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APR. 14, 2020, AT 7:00 AM

Why Did The World Shut Down For COVID-19 But Not Ebola, SARS Or Swine Flu?

By Kaleigh Rogers

Filed under Coronavirus

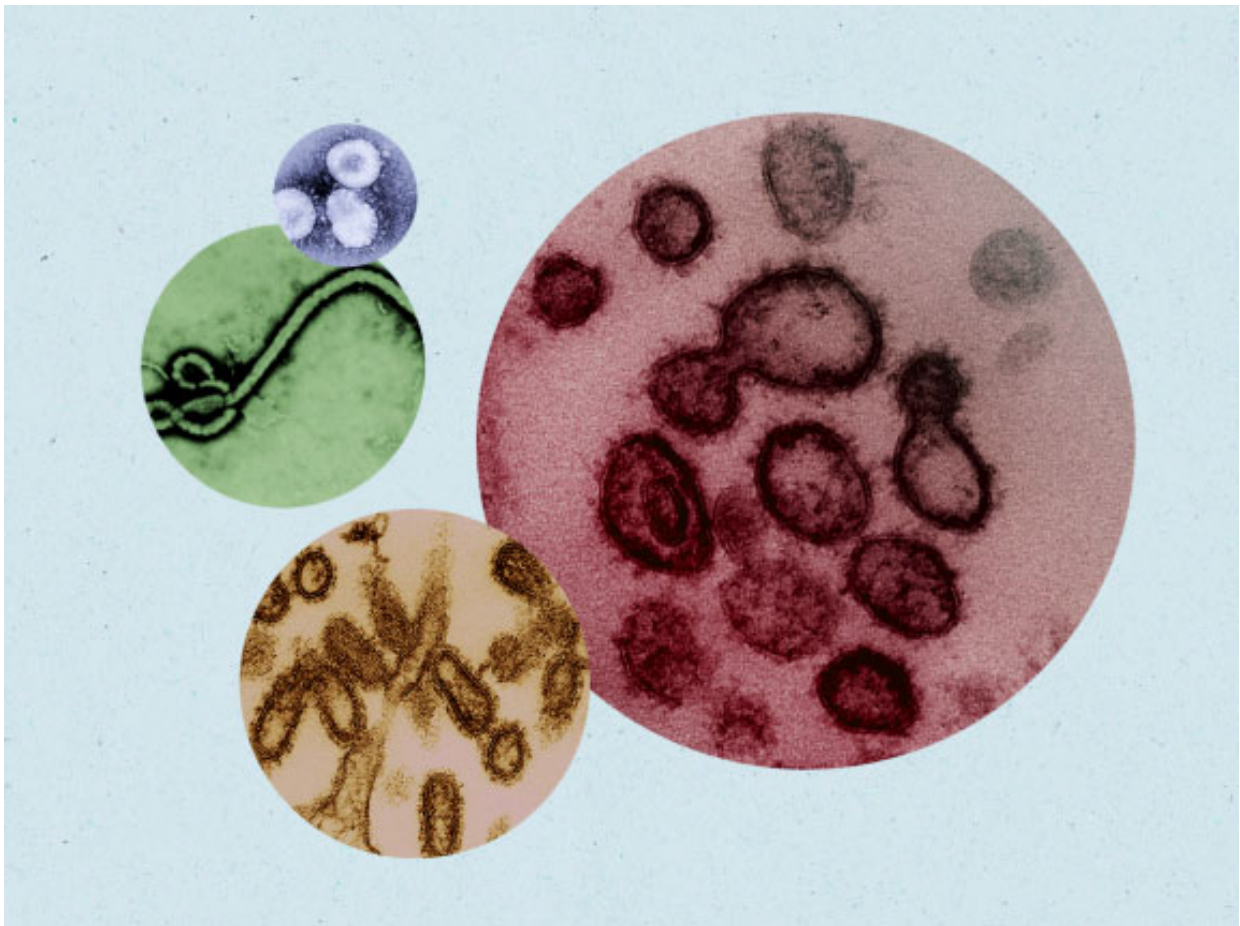


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When reports of a new virus circulating in China's Hubei province first began to emerge, I was cautious about overreacting. I've reported on health long enough to know that just because a pathogen is new doesn't necessarily mean there's a crisis.

Of course, I quickly realized this isn't just any virus. We're currently battling a global pandemic unlike any [we've seen in over a century](#).

