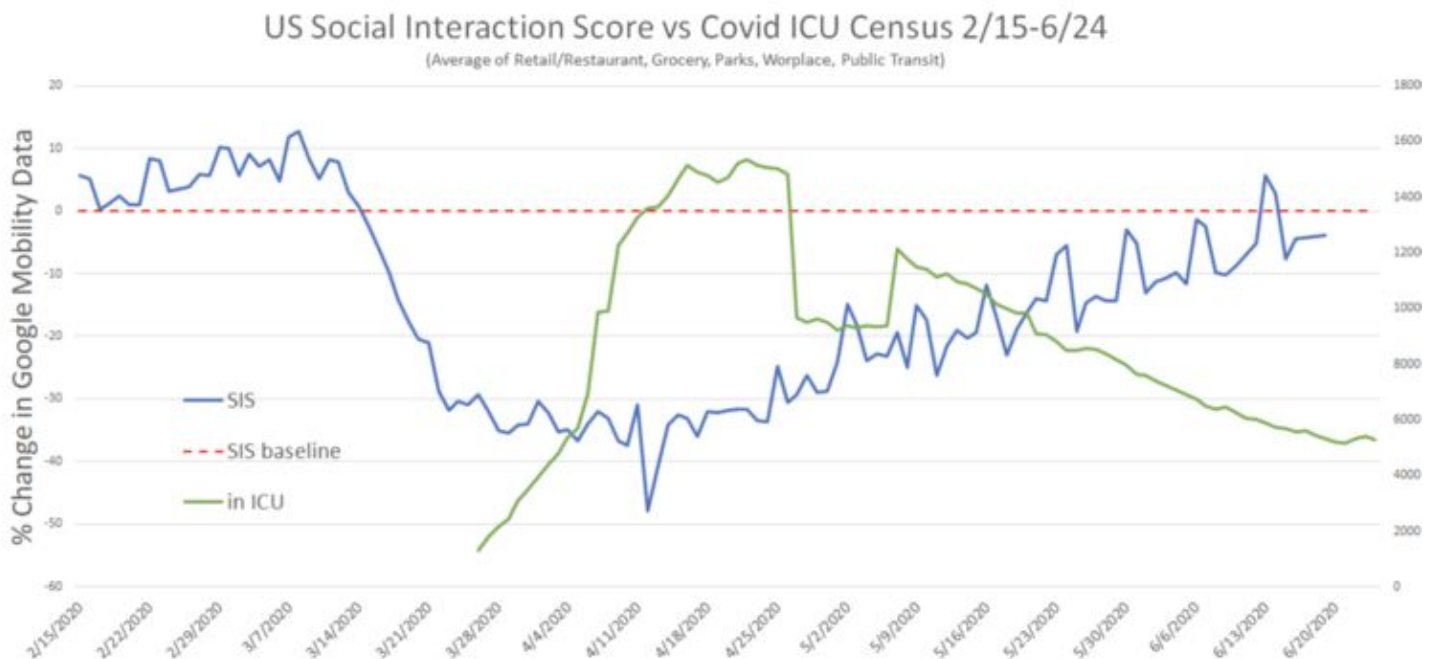
Fact #3: A REAL rise in both cases and hospitalizations perfectly matches the timing of the nationwide protests which included many densely-packed crowds together for many hours and even days.

Not convinced? Check out this [great graph](#) that overlays the timing of the protests, lockdowns, social mobility, and hospitalizations, using data for the entire US. Note there is a time delay between exposure and hospitalizations (between 8 and 15 days), and look at when the yellow hospitalization line goes up.

US Social Interaction Score vs Covid Hospital Census 2/15-6/24
(Average of Retail/Restaurant, Grocery, Parks, Worplace, Public Transit)
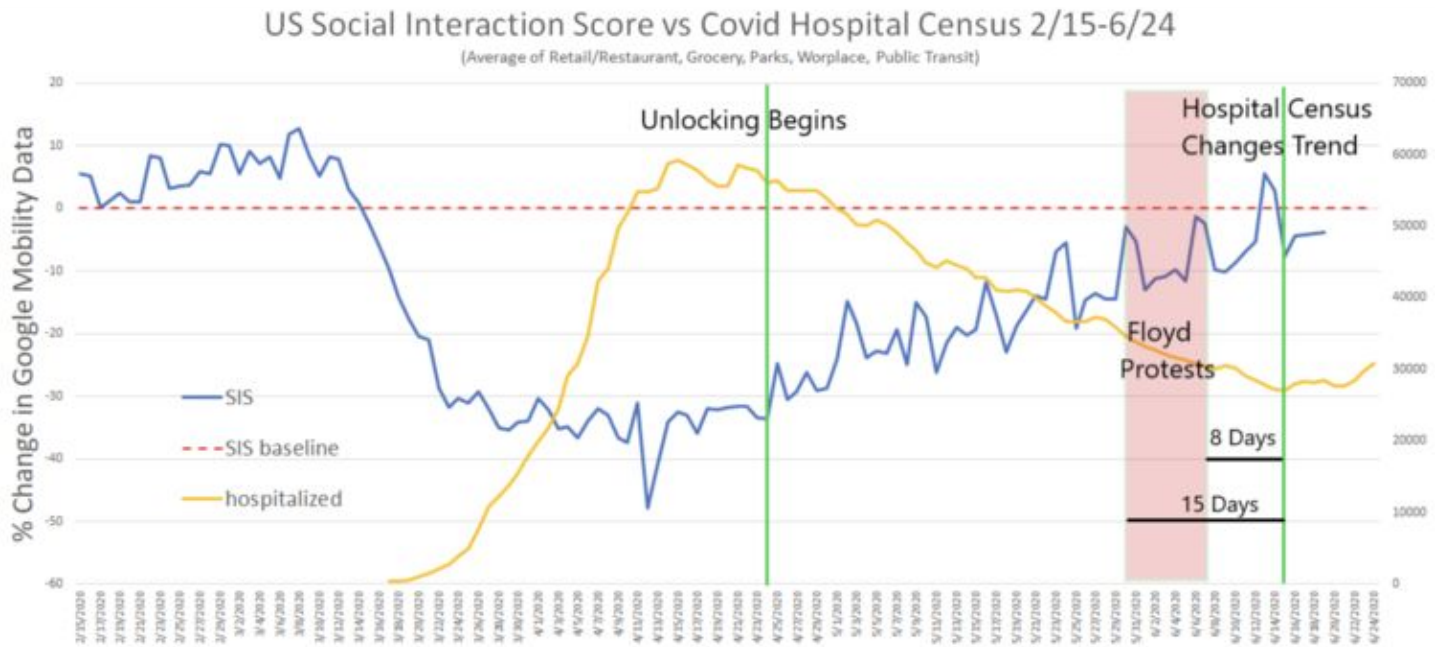
However, the good news about all of this is that there has been no impact on the number of COVID-19 patients in ICUs, which is consistent with the fact that we know younger patients are less impacted by COVID-19. Check out this chart:

US Social Interaction Score vs Covid ICU Census 2/15-6/24
(Average of Retail/Restaurant, Grocery, Parks, Worplace, Public Transit)

Fact #4: Despite a small uptick in hospitalizations, the number of COVID-19 patients in the ICU continues to decline.

<div align="center">

IT'S DEATHS, NOT CASES

</div>

You've been hearing about a handful of states with rising cases, here they are on a chart, cases are clearly rising:
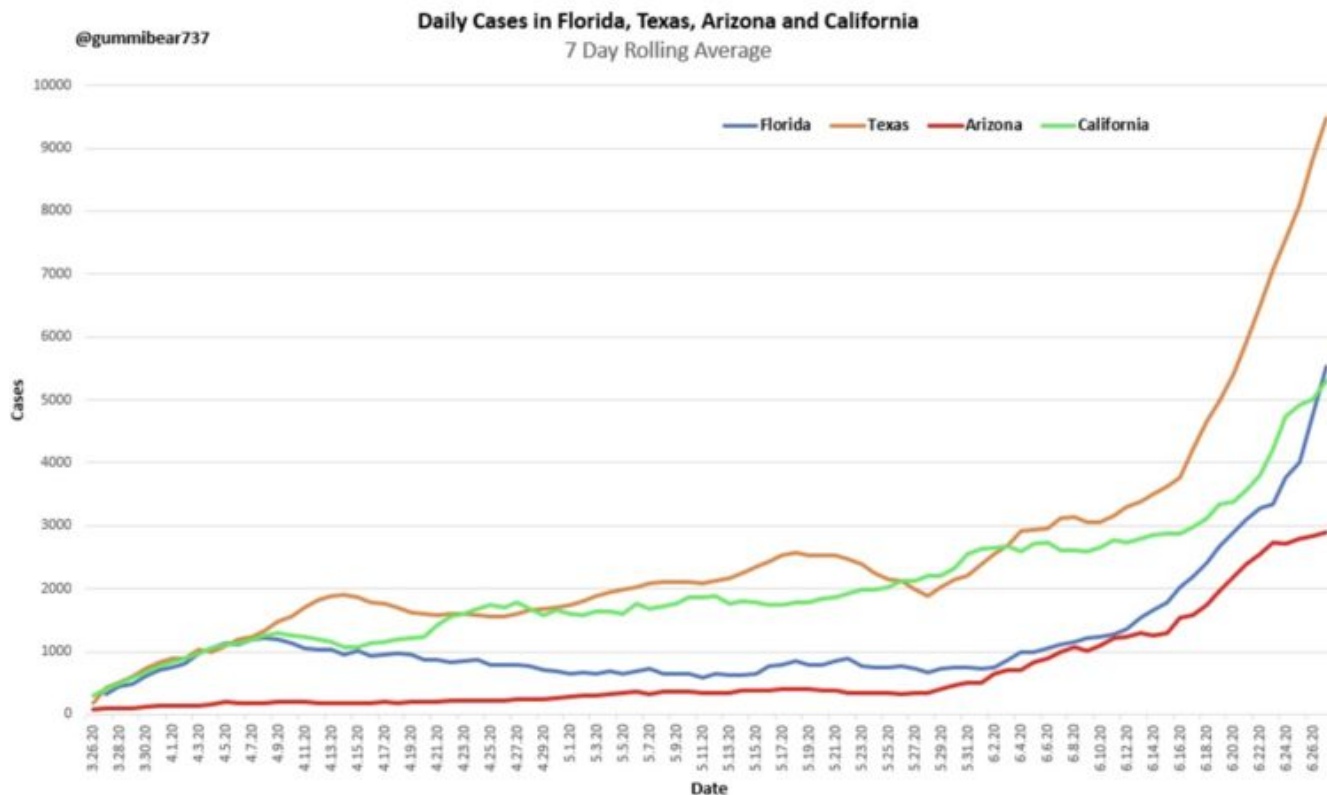
But for those states, what about deaths? They appear to be going the other way:
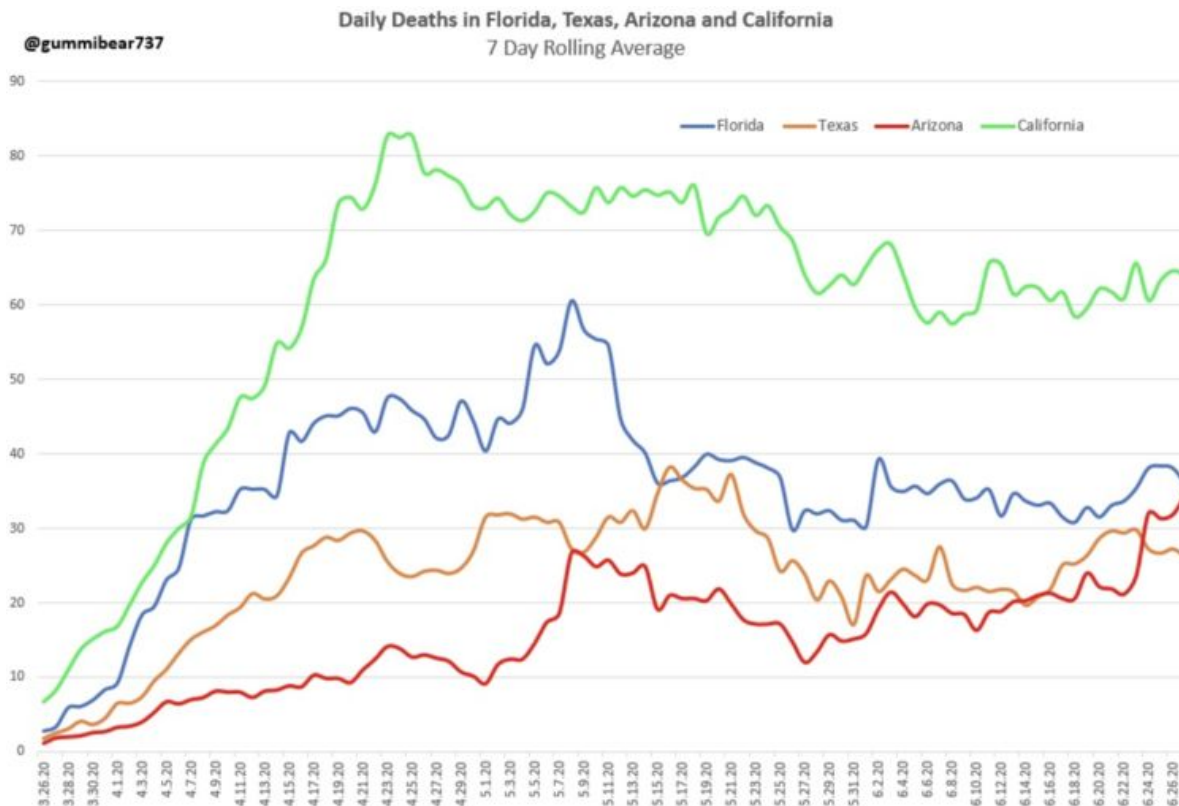
And, finally, perhaps the most important slide, using Florida as the example, there is NO correlation between more tests, more positive tests, and DEATHS (red line in the graph). The fact that these three measures are not linear means Florida has a low and stable death rate, and the recent uptick in positive cases —which happens to be perfectly timed to the nationwide protests— means nothing:

