Reflecting on SARS, 17 years and two flu-like epidemics later

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By

On April 12, 2003, I was evacuated from my post teaching English at Zhongshan University in Guangzhou, China. I packed my belongings into two suitcases and a duffle bag, got on a bus, crossed the border into Hong Kong, and flew, with my N95 mask on, back to the United States. It was the height of China's outbreak of SARS, or Severe Acute Respiratory Syndrome.

At the time of my evacuation, SARS had produced impressively little panic back in Guangzhou. To my friends and colleagues there it was simply another virus – one that was competing with scores of other microbes to kill a tiny minority of Guangzhou's millions of citizens. At that point, they had been inspired to take little more drastic action than to open the windows and repeatedly wash the floors with vinegar. This relatively muted response contrasted sharply with the responses that I was met with back in the US. My sponsoring American program demanded my evacuation back to the U.S., leaving me five days to wrap up the life I had built in Guangzhou over a span of two years. During that five-day period my family became convinced that I was going to be patient zero for an American outbreak of SARS, and attempted upon my return to quarantine me in my sister's apartment in Philadelphia.

Unlike during the current epidemic, even at the height of SARS there were no blanket travel bans or quarantines being instituted for travelers returning to the US from China, and the US CDC was recommending *against* quarantine for those who had no risk factors other than travel. I broke my quarantine, and moved to New York City. The 10-day quarantine period passed without incident, and the epidemic slowly faded, eventually disappearing from the world a few months later.

I thought I was done with SARS. But SARS wasn't done with me – and it definitely was not done with China. To understand what came next, let me return to the beginning.

In Guangzhou we started hearing about a strange new virus around the end of 2002, but no one paid much attention until February 2003, when a physician crossed into Hong Kong and spread the SARS virus to over a

dozen hotel guests, who then carried it around the world. In an unprecedented move at that time, the WHO then issued a global health alert and urged the cessation of all non-urgent travel to Mainland China and Hong Kong and later to other cities.

After initially denying the scope of SARS within China, China's central government finally admitted error following a whistleblower's report. Chinese leaders purged the Minister of Health and the mayor of Beijing, promised to cooperate with all international disease control efforts, and began aggressively instituting control measures, including quarantining entire hospitals, city blocks, universities, and villages, setting up neighborhood watch systems to root out potential carriers of disease, and building new hospitals in a matter of days – all things that might seem familiar now given recent events.

The WHO praised China's control efforts and credited them in part with the success of the global containment effort. Some scholars have since argued that China's political system has the rare powers necessary to control a novel epidemic. For example, political scientist Joan Kaufman wrote in 2006, "In China, where individual civil liberties are rarely prioritized over issues of public safety or order, the government apparatus was able to detain and isolate citizens even when they had had no direct exposure to a confirmed SARS patient." Kaufman goes on to argue that this ability to mobilize quickly and aggressively was "precisely what was required to put in place the series of preventive measures that broke the chain of transmission" (66-68).

However, reactions like this left me feeling uneasy. What did it mean exactly for American scholars to be pointing to the lack of civil liberties in China as a useful tool for controlling a global epidemic? And what lessons had really been learned in 2003?

These questions led me back to China in 2008 to conduct ethnographic fieldwork on the development of public health after SARS. My research there eventually resulted in the publication of my book, *Infectious Change*,which examines the long aftermath of SARS in China.

One thing that became very clear very quickly is that SARS had an enormous impact on China's public health system. This was in part because of serendipitous timing. After Chairman Mao's death in 1976, China's public health infrastructure slowly deteriorated over a period of 25 years, until the government finally began rebuilding the system in the early 2000s, just prior to the arrival of SARS.

Beginning in the couple of years leading up to SARS, the central government began replacing the thousands of crumbling local

Anti-Epidemic stations (*fangyi zhan*) that formed the backbone of Mao's grassroots public health infrastructure with thousands of "Centers for Disease Control and Prevention" (*jibing yufang kongzhi zhongxin*), or CDCs. The name "CDC" was an *explicit* reference to the U.S. CDC in Atlanta, Georgia, and was intended to evoke a highly modern, scientific ethos.

Until SARS hit though, the call to build the CDC system remained an unfunded and unclear mandate. The arrival of SARS made this mandate much clearer. Preventing another SARS became the number one priority of the Chinese public health system going forward, over and above any more mundane domestic public health priorities. A huge amount of money and resources from the central government, local governments, and foreign sources poured in to help. Over the next several years, thousands of young scientists with master's degrees and PhDs were hired at local, provincial, and central government levels to carry out the new CDC mission. Local and central governments purchased high tech equipment to detect, test for, and analyze new viruses; and developed a surveillance and reporting system that all local health officials were supposed to utilize to report cases of new diseases in a timely fashion upwards to higher level officials.

All of this begs the question, then, of how COVID-19 happened.

To begin to answer that question it is important to note that the image a lot of people have of the central Chinese government's authoritarian powers to obtain or disseminate health information is highly overblown. The central government relies heavily on *local* systems to collect and pass on disease surveillance information, and actually in practice has very *little* power to enforce the surveillance system that was put in place after SARS. China's system can best be described as what political scientist Kenneth Lieberthal has referred to as 'fragmented authoritarianism' – it operates as a collection of thousands of little fiefdoms at the local level, with very little ability on the part of the central government to compel ongoing action in any one of these fiefdoms. What this means in practice is that the central government does not have a lot of power to *make* local officials report what they are seeing when they don't want to or feel unable to do so.