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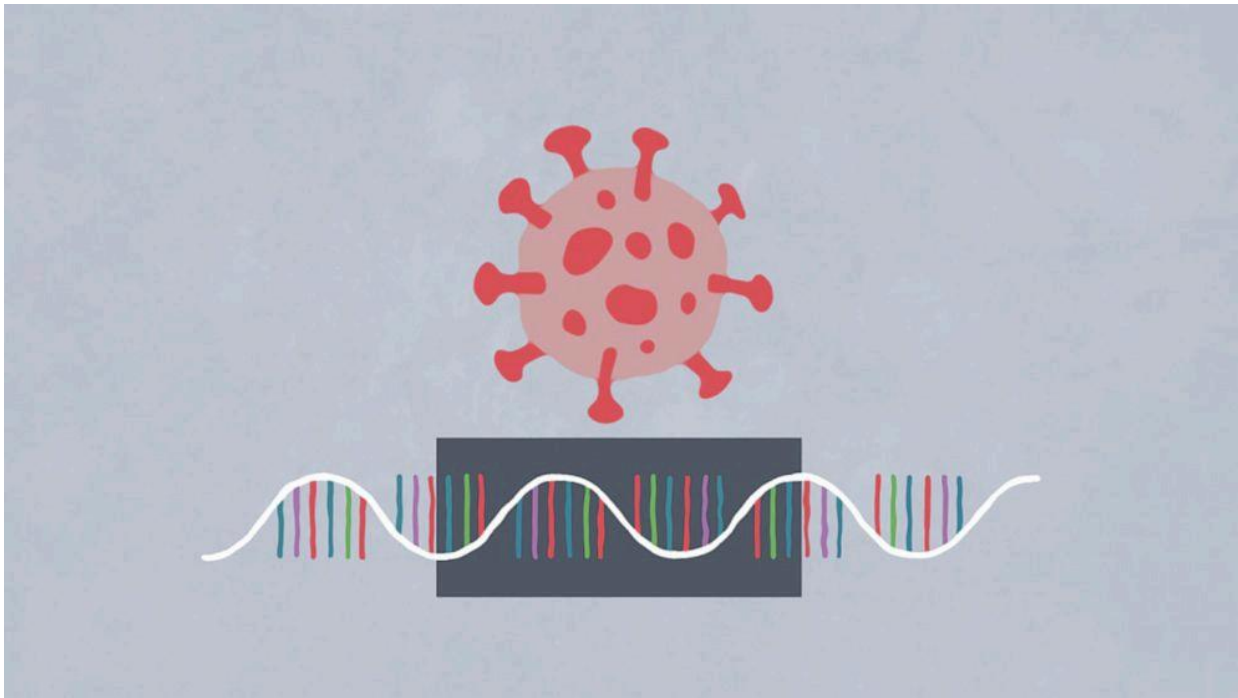
But it's also not the first modern virus we've faced. In the past two decades, the world battled Ebola, SARS and more than one major flu outbreak. Those left tragedies in their wake but didn't cause the same level of societal and economic disruption that COVID-19 has. As a result, they can help us understand this new coronavirus — to capture how unique our new reality is, it helps to look back at similar outbreaks that threatened to upend society, but ultimately stopped short.

SARS and MERS: Deadly, but not easily spread

In late 2002, [an emerging pathogen that likely spilled over from the animal world](#) started to cause severe respiratory illness in China. Sound familiar? Through the first half of 2003, the severe acute respiratory syndrome coronavirus (SARS-CoV) spread through 26 countries, [infecting at least 8,098 people and killing at least 774](#).

If the name didn't give it away, SARS was caused by a virus similar to the one that causes COVID-19, SARS-CoV-2, but it didn't have nearly the same impact. This is in spite of having a relatively high case fatality rate of [9.6 percent](#), compared to the [current estimate for COVID-19: 1.4 percent](#).





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Another respiratory illness caused by a coronavirus, Middle East Respiratory Syndrome, or MERS, has an even [higher case fatality rate of 34 percent](#). But it's also led to fewer deaths than what we've already seen from COVID-19: As of January 2020, [there have been 2,519 cases of MERS and 866 associated deaths](#) from the infection.