Florida Daily Tests vs Cases vs Deaths
7 Day Rolling Average
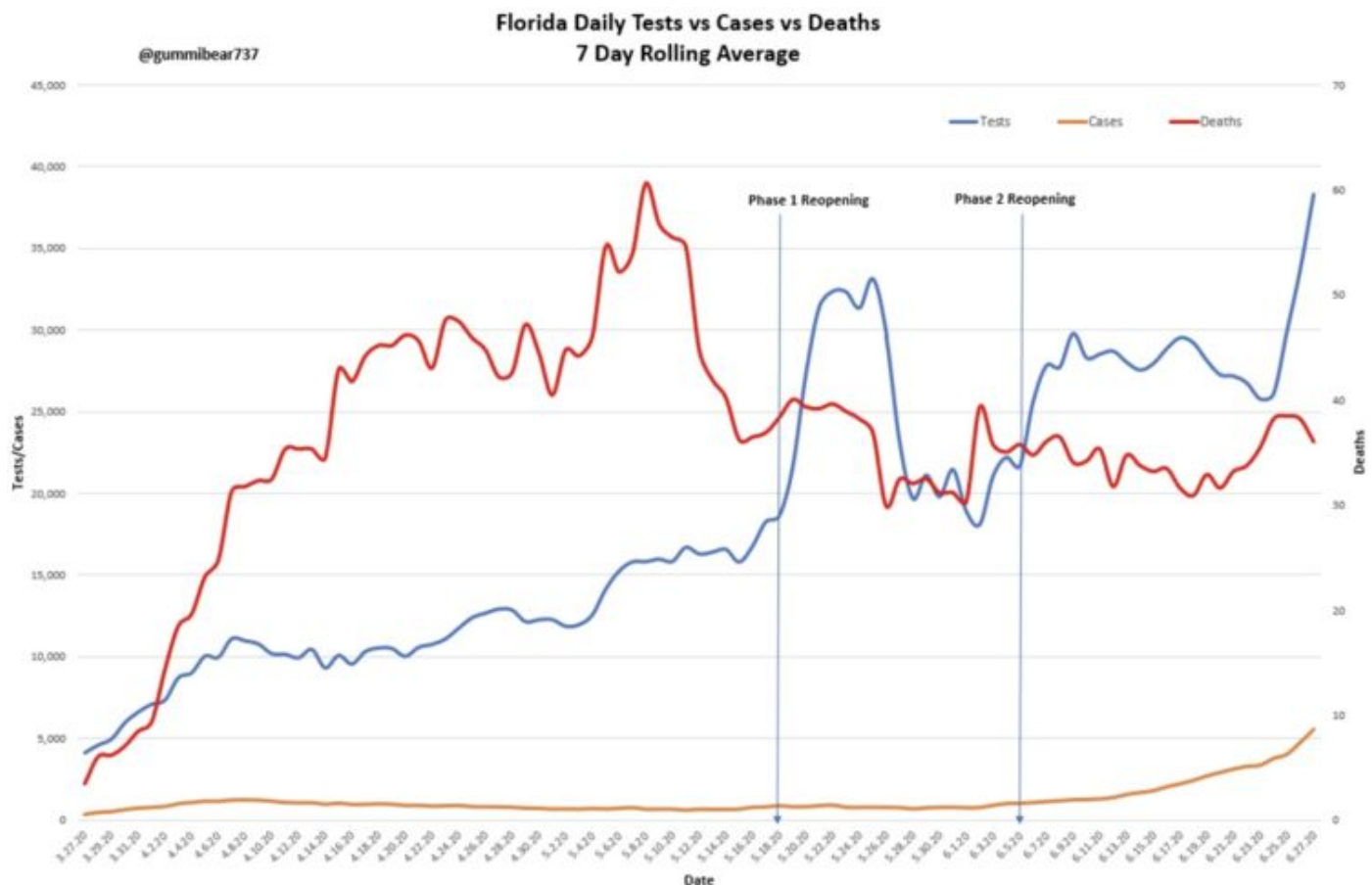
Fact #5: There is NO correlation in Florida —the state taking the most heat in the press about a second wave— between positive tests and deaths.
Of course, anyone who has been paying attention to the data could have told you that, because the national data on COVID-19 deaths is looking more and more like Sweden's, as we already discussed. Today, our national HIT is roughly 15%, which means we are almost done, no matter what any Governor does.

I've seen discussion about how the protests caused an uptick in infections amongst younger people. Some in opposition to that fairly obvious reality point to New York, which also had densely-packed protests but has NOT seen an uptick in hospitalizations. How do you explain that? By now, you know the answer: **New York's HIT is already 65%!**

Notably, in the math I used, Florida only had a Herd Immunity Threshold number of 6%, well below the target of 17%. So, yes, they MAY WELL have to endure a few more deaths before they achieve HIT. But, it's highly likely that 1) it won't need to be as high as 17% because the people being infected are much younger (where death rate is much lower), and 2) that it will happen in the next few weeks, and policy will have nothing to do with whether it happens or not. Either way, because we know the national number is 15%, the virus is almost gone, no matter what anyone says or does, and all you need to do to verify that is look at the CDC's death curve.

A FINAL THOUGHT ABOUT FLORIDA
John Thomas Littell, MD is a family physician in Florida. I was going to publish an excerpt from his Letter to the Editor of the Orlando Medical News, but it's so good and so wide-ranging, I want you to read the whole thing, and then we can wrap this up:

Several times a day, on every possible news outlet, we are bombarded with updates as to the new number of "cases" of COVID-19 in the U.S. and elsewhere. News analysts then use these numbers to justify criticisms of those who dare to reject the CDC's recommendations with regards to mask wearing and social distancing. It is imperative that all Americans —and especially those in the medical profession— understand the actual definition of a "case" of COVID -19 so as to make informed decisions as to how to live our lives.

Older Americans remember all too well the dread they experienced when a family member was diagnosed with a "case" of scarlet fever, diphtheria, whooping cough (pertussis), or polio. During my career in family medicine, including several years as an Army physician, I have cared for patients with chickenpox, shingles, Lyme disease as well as measles, tuberculosis, malaria, and AIDS. The "case definition" established for all of these diseases by the CDC requires the presence of signs and symptoms of that disease. In other words, each case involved a SICK patient. Laboratory studies may be performed to "confirm" a diagnosis, but are not sufficient in the absence of clinical symptoms.

Having now been privileged to care for sick patients with COVID-19, both in and out of the hospital setting, I am happy to see the number of these sick patients dwindle almost to zero in my community – while the "case numbers" for COVID-19 continue to go up. Why is that?

In marked contrast to measles, shingles, and other infectious disease, "cases" of COVID-19 do NOT require the presence of ANY symptoms whatsoever. Health departments are encouraging everyone and anyone to come in for testing, and each positive test is reported as yet another "new" case of COVID-19!

On April 5, 2020, a small number of state epidemiologists (Council of State and Territorial Epidemiologists (CSTE) Technical Supplement: Interim-20-ID-01) came up with a "surveillance" case definition for COVID-19. At the time, there was uncertainty as to whether or not completely asymptomatic persons could transmit COVID-19 sufficiently enough to infect and cause disease in others. (This notion has never been proven and, in fact, has recently been discounted – cfr " A Study on the Infectivity of Asymptomatic SARS-CoV-2 Carriers, Ming Fao et al, Respir Med, 2020 Aug – available online through PubMed 2020 May 13, as well as recent reports from the WHO itself). The CSTF thereby justified the unconventional case definition for COVID-19, adding "CSTE realizes that field investigations will involve evaluations of persons with no symptoms and these individuals will need to be counted as cases."

Hence, anyone who has a positive PCR test (the nasal swab, PCR test for COVID Antigen or Nucleic Acid) or serological test (blood test for antibodies –IgG and/or IgM) would be classified as a "case" – even in the absence of symptoms. In our hospitals at this time, there are hundreds of former nursing home residents sitting in "COVID" units who are in their usual state of good health, banned from returning to their former nursing home residences simply because they have TESTED Positive for COVID-19 during mass testing programs in the nursing homes.

The presence of a positive lab test for COVID-19 in a person who has never been sick is actually GOOD news for that person and for the rest of us. The positive test indicates that this person has likely mounted an adequate immune response to a small dose of COVID-19 to whom he or she was exposed naturally (hence, no need for a vaccine vs. COVID-19).

It is important as well to understand that the presence of lab testing is not the ONLY criterion that the the CDC uses to established a diagnosis of COVID-19. The presence of only 1 or 2 flu-like symptoms (fever,chills, cough, sore throat, shortness of breath) in the absence of another proven cause (e. g. , influenza, bacterial pneumonia) is SUFFICIENT to give a diagnosis of COVID-19— as long as the patient also meets certain "epidemiological linkage" criteria as follows:

"In a person with clinically compatible symptoms, [a "case" will be reported if that person had] one or more of the following exposures in the 14 days before onset of symptoms: travel to or residence in an area with sustained, ongoing community transmission of SARS-CoV-2; close contact (10 minutes or longer,

within a 6 foot distance) with a person diagnosed with COVID-19; or member of a risk cohort as defined by public health authorities during an outbreak." Note that the definition of a "risk cohort" includes age > 70 or living in a nursing home or similar facility."

So, in essence, any person with an influenza-like illness (ILI) could be considered a "case" of COVID-19, even WITHOUT confirmatory lab testing. The CDC has even advised to consider any deaths from pneumonia or ILI as "Covid-related" deaths, unless the physician or medical examiner establishes another infectious agent as the cause of illness.