And there are so many reasons not to report. As I have written about elsewhere, transparency is hard, and transparency has costs. Proper reporting requires that an individual low-level doctor or public health worker report to their immediate boss that they are seeing something new and alarming, and then that those bosses report upwards to their bosses. Frankly, no one wants to do that. Doing so has very little benefit to the person at the local level and may have immediate repercussions for them

personally and professionally because no low-level official wants their institution or city to be the source of a major outbreak, which may embarrass them and cause economic and political repercussions for their local area.

Also, many of the people who are on the immediate front lines of this see upwards of 100 patients *a day*, even when there *isn't* an epidemic. In this kind of environment in the middle of winter, it is very hard to distinguish a new virus from the many other respiratory viruses that are circulating. Finally, as we saw with the physician-whistleblower, Li Wenliang, who eventually died of COVID-19 and has now become something of a martyr, individual doctors do not have the right in China to report cases of a novel disease directly to outside sources. New viruses are still officially state secrets, and only provincial or central governments have the power to report on them to the outside world.

The other important lesson learned from SARS pertains to the containment response. One of the big takeaways that the Chinese government got from SARS was that draconian actions are necessary to control a new virus if it does occur, that China is particularly good at taking such actions, and that China *will* be praised by the international community if it does take such actions, *but only if it does so within its own borders*. During SARS, China implemented a lot of containment actions domestically that would not be possible anywhere else, and which we have seen with COVID-19 again in more exaggerated form. The WHO praised them for these actions then and now, calling them bold.

While circumstances have been changing rapidly outside of China in recent weeks, and while a lot of containment measures that feel really extreme to many of us in Europe and North America are rapidly being implemented all over the world, even Italy's lockdown does not really equate to what China has been doing for going on 2 months now. To get a sense of what China's "bold" containment actions have meant for those who are living them, one can try to imagine what would happen if the US government decided to entirely seal off and strictly confine to their homes the entire population of the northeastern US, from Washington DC to Maine. This is roughly the population that has been under strict lockdown in Hubei province since January. Then imagine if local governments further put checkpoints on interstate highways across the whole country, shut down public transportation in all major US cities, and made laws about when people in lockdown zones are allowed to leave their homes even to purchase food. Suppose they then kept all these measures in place for an indefinite period of time, with no indication of when restrictions might be lifted. Suppose further that the entire world started shutting down its borders with the US, and airlifting their citizens out of major US cities.

As a point of comparison, in 2009 we had another novel pandemic of a new respiratory virus, H1N1 influenza. That flu pandemic eventually killed approximately 200,000 people worldwide, nearly 50 times the number of people killed so far by COVID-19. Of course, we must acknowledge that H1N1 very likely had a lower overall fatality rate than COVID-19 – although it also had a higher fatality rate among young people in their 20s and 30s, which scared a lot of people at the time. Another important difference is that the outbreak began in North America, instead of China.

In 2009 I was conducting research for my book in southeastern China. At the time, my colleagues there were expecting the US to lockdown its borders in a similar manner to what China is doing now, to buy time for China and other countries to develop a response – much as China apparently bought other countries some time with COVID-19. The US CDC at the time however dismissed such a suggestion as an overreaction, and when Chinese authorities attempted to quarantine some foreign citizens and prevent others from entering their country, there was an indignant outcry from the international community that they were overreacting and being xenophobic, and making futile attempts to contain the inevitable.

This response to H1N1 was very demoralizing to the public health professionals I knew in China. They had been training and preparing for this moment ever since SARS, but now their American colleagues seemed *to them* to be standing by and doing nothing, allowing *their* disease to invade China. To many of the public health professionals I knew, this really felt like a betrayal.

Since SARS, a number of scholars have argued that as members of an authoritarian society, the people of China simply find it more acceptable to be subject to coercive containment practices than people of democratic societies. Current circumstances, however, are challenging whether this is really true. For one thing, we are about to find out whether coercive, China-like containment policies are able to work in a democratic society like Italy. What is going to happen in Italy – or in the US, if President Trump were to shut down entire regions of the US for example – is really anyone's guess, but pretty much everyone expects it to get ugly.

On the other hand, we have yet to see what the long-term impact is going to be in China – economically, epidemiologically, or politically. The epidemic appears to have slowed, at least temporarily. For a long time, people were very angry. They were angry that they couldn't say what they wanted to say, they were angry that the Chinese authorities had not been forthcoming with them, and, most of all, they were angry that their government let this happen to them. Chinese citizens complied with draconian measures out of fear – the message that had been relayed to

the Chinese public is that leaving their apartments meant certain death. People were willing to comply with even the most draconian of control measures to avoid that fate.

Recently, however, the tide has turned – at least outside of Hubei. Public spaces are reopening. People are returning to work, and to play. The government is now spinning the tale of China's slowing epidemic as a huge win for Chinese autocracy, and a moment of nationalist pride. But the people of Hubei remain under lockdown, and it will be a long time before we fully understand the fallout of what happened here. But the cure may have been as toxic as the illness itself.

As the rest of the world begins shutting down their own societies, it is very important that we acknowledge the very large collateral damage of China's "bold" efforts. Tens of millions of migrant workers are stuck in their home provinces without a way to get back to work so that they can feed their families. Restaurants and other small businesses all over the country have closed down, destroying a lot of middle- and working-class livelihoods. People who have been stuck for eight weeks on what was intended to be a one-week holiday still can't get home to take care of elderly parents or disabled relatives. People who are sick with chronic ailments cannot get their medications or get in to see their doctors. While I do not pretend to have the answers about what China – or any country faced with an outbreak of COVID-19 – should do, we must keep our eyes wide open to the fact that quarantining tens of millions of people for weeks on end is not just an inconvenience. It is a catastrophe. And when we think about the risks and benefits of epidemic control measures, we must recognize it as such.

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