SARS and MERS didn't cause the same level of devastation that COVID-19 has largely because they aren't as easily transmitted. Rather than moving by casual, person-to-person transmission, SARS and MERS spread from much closer contact, between family members or health care workers and patients (or, in the case of MERS, [from camels to people directly](#)). These viruses also [aren't spread through presymptomatic](#) transmission, meaning [infected people don't spread it](#) before they have symptoms. Once people got sick, they typically stayed home or were hospitalized, making it harder for them to spread the virus around.

"By and large, except for a couple of mass transmission events, almost all of the transmission of SARS was [within the health care setting](#), when you have an aerosol-generating event like intubating someone or dialysis," said Stephen Morse, an infectious disease epidemiologist at Columbia University's Mailman School of Public Health. "So basically, you could control SARS by improving infection control and prevention in the hospitals."

[Related: New York's Inequalities Are Fueling COVID-19]

This differs significantly from COVID-19, which [can be spread by people without symptoms](#) (whether those people go on to develop symptoms eventually, or are entirely asymptomatic throughout their infection, is not yet known). It also [spreads easily from person to person](#). Put together, that means that people who don't know they're infectious could still be out and about, and their casual interactions are enough to spread the virus to other people. This is why [social distancing has become such a crucial part](#) of our strategy to combat the virus's spread.

Swine flu: Easily spread, but not as deadly

In the spring of 2009, a new version of the H1N1 influenza virus — the [virus that caused the 1918 Spanish flu](#) pandemic — [emerged and began to spread rapidly](#). The swine flu killed anywhere from 151,700 to 575,400 people worldwide in its first 12 months, through April 2010, according to [estimates from the Centers for Disease Control and Prevention](#), and may have infected over [1 billion](#) by the end of 2010.

The swine flu spread easily person-to-person, just like COVID-19, and possibly even from [people who were presymptomatic](#). Its R_0 , or R-naught, a measure of how many people an infectious person could infect, [is between 1.4 and 1.6](#). This is a little lower than COVID-19, which [experts estimate has a R-naught of between 1.5 and 3.5](#), but it still means H1N1 is a very infectious virus.

So why didn't the swine flu overwhelm our health care systems and grind our economies to a halt? The main difference is that it ended up being a much milder and less deadly infection. There are a range of estimated case fatality rates for swine flu, but even the highest, [less than 0.1 percent](#), are much lower than the current estimates for COVID-19.

“The 2009 pandemic, the H1N1 swine flu, that [disease] spread very, very well, but the fatality rate was quite low, and that's the reason why it wasn't dubbed as a particularly serious pandemic,” said Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases and a member of the White House's coronavirus task force, [in a February livestream](#).

Even with such a low case fatality rate, the swine flu had a high overall death toll due in part to how easily it spread. With an even higher case fatality rate and perhaps even a higher rate of transmission, COVID-19 has required drastic measures to prevent its spread.

Ebola: Very severe, but hard to contract

Ebola first emerged in 1976, and the world has weathered outbreaks at various points since then, including one in West Africa from 2014 to 2016. It's a severe disease that kills, on average, [50 percent of people who become infected](#), according to the World Health Organization. Yet just over 11,000 people died during the 2014-2016 outbreak, which was largely isolated to the region where it emerged.

[Related: [How Close Are We To A COVID-19 Vaccine?](#)]

Similar to MERS and SARS, Ebola is not easily transmittable. Infected people don't spread the virus [until they start showing symptoms](#), and even then the virus is hard to catch because it is spread through [direct contact with the bodily fluid of an infected person](#), like blood, sweat, and urine, rather than through the kind of particles produced when someone sneezes or speaks. Unless you're nursing patients (either at home or in a hospital setting) or tending to their body after they've died, it's unlikely you'd acquire the infection.

Ebola also tends to cause pretty severe and identifiable symptoms, such as fever and fatigue followed by vomiting and diarrhea. Not only can infected people not spread the virus until they're sick, but once they become sick, they'll know it.

"If you want to see illnesses which are controllable, they all have transmission very much tied to symptoms, and this includes SARS and Ebola," said William Hanage, an epidemiologist at the Harvard T.H. Chan School of Public Health. "If you're in an Ebola zone, you can be pretty sure whether or not the person you're talking to is a potentially risky contact."