Now perhaps you see why the increasing number of cases, and even deaths, due to COVID-19 is fraught with misinterpretation and is NOT in any way a measure of the ACTUAL morbidity and mortality FROM COVID-19. My patients who insist upon wearing masks, gloves and social distancing are citing these misleading statistics as justification for their decisions (and, of course, that they are following the "CDC guidelines"). I simply advise them, "COVID-19 is NOT in the atmosphere around us; it resides in the respiratory tracts of infected individuals and can only be transmitted to others by sick, infected persons after prolonged contact with others".

So you may ask— why are we continuing to report increasing numbers of cases of COVID as though it were BAD news for America rather than as GOOD news (i.e– that the thousands of healthy Americans testing positive —also known as "asymptomatic"— are indicative of the presence of herd immunity, protecting themselves and many of us from potential future assaults by COVID variants)?

Why did we as a society stop sending our children to schools and camps and sports activities? Why did we stop going to work and church and public parks and beaches? Why did we insist that healthy persons "stay at home," rather than observing the evidence-based, medically-prudent method of identifying those who were sick and isolating them from the rest of the population… advising the sick to "stay at home" and allowing the rest of society to function normally? And, while we witnessed the gatherings of protestors in recent days with little concern for COVID-19 spreading among these asymptomatic persons, certainly many are hoping that the increasing COVID-19 "case" numbers will discourage folks from coming to any more rallies for certain candidates for political office.

Fear is a powerful weapon. FDR famously broadcast to Americans in 1933 that "We have nothing to fear, but fear itself." I would argue that we have to fear those who would have us remain fearful and servile and willing to surrender basic freedoms without justification.

John Thomas Littell, MD is a board-certified family physician. After earning his MD from George Washington University, he served in the US Army, receiving the Meritorious Service Medal for his work in quality improvement, and also served with the National Health Service Corps in Montana. During his eighteen years in Kissimmee, FL, Dr Littell has served on the faculty of the UCF School of Medicine, President of the County Medical Society, and Chief of Staff at the Florida Hospital. He currently resides with his wife, Kathleen, and family in Ocala, Florida, where he remains very active as a family physician with practices both in Kissimmee and Ocala.

Dr. Littell brings up many more issues than I have chosen to address in this post, because I already wrote about them in my [previous blog post on May 30.](#)

Wasn't this supposed to be about hospitals?
The only reason ever given for locking down in the first place was space availability in hospitals. Here's what Florida said about their hospitals last week:

FLORIDA'S HOSPITAL SYSTEM

- Twice as many beds available than before the pandemic as a percentage.
- Far fewer COVID-19 patients in ICU and on ventilators than in April.
- Non-COVID hospital patients are tested for COVID.

And here's what doctors in Houston, Texas said last week:

> *Hospital CEO's including, Dr. Marc Boom with* Houston Methodist*, Dr. David L. Callender with* Memorial Hermann Health System*, Dr. Doug Lawson with* St. Luke's Health*, and Mark A. Wallace with* Texas Children's Hospital*, held a zoom conference, June 25, out of concern, "that recent news coverage has unnecessarily alarmed the Houston community about hospital capacity during this COVID-19 surge." The two key major takeaways from today's discussion: The Houston health care system has the resources and capacity necessary to treat patients with COVID-19 and otherwise…*

So why is the press making such a big deal out of the "second wave"? I don't do politics, but if I did I would probably mention that here.

What are Governors doing?
In a quick word: nothing helpful. I think this guy summarizes how I feel:

Seriously, though, the rollbacks of openings are simply ridiculous, and simply compounding a terrible idea, and delaying the inevitable process within each region of achieving a proper Herd Immunity Threshold. If you want to get angry about lockdowns all over again, like I did in my article in May, just read this: The lockdown is causing so many deaths. Here's an excerpt:
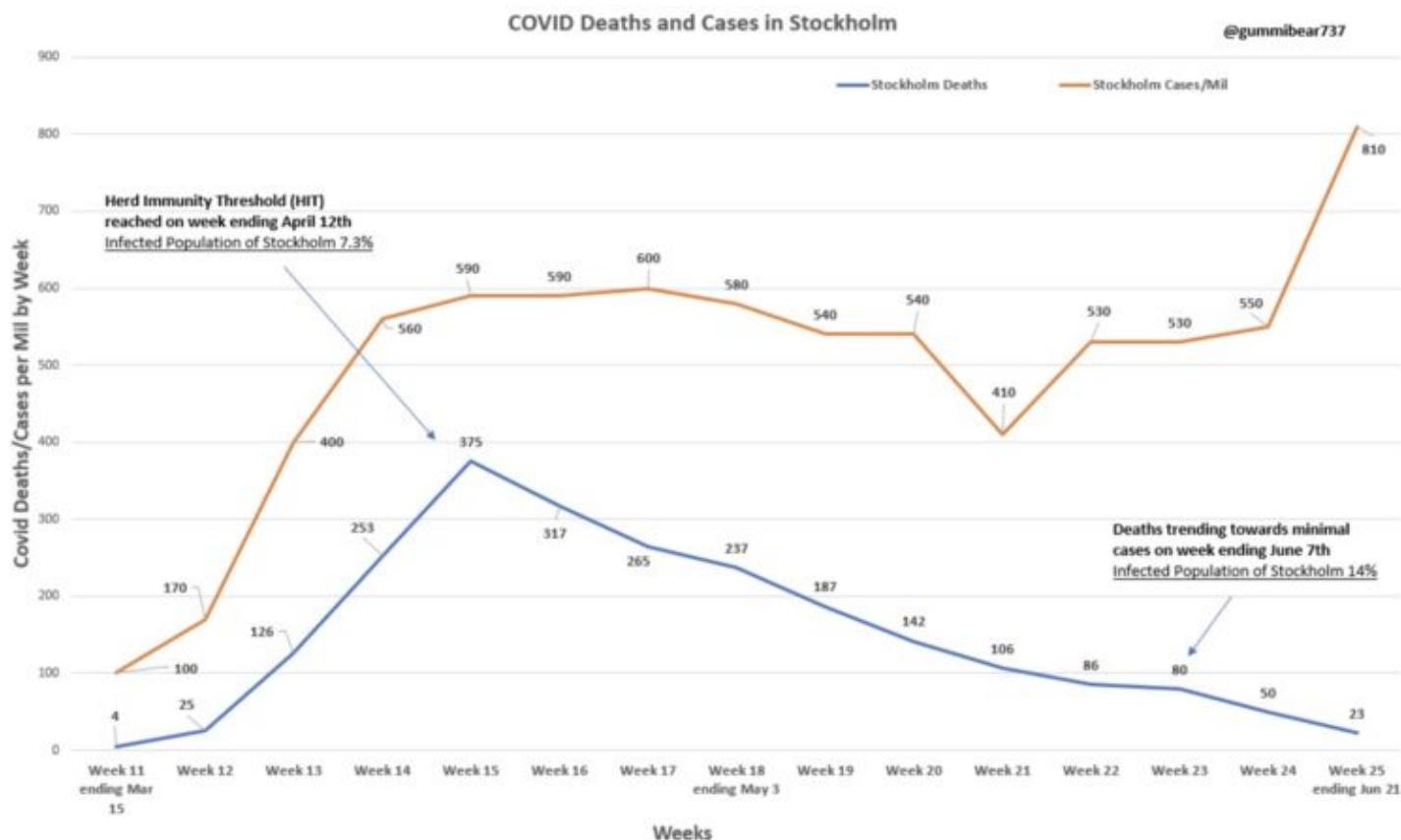
> *How many people aged 15 or under have died of Covid-19? Four. The chance of dying from a lightning strike is one in 700,000. The chance of dying of Covid-19 in that age group is one in 3.5 million! And we locked them all down. Even among the 15- to 44-year-olds, the death rate is very low, and the vast majority of deaths have been people who had significant underlying health conditions. We locked them down as well. We locked down the population that had virtually zero risk of getting any serious problems from the disease, and then spread it wildly among the highly vulnerable age group. If you had written a plan for making a complete bollocks of things you would have come up with this one.*

In Conclusion
Dr. Michael Levitt and Sweden have been right all along. The only way through COVID-19 is by achieving the modest (10-20%) Herd Immunity Threshold required to have the virus snuff itself out. The sooner politicians —and the press— start talking about HIT and stop talking about new confirmed cases, the better off we will all be. Either way, it's likely weeks, not months, before the data of new daily deaths will be so low that the press will have to find something new to scare everyone. It's over.

A quick note:
Haters of this article will post articles about Sweden saying their approach has been a failure. They will point to recent press about Sweden having higher rates of COVID-19 positive tests lately —Sweden has pushed back strongly— so here's a chart for the haters, it shows positive cases in Sweden, tracked against deaths. There's no correlation.

COVID Deaths and Cases in Stockholm

@gummibear737

— Stockholm Deaths   — Stockholm Cases/Mil

Covid Deaths/Cases per Mil by Week

Herd Immunity Threshold (HIT)
reached on week ending April 12th
Infected Population of Stockholm 7.3%

Deaths trending towards minimal
cases on week ending June 7th
Infected Population of Stockholm 14%

590   590   600   580   540   540   530   530   550   810
560
400   375
253   317   237
170   126   265   187   410
100   142   106   86   80   550
4   25   50   23

Week 11 ending Mar 15 | Week 12 | Week 13 | Week 14 | Week 15 | Week 16 | Week 17 | Week 18 ending May 3 | Week 19 | Week 20 | Week 21 | Week 22 | Week 23 | Week 24 | Week 25 ending Jun 21

Weeks

For my truly committed readers who made it this far:

> *"The death rate is a fact; anything beyond this is an inference." – William Farr (1807 – 1883)*

William Farr, creator of Farr's law, knew this over 100 years ago. Viruses rise and fall at roughly the same slopes. It's predictable, and COVID-19 is no different, which is why, after looking at all these death curves, it's not very hard to declare that the pandemic is over. Oxford's center for Evidence Based Medicine has a wonderful explanation of Farr's law, and it's [well worth a read](#). Some of my favorite quotes:

> *"Farr shows us that once peak infection has been reached, it will then roughly follow the same symmetrical pattern on the downward slope."*

> *"In the midst of a pandemic, it is easy to forget Farr's Law, and believe the number infected will just keep rising. It will not. Just as quick as measures were introduced to prevent the spread of infection we need to recognise the point at which to open up society and also the special measures, due to 'density,' that require special considerations."*
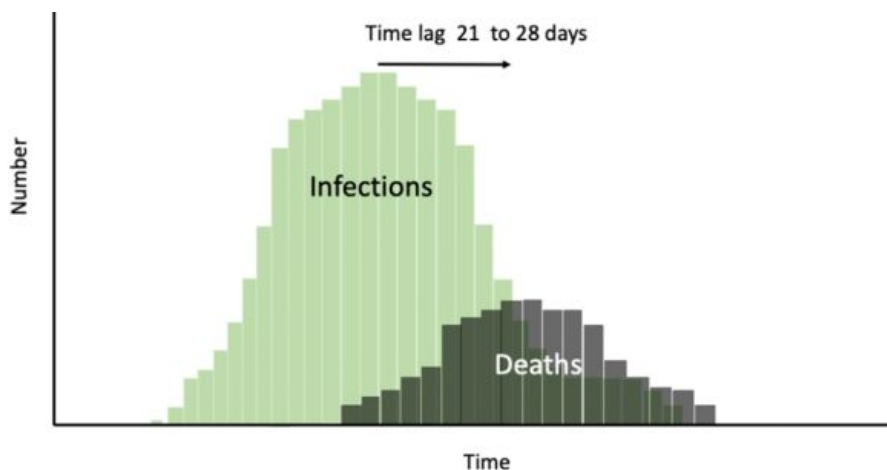
Time lag 21 to 28 days

Number

Infections

Deaths

Time

"Once peak deaths have been reached we should be working on the assumption that the infection has already started falling in the same progressive steps. Using deaths as the proxy for falling infections facilitates the planning of the next steps for reopening those societies that are in lockdown."

