Why I Am LESS Concerned About the Coronavirus-Episode 1

By Chris Centeno, MD / March 8, 2020

[This is NOT the most recent blog in this series. My current thinking on this issue is better reflected by the Dan Bongino interview in Episode 4 or Episode 5 which covers the urgent need for us to begin to take steps to avoid the overload of our health systems. Meaning while the opinions expressed in this blog are still backed by data, the catch is that to have lower mortality rates we need to shut down our society due to our lack of ability to test for the coronavirus at scale as of the end of the week ending 3/13/20.].

You can't turn on a computer screen, a TV, or look at a phone without dozens of new stories about how the deadly Coronavirus is lurking like a silent killer waiting to end millions of lives. You hear terms like "pandemic", ICU", and "Emergency Funding". The shelves at COSTCO are bare. Any sane person would be scared and freaked out at this point. However, I'm neither. Why? Because if you look at the actual science emerging and read through the media hype, what you see is VERY different. Let's dig in.

Coronavirus

To quickly review, the Coronavirus disease is much like the flu. Its scientific name is COVID-19. 'CO' stands for 'corona,' "VI' for 'virus,' and 'D' for disease. The "-19" indicates that it was first detected in 2019. The common name often used for this disease, called "Coronavirus" is really medical slang as that's just a common virus type. The virus that causes the disease has been named SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2). Now let's dig into why is everyone so freaked out.

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The 1918 Pandemic

If you're a virologist or epidemiologist, the "big one" happened just after World War I. This was called the 1918 Spanish Flu Pandemic. This influenza virus had a 2-3% mortality rate and killed an estimated 30 million people worldwide (1.7% of the world's population). That number is hard to compare to today because this was before modern medicine and intensive care techniques that began in the Korean War and Vietnam. Now we have ventilators, anti-viral, drugs, and modern life support. In 1918 we didn't even have simple things that can save lives like the widespread use of oxygen.

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VIEW PROFILE

How Lethal Is the Regular Flu?

The average seasonal flu kills between 291,000 to 646,000 people worldwide each year (1). Before I dive into the Coronavirus you need to think about that for a second. **Half a million people die from the average flu bug each winter.** The CDC recently announced that the seasonal flu has killed 20,000 people in the United States this year with 350,000 hospitalizations (5). **To date, worldwide, less than 4,000 people have died of Coronavirus. That's less than 1% of the number of people who die from the seasonal flu.**

Why Then the Panic?

The panic is over the death rate per 100 patients reported out of Wuhan China, where the Coronavirus began. At one point, we heard very high numbers like 3-4% of everyone who contracted the disease or even twenty percent or more of the elderly. The average seasonal flu has much lower death rates.

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How Lethal Is Coronavirus?

So just how lethal is this Coronavirus disease (COVID-19) versus the average flu? After all, if it's a real killer of healthy young and middle-aged people you should be freaked out. If it's really just like a bad flu bug, you should just go about your business, wash your hands frequently, and not be concerned. Hence, this is the multi-billion dollar question.

How Lethal Is the Average Seasonal Flu?

This is a really interesting one. From the paper above, mortality rates as low as 0.05% to as high as 3.5% have been reported. **The fact that the high number is from southeast Asia is important (see below).** The new death rate for seasonal flu worldwide, based on the most recent models, is 0.03% for people under 65 years of age and about 3% for the elderly over 75. You also need to keep in mind that most of the young who die from the seasonal flu have problems like a significant respiratory disease.

How Lethal Is COVID-19?

The most accurate data on case fatalities is from the only natural experiment that exists, the Diamond Princess cruise. Why a cruise ship? Because this is a closed environment where we can accurately measure every person who gets sick and know the real number of people who perish based on that exposure.

The cruise ship data shows a fatality rate of 0.85%. **All of the people that perished were over 70, which is much more like the seasonal flu**. In addition, the ability of the virus to spread was again, not that impressive as only about 20% got the virus. **So while this bug is nasty, it's NOT the middle-aged killer that the media has been making it out to be.**

[3/11/20 update] Here's some new data since this post first published:

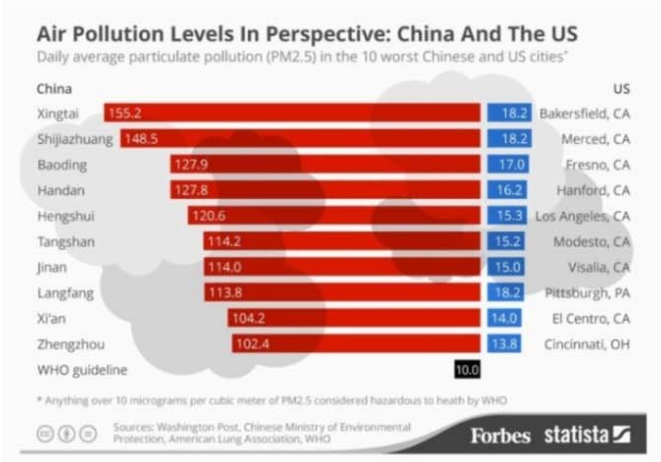
- The outside of Wuhan Chinese death rate reported by their CDC is 0.4% (6)
- The South Korean death rate being reported is 0.65% (7)

Why the Huge Difference in Death Rates?

