Coronavirus: When the Facts Change, I Change My Mind

By Alex Berezow, PhD — February 27, 2020

When COVID-19, aka the Wuhan coronavirus, first emerged, it seemed most likely that the virus would fizzle out. But as the disease continues to spread, that outcome now appears nearly impossible.

"When the facts change, I change my mind. What do you do, sir?"

That quote (or something like it) is often attributed to economist John Maynard Keynes. Regardless of its actual origin, the quote presents us with a timeless truth: There is nothing honorable about never changing your mind. When reality changes, you need to update your opinion accordingly.

When we first started analyzing the Wuhan coronavirus (COVID-19) outbreak, we felt that there was little cause for alarm. Previous coronavirus outbreaks, which at first appeared terrifying, ended up fizzling out. SARS emerged in 2002 and disappeared soon thereafter; MERS emerged in 2012 and became endemic, causing a handful of cases each year. We felt that COVID-19 would follow a similar path. Failing that, we thought it at least likely that COVID-19 would not spread inside advanced countries.

For these reasons, among many others, we scolded the media for botching their coronavirus coverage. (We still stand by those criticisms, particularly of the European media.) One of the claims that we felt was particularly out of line was the prediction that billions of people would
become infected with the new coronavirus. Alas, that prediction is no longer looking as crazy as it did two weeks ago.

As of publication, Johns Hopkins [4] reports that there have been 82,541 confirmed cases of COVID-19, and a total of 2,810 deaths. So far, 95% of the cases have been in mainland China, as well as nearly 98% of deaths. But new epicenters of infection have emerged: South Korea (1,766 cases), Italy (528), Iran (245), and possibly Japan (189).

The virus has now been detected in 50 different countries. Whatever hope we once had of containing the virus to China or southeast Asia is long gone. The horse is out the of the barn. The cat is out of the bag. Your favorite "escaped animal" idiom applies.

There are more concerns, which are excellently explained by medical doctor James Hamblin in The Atlantic [5]. One of them is that COVID-19 might be able to cause asymptomatic infections [6]. In other words, some people may become infected with the virus and not know it because they never develop symptoms. (For example, a meta-analysis [7] concluded that 16% of influenza infections are asymptomatic.) In the parlance of infectious disease epidemiology, these people are called "carriers." Crucially, carriers can still pass the disease on to others.

If there are a lot of asymptomatic COVID-19 carriers, then our future is already written: The virus will circle the globe.

**Outstanding Questions**

While that sounds scary, there are still several outstanding questions whose answers will determine just how serious of a global public health threat COVID-19 poses:

1) **What is the case-fatality rate?** Currently, the case-fatality rate is an alarming 3.4%. But, there may be thousands of asymptomatic or mild cases that go undetected, and these people are not counted in the official statistics. While that would mean that the disease has spread further than
we thought, it also means that the case-fatality rate is a lot lower than 3.4%. Also, the case-fatality rate is likely to vary inversely with the quality of a country's healthcare system. Advanced countries probably will have a lower case-fatality rate than developing ones.

2) How many people will become infected? Seasonal influenza [8] infects about 1 billion people each year around the world and kills 300,000 to 500,000. Will COVID-19 infect that many people? Will it become a seasonal virus? Nobody knows, but that outcome looks much likelier now than it did a few weeks ago. Only time will tell.

3) Will a vaccine work? This also won't be known for a while. Several coronavirus vaccines are in development [9], but clinical trials are still a couple months away and a final product at least a year away. Also, as Dr. Hamblin's aforementioned article noted, people do not develop long-lasting immunity to other types of coronaviruses that cause the common cold. If that applies to COVID-19, it would mean that people could become reinfected and that a vaccine may not be all that effective.

4) How should we prepare for the coronavirus? The CDC is concerned [10] enough to consider COVID-19 a pandemic in the making. So, do what you do during cold and flu season: Wash your hands, especially after being in public and before eating or touching your face. (That is absolutely essential.) Stay home if you're sick. If there is a local outbreak, it would not be unreasonable for businesses or schools to close for a few days. Don't travel to places that are hotspots.

It's also crucial to keep things in perspective. At this moment in time, seasonal influenza is still a far bigger public health threat than COVID-19. So are fatal car accidents. The bottom line, therefore, is to be on alert without over-reacting.

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[8] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3278149/