A reader just sent me this chart from the CDC. If you don't think the COVID-19 virus has run its course according to Farr's Law, I can't help you!

> Table 1. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by sex and age group. United States. Week ending 2/1/2020 to 6/27/2020

Provisional Death Counts for Coronavirus Disease (COVID-19)

Select Sex	Select Measure	Reporting Period
All sex	COVID-19 Deaths	**Week ending 2/1/2020 through 6/27/2020**

Provisional Death Counts, by Week Ending Date and Age Group

Age Group ● 0-24 years ● 25-34 years ● 35-44 years ● 45-54 years ● 55-64 years ● 65-74 years ● 75-84 years ● 85 years and over

NOTE: Provisional death counts are based on death certificate data received and coded by the National Center for Health Statistics as of the date of analysis and do not represent all deaths that occurred in that period.
SOURCE: NCHS, National Vital Statistics System. Estimates are based on provisional data.

See next blog post: LOCKDOWN LUNACY 3.0: It's over.

LOCKDOWN LUNACY 3.0
It's over.

By J. B. Handley | July 28, 2020

If you're hoping the COVID-19 pandemic will go on forever, this post may disappoint you. And, I get it. We have gone frothing-at-the-mouth nuts over a slightly above-normal virulence virus, with a unique and obvious age-distribution pattern that should have made containment easy and panic completely unnecessary. And, if you're living in the United States, like I am, you probably think my declaration that this pandemic is "over" to be somewhere between wishful thinking and incredibly premature. And I hear you, too; although forgive me if I'm not sure you're the one thinking clearly, given some of the things I've recently read. I promise to support my assertions with data, and the wisdom of people far more expert than I, who are having a harder time being heard in the present climate of…bats#@t crazy.

Have we lost our collective minds? Yes.

You may not be one of them. In fact, I'm guessing the people who actually take the time to read my blog posts are the few remaining who haven't been subsumed by the panic, but can we agree that most have? Jeffrey A. Tucker of the American Institute for Economic Research put it best in his excellent essay on July 10 titled, When will the Madness End?:

> "I'm a practicing psychiatrist who specializes in anxiety disorders, paranoid delusions, and irrational fear. I've been treating this in individuals as a specialist. It's hard enough to contain these problems in normal times. What's happening now is a spread of this serious medical condition to the whole population. It can happen with anything, but here we see a primal fear of disease turning into mass panic. It seems almost deliberate. It is tragic. Once this starts, it could take years to repair the psychological damage."

I'm 50 years old, and I've noticed that younger people seem particularly scared of COVID-19. They are the ones I typically see biking and hiking with masks on, and this survey really corroborated that point:

Figure 1. Estimated Covid-19 Risks for "People Like You"
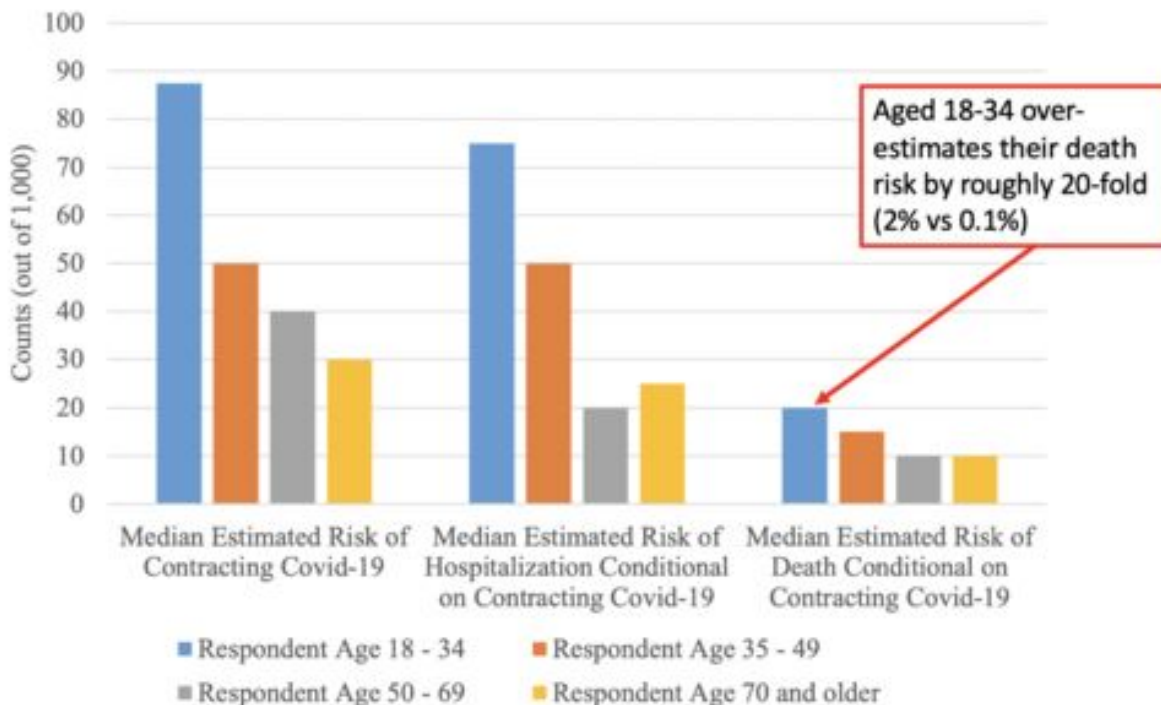
The age gradient is striking: the young attach higher probabilities to people like themselves contracting COVID-19, of being hospitalized conditional on infection, and of dying conditional on infection. Arguably, young respondents have a lifestyle that exposes them to wider networks, and this may explain why they feel more likely to be infected. But their assessment of health risks conditional on infection are puzzling in light of the evidence that COVID-19 is significantly less severe for younger people. Crucially, young people, as compared to older people, report substantially higher mortality rates for every age group. Young people are more pessimistic than older people not only about their own mortality risk but also about everyone else's mortality risk.

Daniel Horowitz wrote a great article about this survey titled, New study: Millennials think their risk from COVID-19 is exponentially more than the true threat. He writes:

> Perhaps the most destructive element of lockdown is the panic and fear that such severe measures help confirm, in this case, wrongly so, in the minds of the young and impressionable. As the paper concludes, "Experience has shown that communities faced with epidemics or other adverse events respond best and with the least anxiety when the normal social functioning of the community is least disrupted." In other words, we need to flatten the fear.

I thought that survey was bad enough, but a different survey by *Kekst CNC* asking different questions revealed a simply astonishing figure: Americans over-estimated the TOTAL number of compatriots who have died from COVID-19 by 200-fold! When asked the question (in mid-July), "How many people in your country have died from the Coronavirus?," **Americans responded "9%,"** which would be roughly 30,000,000 people, versus the actual number of 151,000. No wonder people are panicked (and wildly, wildly misinformed.)

Perception vs reality – the impact of Covid-19

People think coronavirus is much more prevalent than it is – and that many more have died than in reality

How many people in your country have had coronavirus?

22% 4x modelled cases (ONS)
20% 20x confirmed cases (CDC)
11% 46x confirmed cases (RKI)
16% 20x confirmed cases (PHS)
12% 46x confirmed cases (SPF)

How many people in your country have died from coronavirus?

7% 100x confirmed deaths (PHE)
9% 225x confirmed deaths (CDC)
3% 300x confirmed deaths (RKI)
6% 100x confirmed deaths (PHS)
5% 100x confirmed deaths (SPF)

Respondents across all countries were asked to enter a % for each category. The mean percentage is shown for each. Comparisons are shown on confirmed cases/deaths or, in the case of the UK, best modelled estimates of total COVID cases.

UK
U.S.
DE
SE
FR

Great, so we can at least agree on three points: 1) Society has lost its collective mind over a virus, and 2) younger people overestimate the risk of dying from COVID-19, which creates a vicious cycle with Point #1, and 3) Americans have wildly over-estimated how many people have died from COVID-19.

This is the third time I have written about the pandemic. My first and second blogs provide plenty of data and perspective. I think there are five bits of data that I've explored in the past that merit an update:

1. Infection Fatality Rate

The "IFR," unlike the "Case Fatality Rate" that is more often quoted in the news, is the ACTUAL fatality rate of COVID-19. In order to accurately forecast the IFR, you need two bits of data: total deaths, and total people who have had the virus. The second data point is harder to find, because so many people are asymptomatic, but the most reliable data I have found is in this meta-analysis by Stanford's Dr. John Ioannidis titled, [The infection fatality rate of COVID-19 inferred from seroprevalence data](). What does the paper conclude? **A median IFR of 0.25%.** It's hard to make this point strongly enough: a virus with an IFR this low would never, ever merit the response we've seen from health authorities and elected officials. COVID-19 is hardly a "once in a century pandemic" as some try to say; it's a strong flu bug, nothing more.

2. Death rates by age stratification

The best science I have seen showing IFR by age is this study titled [Assessing The Age Specificity Of Infection Fatality Rates For Covid-19: Meta-Analysis & Public Policy Implications](). Check out this chart:

Table 6: Age-Specific Fatality Rates for COVID-19 vs. Accidental Injuries

Age Group	COVID-19 Infection Fatality Rate (%)	Automobile Accident Annualized Fatality Rate (%)	Other Accidental Injury Annualized Fatality Rate (%)
0 to 44	0.01	0.01	0.03
45 to 54	0.14	0.01	0.04
55 to 64	0.48	0.01	0.04
65 to 74	1.65	0.01	0.04
75 to 84	5.72	0.02	0.09
85+	22.5	0.02	0.35

Source: National Center for Health Statistics (2020)

I wish this chart broke the age down even further, particularly in the 0-10 or 0-20 age range, where the IFR is effectively zero. These facts are slowly making their way into the mainstream, and the paper concludes: "Age and fatality risk for COVID-19 are exponentially related. In non-technical terms, COVID-19 poses a very low risk for children and younger adults but is hazardous for middle-aged adults and extremely dangerous for elderly people."

3. Herd Immunity Threshold.

Since my [previous blog post](), when I wrote about Herd Immunity Threshold in detail, it's becoming even more clear that the "H.I.T." of COVID-19 is very likely in the 10-20% range, rather than the 60-70% range that was originally thought. It would be impossible to overstate the importance of this difference, because it supports exactly WHY COVID-19 has already reached herd immunity in most of Europe, and WHY we're almost done here in the U.S., too. Here's one new paper, [Herd immunity thresholds for SARS-CoV-2 estimated from unfolding epidemics](). Their conclusion:

Our inferences result in herd immunity thresholds around 10-20%…these findings have profound consequences for the governance of the current pandemic given that some populations may be close to achieving herd immunity despite being under more or less strict social distancing measures.

The conclusion that COVID-19's H.I.T. is between 10-20% is gaining wide acceptance, and it's being borne out in the real world as countries everywhere are watching deaths from COVID-19 simply dry up, as the virus runs out of new people to infect. The obvious explanation for WHY the H.I.T. for COVID-19 is far lower than thought is that many more of us are naturally immune to COVID-19, because our T-cells carry immunity based on the fact that we've all been exposed to many prior corona viruses, which is commonly called a cold. My favorite outspoken scientist on this issue is Oxford's Dr. Sunetra Gupta, check out this interview with her titled, "We may already have herd immunity – an interview with Professor Sunetra Gupta." A quote:

What I didn't anticipate was that some of our responses to previous exposure to seasonal coronaviruses might actually protect us from infection. It's one thing to get infected and not ill, but what the new studies are showing is that people are actually fighting off infection. So at an even more basic level, the pre-existing antibodies or T-cell responses against coronaviruses seem to protect against infection, not just the outcome of infection.