First, the death rates in the first part of any outbreak are always wildly inflated. Why? They are based on only the number of people who are sick and are tested for the virus while ignoring the greater number of people who contract the virus, get a little sick for a few days, and never get tested. When you add in all of those healthy people who shrugged the virus off, the death rates almost always plummet. Here are a few science-focused articles on this topic:

- SLATE-COVID-19 Isn't As Deadly As We Think
- HumanProgress-The Misleading Arithmetic of COVID-19 Death Rates
- NPR-Why The Death Rate From Coronavirus Is Plunging In China

Second, there are other factors that could explain the differences. For example, 2/3rds of Chinese men smoke (compared to 15% of US men) (4). China also has severe air pollution compared to the US:



China is also significantly denser (4-5X the US), which facilitates viral transmission. In addition, China has many "Wet Markets" where live animals are kept in tight conditions and then slaughtered on the spot to be sold as food. You honestly couldn't create a more perfect animal to human viral transmission model. In fact, it's believed the coronavirus began in an animal sold in these markets called a pangolin.

What Should You Do?

If you're healthy and under the age of 70 without any known respiratory problems or other serious health conditions, then the list below applies to you. If you're elderly and/or have respiratory or other serious health problems like heart disease, then you're in a higher risk category, more on that below.

Don't:

- Panic and go clear out your local grocery store shelves!
- Buy masks unless you're the one that has a cough
- Cancel trips

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Select Your Problem Area

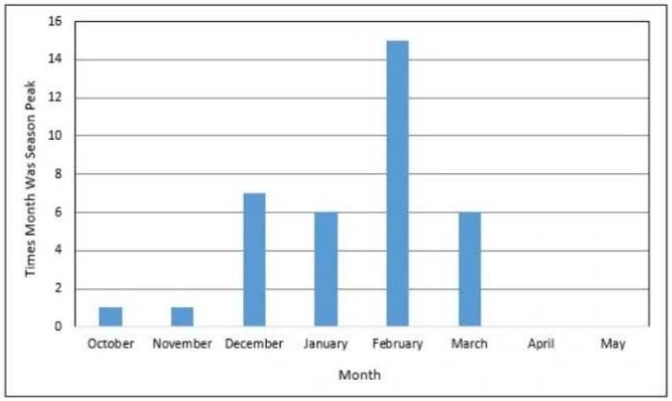
Regenerative procedures are commonly used to treat musculoskelatal trauma, overuse injuries, and degenerative issues, including failed surgeries.

Do:

- Wash your hands frequently with soap for 20 seconds!
- Use hand sanitizer when you can't wash your hands (must be >60% alcohol)
- **Stay home if you're sick**
- **Ask for a local COVID-19 test if you think you have the flu (the symptoms of this one are a fever and a dry cough)**
- **Observe strict quarantine rules if you test positive**

Can Weather Help?

Check out the CDC graph below that shows that viral flu transmission goes way down after March (3). While the coronavirus isn't the seasonal flu, transmitting it seems to obey the same rules as viral influenza.



High-Risk Individuals

Again, if you're in a high-risk category, you may want to be more careful. For now, if you're over 70 or have a respiratory problem that's being actively treated (like COPD), you might want to consider limiting travel and contacts. However, even then, **you have to put this in context**. You need to ask yourself if you would cancel trips and stay indoors if you knew that it was a bad flu season with a bad bug or would you just go about your business and wash your hands frequently? **That's a choice only you can make.**

Finally, authorities will make local recommendations for high-risk individuals based on the evolving data being collected here and elsewhere, so pay attention to those public health advisories. For example, in the US this may take the form of limiting nursing home visits. As another example, in Italy, they have recently closed down tourism to the Lombardy region.

The upshot? After a deep dive into the best data we have, I am LESS concerned about the Coronavirus. I am, however, looking forward to some empty planes and airports!

- Click here for Coronavirus Episode 2-Myths Debunked
- Click here for Coronavirus Episode 3-Keep Calm and Carry On...
- Click here for my Dan Bongino interview...
- Click here for Coronavirus episode 5-We Need to Ben the Curve NOW...

[We usually allow comments on this blog, but the comments on this post have not generally been constructive, so they will be suspended.].

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(1) Iuliano AD, Roguski KM, Chang HH, et al. Estimates of global seasonal influenza-associated respiratory mortality: a modelling study [published correction appears in Lancet. 2018 Jan 19;:]. *Lancet.* 2018;391(10127):1285–1300. doi: 10.1016/S0140-6736(17)33293-2

(2) Faust J. COVID-19 Isn't As Deadly As We Think. Slate. https://slate.com/technology/2020/03/coronavirus-mortality-rate-lower-than-we-think.html Accessed 3/6/20.

(3) Centers for Disease Control. The Flu Season. https://www.cdc.gov/flu/about/season/flu-season.htm Accessed 3/8/20

(4) Chen Z, Peto R, Zhou M, et al. Contrasting male and female trends in tobacco-attributed mortality in China: evidence from successive nationwide prospective cohort studies. Lancet. 2015;386(10002):1447–1456. doi: 10.1016/S0140-6736(15)00340-2

(5) Centers for Disease Control. Weekly U.S. Influenza Surveillance Report https://www.cdc.gov/flu/weekly/index.htm Accessed 3/8/20

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Coronavirus Diseases (COVID-19) — China, 2020. Vol. 2. No.
8. http://weekly.chinacdc.cn/fileCCDCW/journal/article/ccdcw/2020/8/PDF/COVID-19.pdf

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