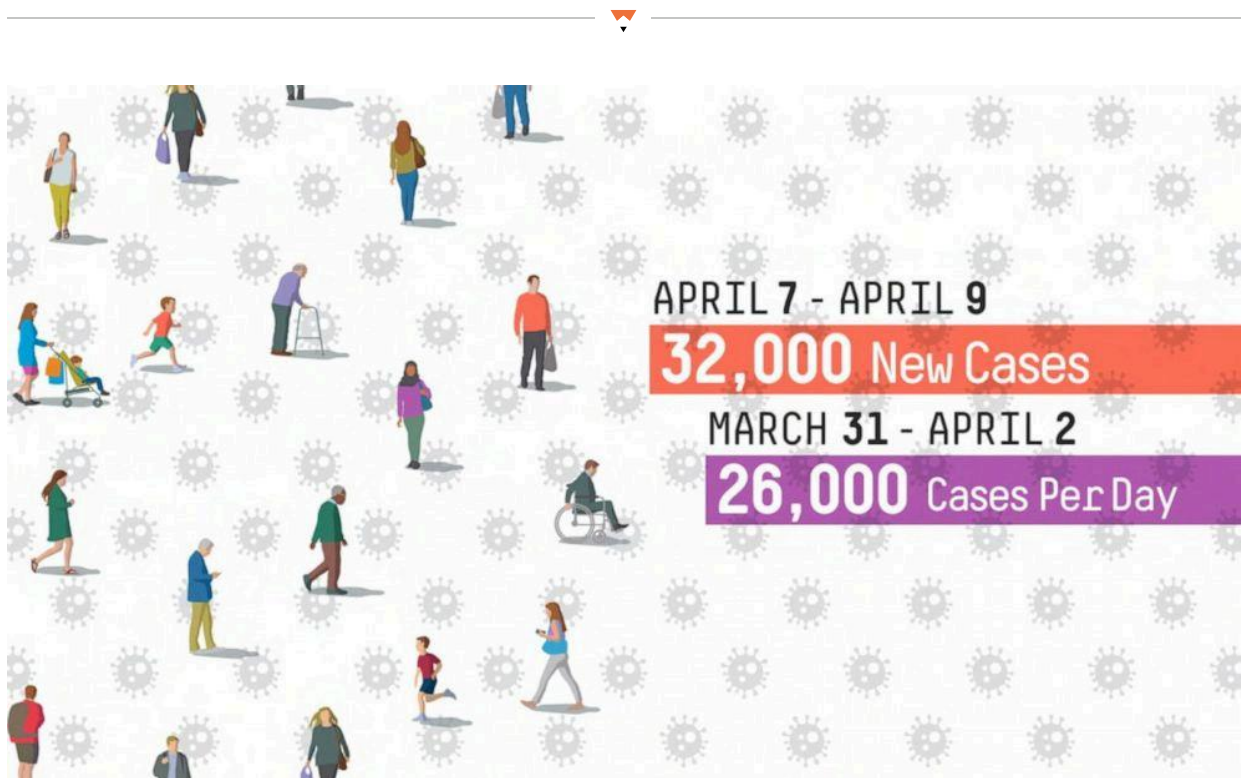
This makes it easier to isolate infected individuals and protect health care workers to limit the spread, which is what occurred in the 2014-2016 outbreak. It's a striking difference from COVID-19, which [we know can be spread without any symptoms at all](#), and even when people get sick, some people might have symptoms so mild that they're not sure they have COVID-19 in the first place.

In each of these cases, the viral outbreak lacked one of the key components that COVID-19 has that allowed it to tip over into a global pandemic. "SARS-CoV-2 is kind of a perfect storm," said Angela Rasmussen, a virologist at Columbia University who specializes in infectious diseases.

[Related: [The COVID-19 Blame Game Is Going To Get Uglier](#)]

COVID-19 can be mild enough that some people who have it don't know they have it. It's also easily spread, can be transmitted by presymptomatic people and is severe enough to kill a significant share of those who have it. All combined, the novel coronavirus has led to an outbreak that is unusually difficult to track and control. The seismic shift in our everyday lives is happening for a reason.

CORRECTION (April 15, 9:40 a.m.): An earlier version of this article misstated the number of people who died from swine flu since 2009. Between 151,700 and 575,400 people died in the first 12 months after the virus emerged; that range does not include all deaths since 2009. The article has also been updated to make clear that the swine flu infected over 1 billion people by the end of 2010 — again, that does not include all infections since 2009.

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