If you read one link in this whole blog post, I'd make it this interview with Dr. Gupta. It's wide-ranging and she also explains how lockdowns not only don't work (see next), but that countries and states that sealed themselves off
—like New Zealand or Hawaii— are simply postponing their day of reckoning. Dr. Gupta and her team's new paper, The impact of host resistance on cumulative mortality and the threshold of herd immunity for SARS-CoV-2, explores the issue of H.I.T. further:

These results help to explain the large degree of regional variation observed in seroprevalence and cumulative deaths and suggest that sufficient herd-immunity may already be in place to substantially mitigate a potential second wave… Equally, seropositivity measures of 10-20% are entirely compatible with local levels of immunity having approached or even exceeded the HIT, in which case the risk and scale of resurgence is lower than currently perceived.

4. Lockdowns don't work.
Getting politicians involved in trying to fight the normal course of a viral illness will hopefully be seen by historians as one of the silliest things we ever chose to do. In simple terms, a virus is gonna be a virus. As Dr. Gupta explains, *"The epidemic is an ecological relationship that we have to manage between ourselves and the virus. But instead, people are looking at it as a completely external thing."* Said differently— like every other virus, COVID-19 is here to stay. Lockdowns provide politicians with an "illusion of control," but the data is rolling in that they have been useless,. And even *The Lancet,* one of the world's most prestigious medical journals, has weighed in. Titled A country level analysis measuring the impact of government actions, country preparedness and socioeconomic factors on COVID-19 mortality and related health outcomes, their conclusions are pretty stark, and depressing for those of us who have undergone lockdowns:

"Government actions such as border closures, full lockdowns, and a high rate of COVID-19 testing were not associated with statistically significant reductions in the number of critical cases or overall mortality."

German scientists looked at the same topic just within the country of Germany and reached the same conclusion in this paper, titled Change points in the spread of COVID-19 question the effectiveness of nonpharmaceutical interventions in Germany. An excerpt:

A trend change of infections from exponential growth to decay was not induced by the "lockdown" measures but occurred earlier. Additional impacts of later NPIs cannot be clearly detected: Firstly, there is no significant effect with respect to infections that could be attributed to school and day-care closures. Secondly, effects which could be related to the contact ban a) do not appear with respect to all three indicators, b) differ in strength and tend towards lower impacts, and c) do not match the time the

measure came into force. Thus, the necessity of the second (March 16-18) and the third bundle of interventions (March 23) is questionable…

All these American Governors threatening to resume lockdowns? Yes, there's no science that supports anything they are threatening. A virus is going to be a virus, which leads me to the final piece of data before we look at the evidence that inspired the title of this piece, the evidence that the pandemic is OVER.
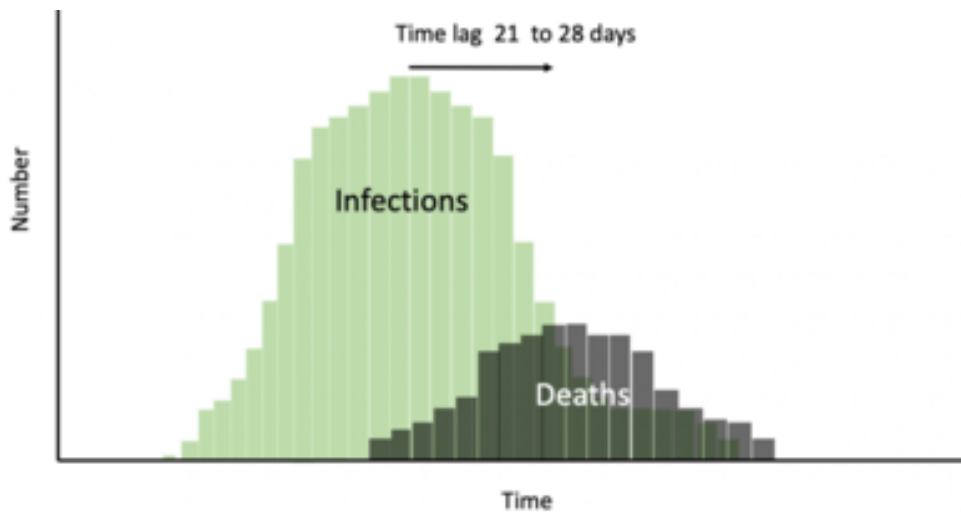
Farr's law on a chart, from Oxford

5. Viruses go up, and then down, and the death rate is the only reliable way to track them.
A team at Oxford explains this way better than I ever can. In this post, titled COVID-19: William Farr's way out of the Pandemic, they explain how Farr, a UK epidemiologist from the mid-19th century, understood that all viruses follow a similar pattern, and that the slope of the death curve on the way up will roughly equal the slope on the way down; which means if you know when you have reached peak deaths, you have a very good idea of when the virus will be extinguished. As Farr wrote, "The death rate is a fact; anything beyond this is an inference." *The Oxford* scientists write:

> *Once peak deaths have been reached we should be working on the assumption that the infection has already started falling in the same progressive steps. Using deaths as the proxy for falling infections facilitates the planning of the next steps for reopening those societies that are in lockdown.*

I think there are two points about Farr's Law that deserve further clarification:

- In order to prove the virus is basically done, I'm going to be showing you death curves from all over the world. My death curves are based on country-specific reported COVID-19 deaths. This runs the risk that COVID-19 deaths are over-stated because of the pressure in many places to classify any questionable death as a COVID-19 death. The proper way to measure the impact of a virus is to compare current year "all cause mortality" versus previous year "all cause mortality." This is a far more accurate way to see IF COVID-19 impacted mortality, and the way Farr recommended doing it.

- I missed something when I wrote my previous blog post. While Farr has been proven right, that viruses typically have the same death slope on the way up and down, I missed the wisdom of another British scientist, Dr. Edgar Hope Simpson, who explained that the course of a virus is DIFFERENT in terms of both timing and its slope, based on WHERE in the world you live, by latitude. Whether driven by solar radiation or Vitamin D levels, Hope-Simpson long ago predicted exactly what happened in California, Arizona, Texas, and Florida in the last month: COVID-19 came later, on a lower death curve, to U.S. states that sit at or below the 35th parallel (see chart from his book that shows this visually). Hope-Simpson's seminal work is a book titled The Transmission of Epidemic Influenza, and why our public

health authorities never discuss the fact that seasonal viruses hit our lower latitudes later in the year is beyond me. The U.S. is unique, relative to Western Europe, because our geography is so vast. In simple terms, our northern states are done with their death curves, and our southern states are almost there. Read on.
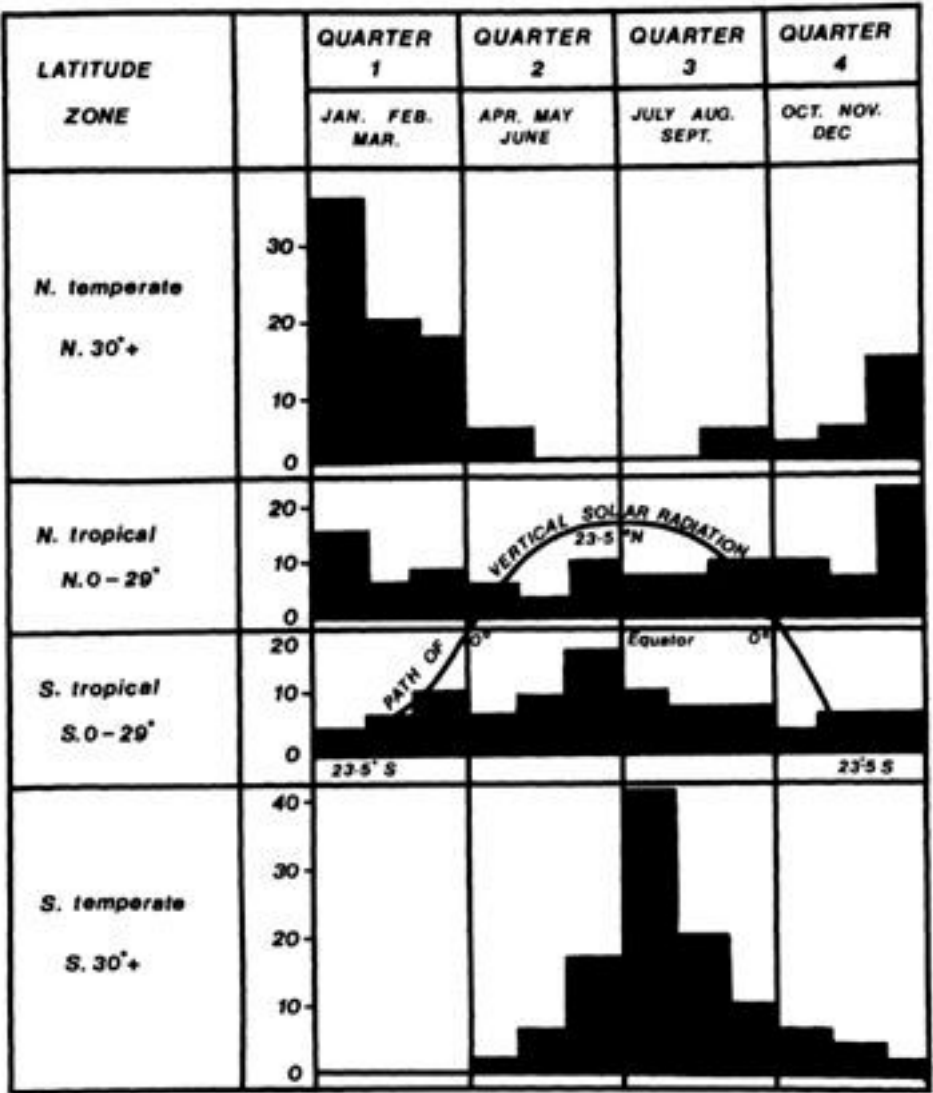

FIGURE 8.4. The distribution of world epidemic influenza 1964 to 1975 in four major zones of latitude. In each zone the percentage of the zone's epidemic months is shown monthly. The epidemic months cluster around local midwinter in both temperate zones whereas in both tropical zones they show a transition, each approaching the distribution in its own temperate zone. See also Table 8.1 (data extracted from the *Weekly Epidemiological Record* of WHO; Hope-Simpson,[4] p. 39, Fig. 2: reproduced with permission from *Epidemiology and Infection*).

Hope-Simpson's viral seasonality

Now we get to the fun part: Celebrating that the COVID-19 pandemic is over in most Northern countries and passed the peak in most Southern countries. In the United States, we actually have two distinct death curves, roughly divided along the 35th parallel. The Northern states are done, and the Southern states are almost done. I'll start with the rest of the world, and finish with the U.S. Please note that ALL the death curve charts I'm using come from Worldometers, so you can go see the exact same ones for yourself. Are they imperfect? Yes. But, they are the best we have. Will I give you an actual date for the U.S.? Yes, I will.

Europe
Here are the death curves, from Worldometers, for six European countries. It's self-explanatory, so I won't belabor the point. To state the obvious: Sweden had no lockdown. Amongst the other five countries, the choice

for *how* to lockdown varied widely. Knowing those simple facts and seeing these charts, if you still think lockdowns are important in the management of a seasonal virus, I can't help you. In Western Europe, IT'S OVER, and it had nothing to do with how governments, or the populace, behaved. A virus does what a virus does.
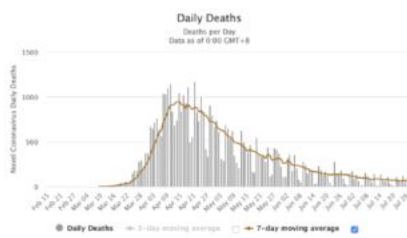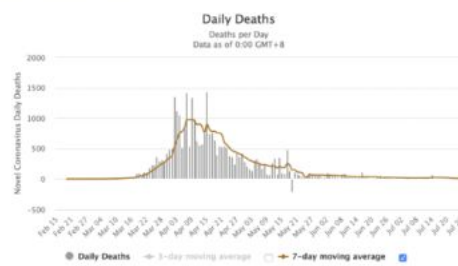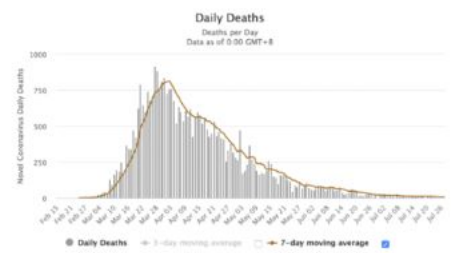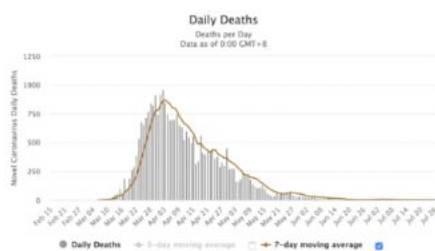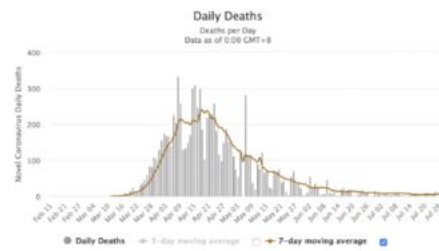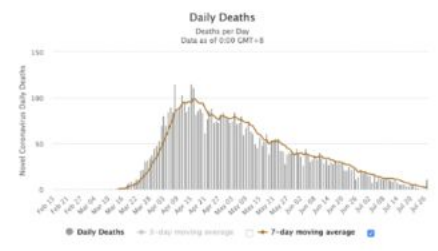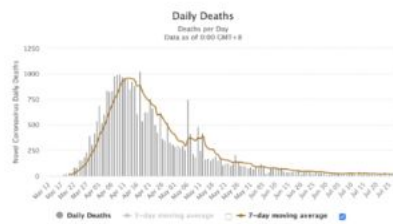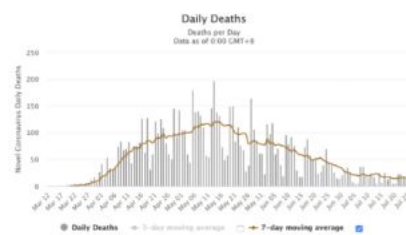

U.S. Northern States

Using the same data from Worldometers, it's also over in the northern states. Note that in certain states, the impact from COVID-19 is so tiny, the death curves aren't even curves, so I'm focusing on larger population states that actually have a curve. I looked at New York, New Jersey, Massachusetts, Illinois, Indiana, and Michigan.
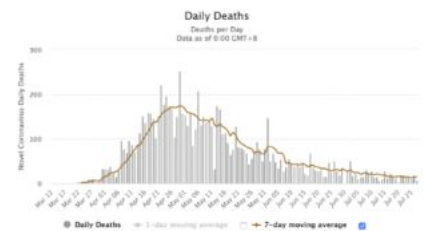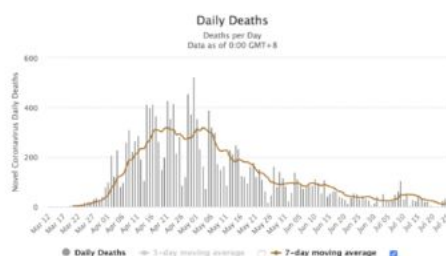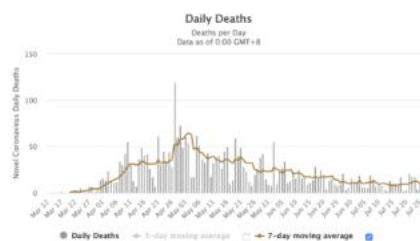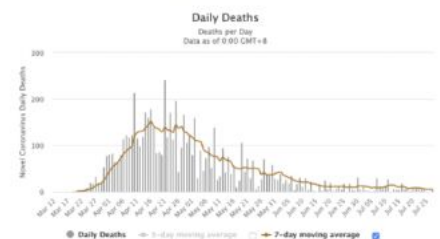
In the Northern U.S states, IT'S OVER, and it had nothing to do with how governments, or the populace, behaved. A virus does what a virus does.
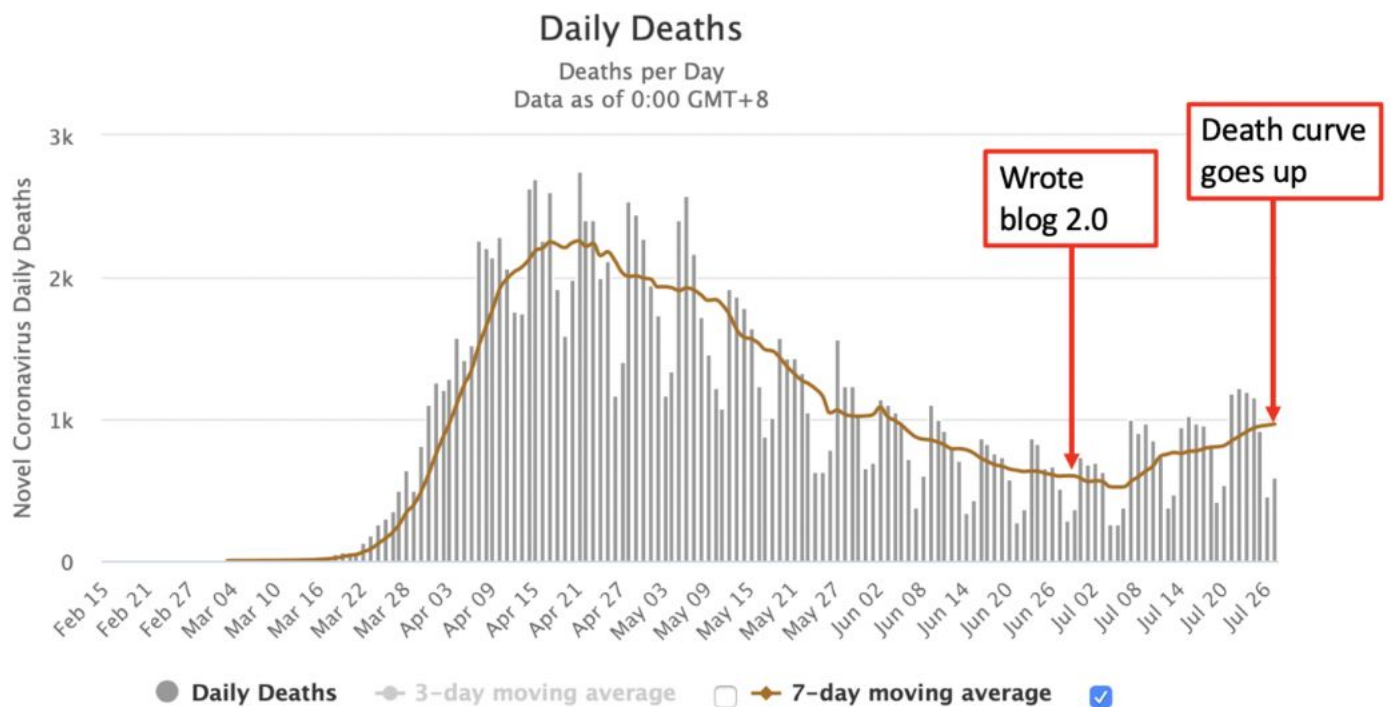
U.S. Southern States

This quote from Dr. Gupta of Oxford explains the mistake the press keeps making by treating the U.S. so homogeneously:

> *"When you think of the US as a whole, you're missing the fact that the epidemic appears to be over in the Northeast and growing in the Southwest. Why would you put them together? There's no reason to lump a rise in cases in Arizona with everything else.*

This is the most confusing part of predicting when the COVID-19 pandemic will be over in the United States. Take a look at the TOTAL U.S. death curve when I wrote my last blog post, and where it is today:

What happened? Seasonal viral patterns of southern latitude states. Well, luckily for me, some smart and enterprising analysts graphed the U.S. death curve, but did something different: they separated the states by using the division of the 35th parallel— basically turning us into two separate countries. They had to make some judgments, so ALL of California is in the Southern number. Here's how the death curves looks:
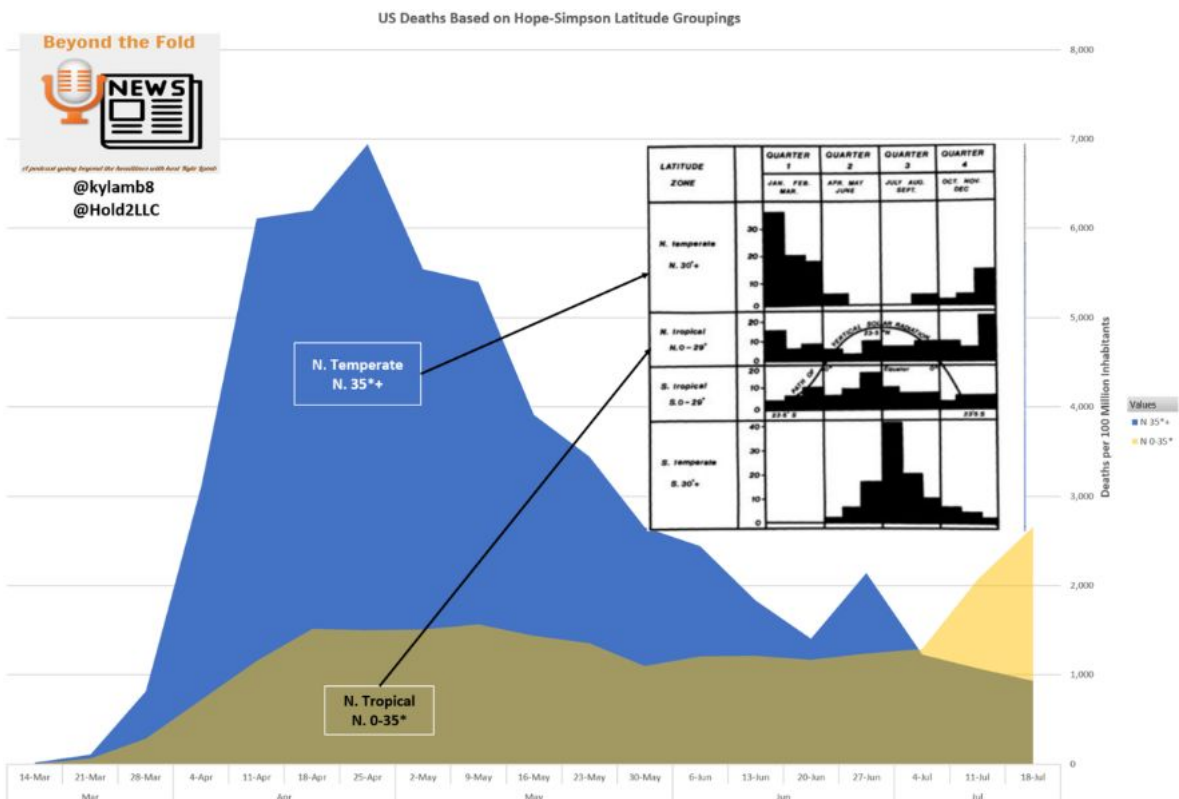
U.S. death curve, by latitude

Here is an excellent, quick video that explains this seasonal dynamic.

Also look at this chart that shows, since June, where deaths have been weighted in California. Notice anything? It's worth mentioning that California also destroys the narrative that governmental behavior has anything to do with the spread of the virus, since California not only locked down early and hard, but also had an early mask mandate. And they look no different from Texas, Arizona, or Florida, which had much more liberal lockdown policies.

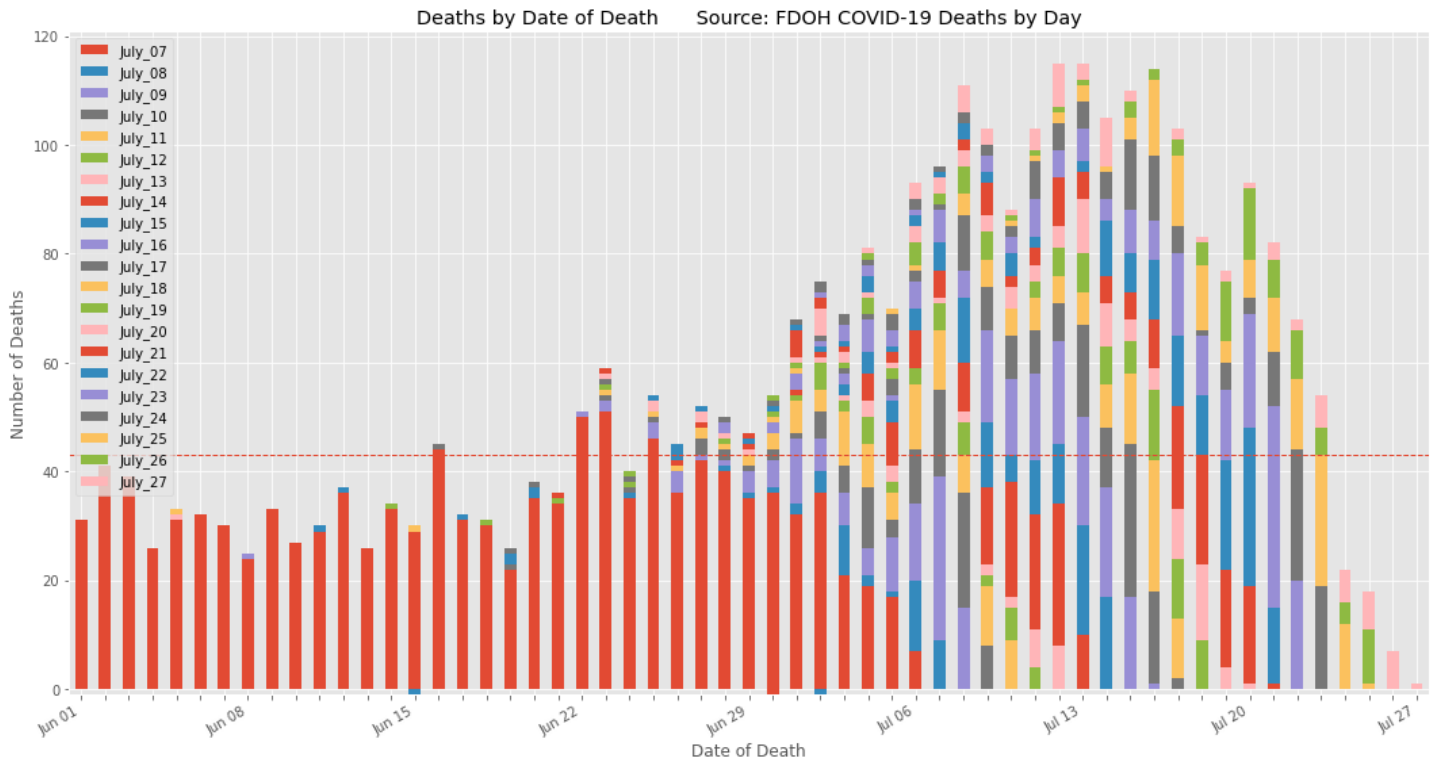### Does climate increase the spread of COVID in California?
Same statewide policies yet the southern counties and Central Valley have been disproportionately impacted.
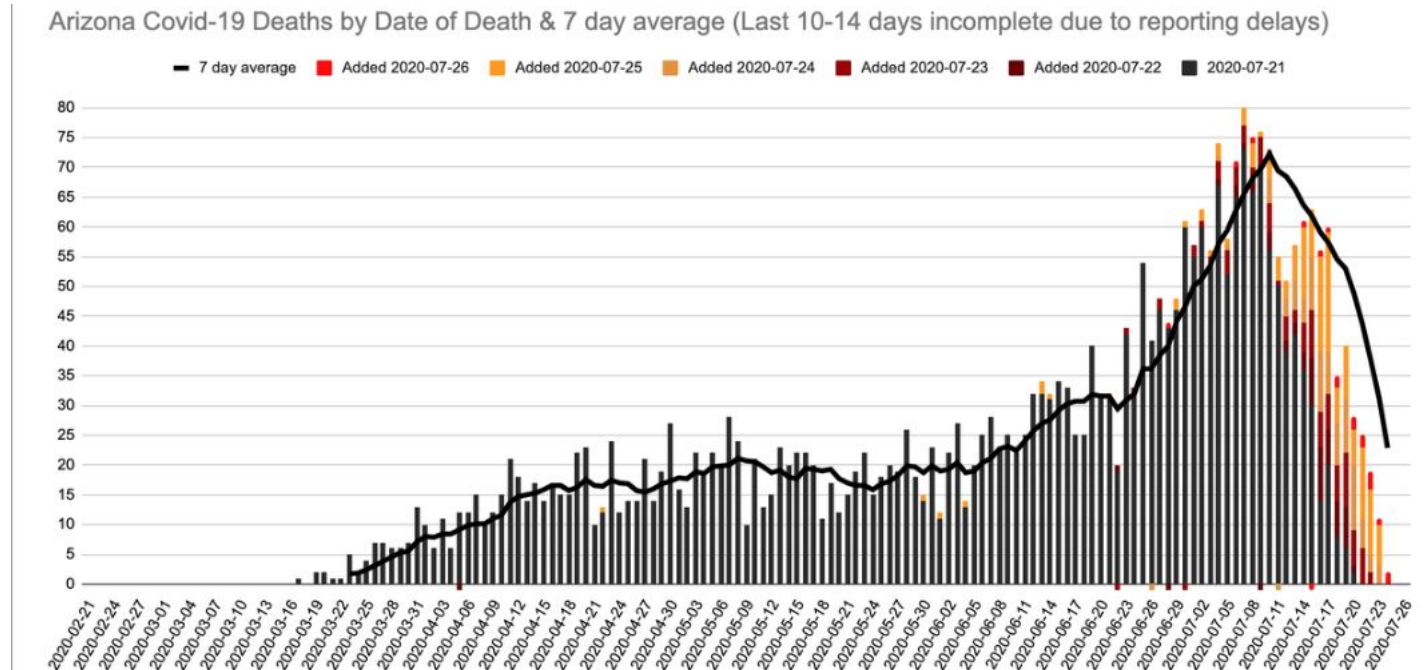
CA COVID deaths per capita by county since June
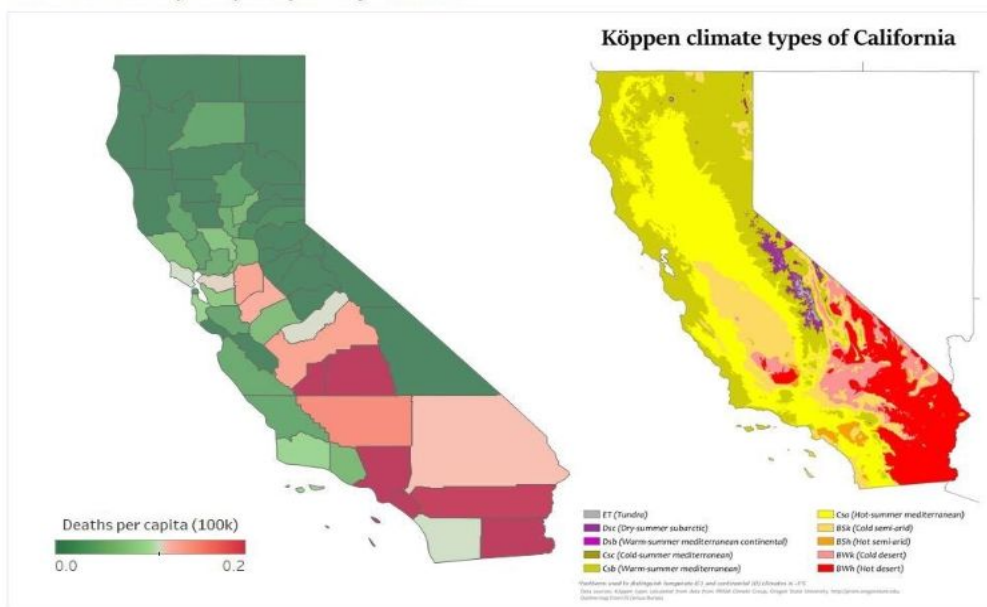
Source: California Department of Public Health

There's plenty of data showing that the southern states are all past their peak. Here are deaths in Florida (sorted by date of death). The curve is clear:

Florida reports deaths by day which gives the total number of Florida Residents with confirmed COVID-19 that died on each calendar day (12:00 AM - 11:59PM). Starting with reporting day July 7th, each subsequent day is reported as the additional deaths reported per calendar day. This demonstrates the lag in reporting, and the difference between what is often reported on the news as "daily deaths", which is inaccurate. Data continues to be added to a calendar day, which this graph attributes to the day of reporting. The horizontal line on the graph is the average deaths per day from March 5th, 2020 through July 27th, 2020.
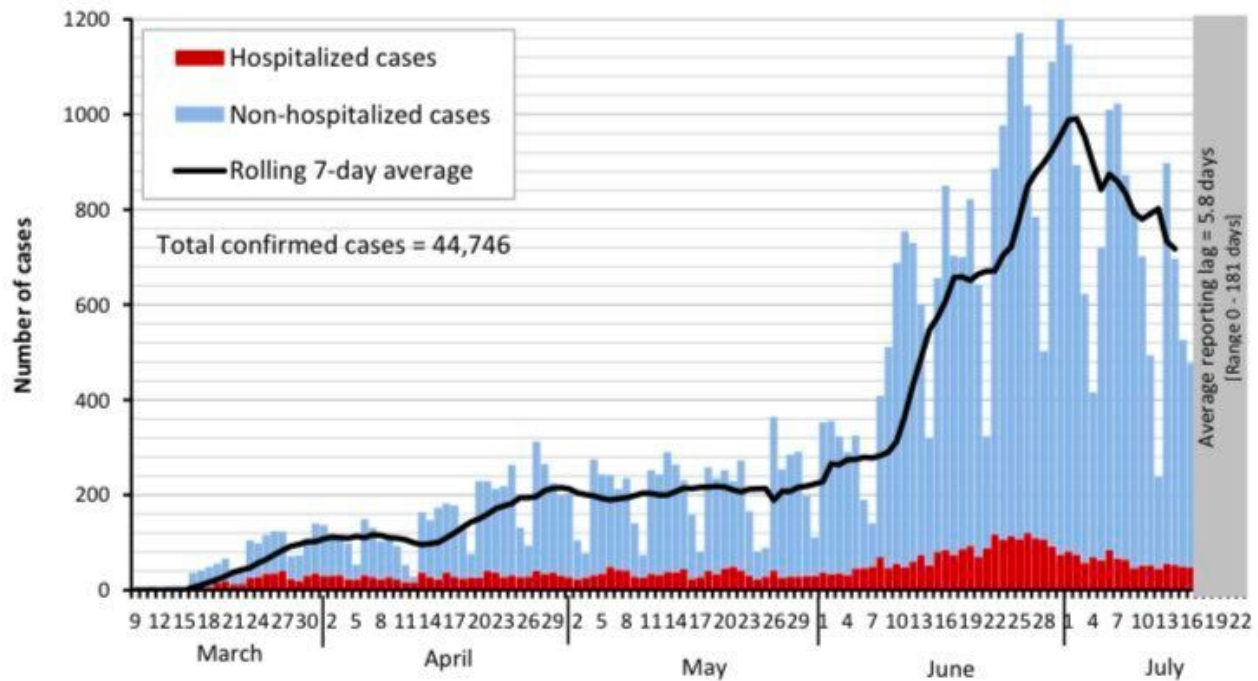
Here are deaths in Arizona:

And below are the hospitalization curve in Texas, showing well past peak. Death curves always match hospitalization curves with a minor lag.

Figure 1. Confirmed COVID-19 positive cases by date of test collection, Dallas County: March 10 – July 24, 2020 [1-4]

1. Data received as of 8:00 pm yesterday, for residents of Dallas County tested with known specimen collection dates. This does include delayed results from previous days. All data are preliminary and subject to change as cases continue to be investigated.
2. Data are incomplete for the most recent dates. Test results may be reported to DCHHS several days after the result. The reporting lag is calculated as time from specimen collection to receipt of test results. The average reporting lag is 5.8 days, with a range from 0 – 181 days.
3. This summary graph includes only confirmed cases based on molecular amplification detection test results.
4. Bars are the number of positive molecular amplification detection tests which were collected that day.
5. Rolling 7-day average is the average number of new confirmed COVID-19 cases collected 7 days prior to value.

So when will it be over in the United States?

That's the question you've patiently been waiting for me to answer. When will we be done in the United States? **August 25th, just under one month from now.** How do I know that? Well, I don't know it with certainty, but it's the date that Stanford Nobel laureate Dr. Michael Levitt picked and he's been right on China and Sweden, so I'm going with him. Let's explore his answer to this question and how he looks at it.

Michael Levitt
@MLevitt_NP2013

US COVID19 will be done in 4 weeks with a total reported death below 170,000. How will we know it is over? Like for Europe, when all cause excess deaths are at normal level for week. Reported COVID19 deaths may continue after 25 Aug. & reported cases will, but it will be over.

Michael Levitt @MLevitt_NP2013 · Jul 11
Thanks so much. Total population and totally annual natural deaths very similar to EuroMOMO area. Right now there are overall 414 reported deaths/million in US. If same as Europe, US about 80% complete. Certainly hope this is true and US saturates at no more than 170,000 deaths. twitter.com/czr111/status/...

7:47 AM · Jul 25, 2020 · Twitter for iPhone

Dr. Levitt does exactly what William Farr said to do: he looks at historical, all-cause mortality. When we hit that same threshold here in the U.S., the pandemic is over. His analysis shows us getting there by August 25th. He

explains why Europe is already done, now that the excess deaths from COVID-19 have stopped for several weeks, which is what all the death curves I showed above also corroborate.

Michael Levitt
@MLevitt_NP2013

The total excess death in Europe in 2020 has not changed for 9 weeks. Still the number is large with 175,000 COVID season deaths since 1 March. This is equivalent to about 25 days of natural death (50,000 natural deaths/week in Europe). It is the burden of death of COVID19.

9:05 AM · Jul 27, 2020 · Twitter for iPhone

Interestingly, looking at CDC data, the 2020 death curve and the Average Death Curve in the U.S.are extremely close to converging, we may be done even sooner than we think:

165 069
Excess Deaths USA
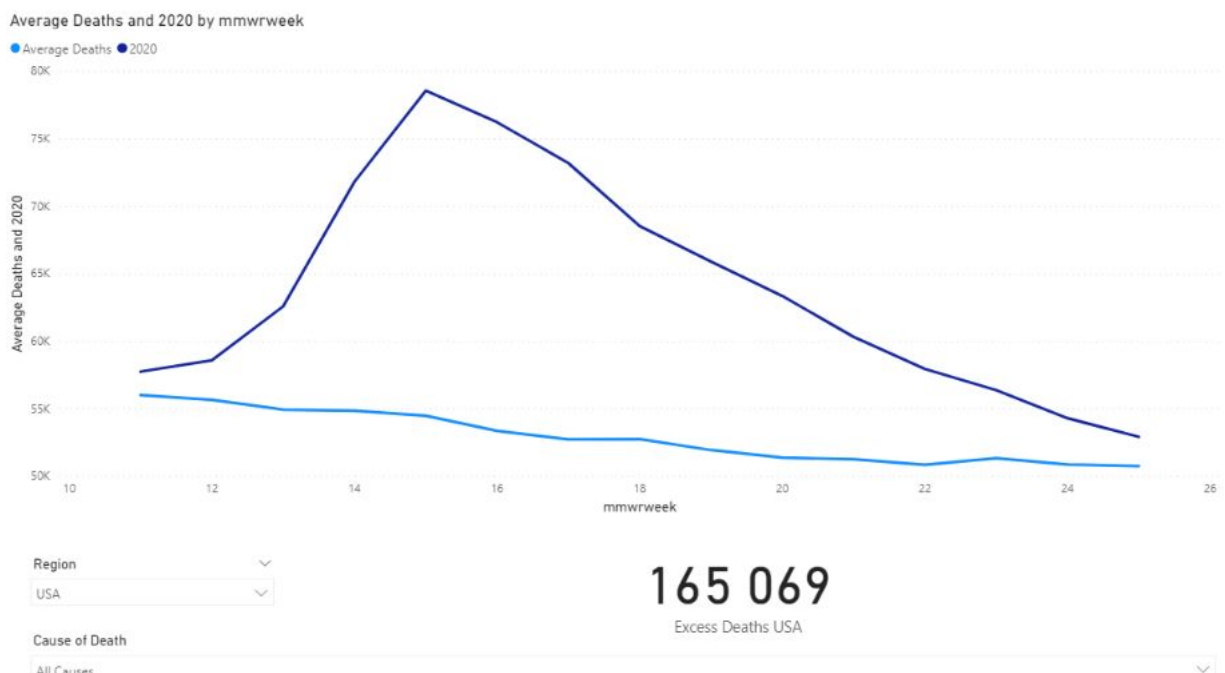
Conclusion

It's over in most of the world. It will likely be over in the United States within the next four weeks. You can spend your time watching the news and hearing about "new cases" and being worried, or you can get on with your life. I'm opting for the latter. I'll finish with a great quote from Oxford's Dr. Gupta that summarizes how I feel about this whole mess:

> *The truth is that herd immunity is a way of preventing vulnerable people from dying. It is achieved at the expense of some people dying, and we can stop that by preventing the vulnerable class in the process. In an ideal situation, you would protect the vulnerable as best you can, let people go about their business, allow herd immunity to build up, make sure the economy doesn't crash, make sure the arts are preserved, and make sure qualities of kindness and tolerance remain in place.*

Appendix

Since I last wrote, there have been a few articles that really jumped out to me. Here's a few great ones:

Wired Magazine, excerpt from **It's Ridiculous to Treat Schools Like Covid Hot Zones**:

> *Let's review some facts: Children are, by and large, spared the effects of the virus. According to the latest data from the CDC, infants, little kids, and teenagers together have accounted for roughly 5 percent of all confirmed cases, and 0.06 percent of all reported deaths. The Covid-linked child inflammatory syndrome that received fervent media attention last month, while scary, has even more infinitesimal numbers. "Many serious childhood diseases are worse, both in possible outcomes and prevalence," said Charles Schleien, chair of pediatrics at Northwell Health in New York. Russell Viner, president of the UK's Royal College of Pediatrics and Child Health, noted that the syndrome was not "relevant" to any discussion related to schools.*

> *There is also a wealth of evidence that children do not transmit the virus at the same rate as adults. While experts note that the precise transmission dynamics between children, or between children and adults, are "not well understood" —and indeed, some argue that the best evidence on this question is that "we do not have enough evidence"— many tend to think that the risk of contagion is diminished. Jonas F. Ludvigsson, a pediatrician and a professor of clinical epidemiology at Sweden's Karolinska Institute, reviewed the relevant research literature as of May 11 and concluded that, while it's "highly likely" that children can transmit the virus-causing COVID-19, they "seldom cause outbreaks." The World Health Organization's chief scientist, Soumya Swaminathan, suggested last month that "it does seem from what we know now that children are less capable of spreading" the disease, and Kristine Macartney, director of Australia's National Centre for Immunisation Research and Surveillance, noted a lack of evidence that school-aged children are superspreaders in her country. A study in Ireland found "no evidence of secondary transmission of COVID-19 from children attending school." And Kári Stefánsson, a leading researcher in Iceland, told The New Yorker that out of some 56,000 residents who have been tested, "there are only two examples where a child infected a parent. But there are lots of examples where parents infected children." Similar conclusions were drawn in a study of families in the Netherlands.*

The Atlantic, excerpt from **Hygiene Theater Is a Huge Waste of Time**:

> *COVID-19 is apparently a war that will be won through antimicrobial blasting, to ensure that pathogens are banished from every square inch of America's surface area. —But what if this is all just a huge waste of time?*

> *In May, the Centers for Disease Control and Prevention updated its guidelines to clarify that while COVID-19 spreads easily among speakers and sneezers in close encounters, touching a surface "isn't thought to be the main way the virus spreads." Other scientists have reached a more forceful conclusion. "Surface transmission of COVID-19 is not justified at all by the science," Emanuel Goldman, a microbiology professor at Rutgers New Jersey Medical School, told me. He also emphasized the primacy of airborne person-to-person transmission.*

Paul Graham, excerpt from **The Four Quadrants of Conformism**:

One of the most revealing ways to classify people is by the degree and aggressiveness of their conformism. Imagine a Cartesian coordinate system whose horizontal axis runs from conventional-minded on the left to independent-minded on the right, and whose vertical axis runs from passive at the bottom to aggressive at the top. The resulting four quadrants define four types of people. Starting in the upper left and going counter-clockwise: aggressively conventional-minded, passively conventional-minded, passively independent-minded, and aggressively independent-minded.

I think that you'll find all four types in most societies, and that which quadrant people fall into depends more on their own personality than the beliefs prevalent in their society. [1]

Spiegel International, excerpt from **Reconstruction of a Mass Hysteria**:

The new virus would probably have attracted far less attention if it hadn't been for modern molecular medicine, with its genetic analyses, antibody tests and reference laboratories. The swine flu would have conquered the world, and no doctor would have noticed.

But the world did notice, largely because of high-tech medicine and the vaccine industry. From Ebola to SARS to the avian flu, epidemiologists, the media, doctors and the pharmaceutical lobby have systematically attuned the world to grim catastrophic scenarios and the dangers of new, menacing infectious diseases.

None of these diseases receives more attention than influenza. Researchers in more than 130 laboratories, in 102 countries, are constantly on the lookout for new flu pathogens. Entire careers and institutions, and a lot of money, depend on the outcomes of their work. "Sometimes you get the feeling that there is a whole industry almost waiting for a pandemic to occur," *says flu expert Tom Jefferson, from an international health nonprofit called the Cochrane Collaboration.* "And all it took was one of these influenza viruses to mutate to start the machine grinding."

T.R. Allen, **An outbreak of common colds at an Antarctic base after seventeen weeks of complete isolation**

An outbreak of common colds at an Antarctic base after seventeen weeks of complete isolation

BY T. R. ALLEN

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SUMMARY

Six of 12 men wintering at an isolated Antarctic base sequentially developed symptoms and signs of a common cold after 17 weeks of complete isolation. Examination of specimens taken from the men in relation to the outbreak has not revealed a causative agent.

Comment:

This is a published study from 1973 (*click to read*), and the title kind of gives it away; but basically, six of seventeen men wintering at a base in Antartica got sick with a cold (coronavirus) "after 17 weeks of complete isolation." If you weren't sure if a virus is going to do what it's going to do, I hope this gives you pause. (Are you listening, New Zealand?) Part of their conclusion is quite the omen for today's craziness: "The occurrence of a common cold during isolation, when the chances of introduction of new infection from the outside are virtually nil, implies that in some way the virus persisted, either in the environment or in the men." Look out.