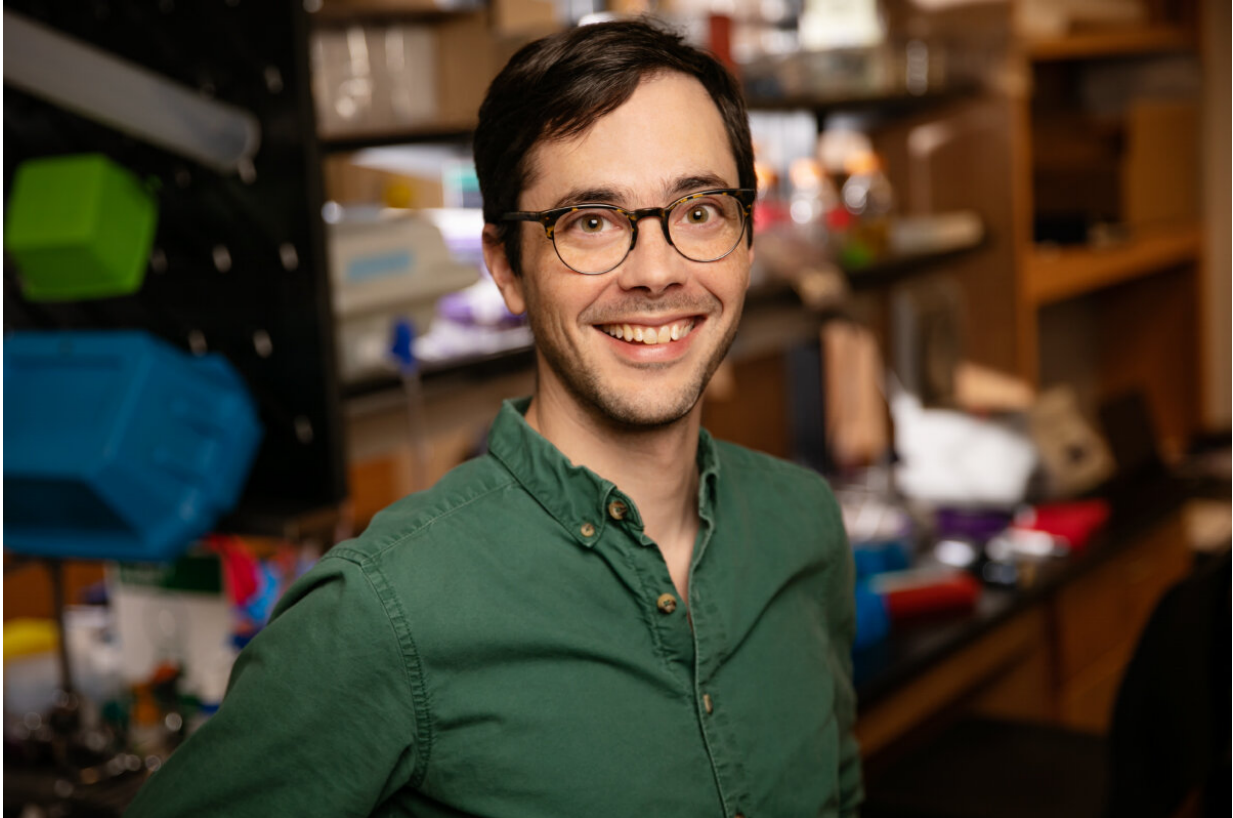


What are the novel coronavirus health risks?

March 2 2020, by Liz Ahlberg Touchstone



The best methods to prevent coronavirus infection are the same as for influenza or other respiratory viruses: frequent hand washing and avoiding contact with sick people, says Illinois virologist Christopher Brooke. Credit: L. Brian Stauffer

The novel coronavirus that first broke out in Wuhan, China in late 2019 has now spread to 48 countries, and the first case of possible community spread has been reported in the United States. The Centers for Disease

Control and Prevention is monitoring the public health risks from the coronavirus, recently named SARS-CoV2, and the respiratory disease it causes, COVID-19. University of Illinois at Urbana-Champaign microbiology professor Christopher Brooke, an expert in viruses and how they spread, discussed with News Bureau biomedical sciences editor Liz Ahlberg Touchstone what makes the novel coronavirus a public health concern.

The novel coronavirus isn't the only type of coronavirus. What are examples of others? What are the symptoms of this group of viruses?

All coronaviruses known to infect humans primarily infect the [respiratory tract](#), and can lead to a wide range of symptoms and infection outcomes, ranging from coldlike symptoms to severe respiratory distress and death.

There are a number of very common human coronaviruses that are associated with the common cold and have been circulating in the human population for years. Most people have been infected with one or more of these viruses.

People may have heard of either SARS, which caused a global outbreak in 2003, or MERS, which emerged into humans in the Middle East in 2012. These viruses gained a lot of media attention because they were associated with high rates of severe disease and mortality and were able to spread between countries, though the number of infections with either of these viruses was relatively low. Both of these viruses were animal viruses that crossed over into humans.

What do we know about how the virus spreads? How contagious is it?

The [virus](#) is likely to spread via the respiratory route: inhaling virus exhaled or coughed by infected people, as well as contact with contaminated surfaces. It is still hard to accurately estimate how contagious the virus is at this point, but it appears to be fairly contagious—potentially more contagious than seasonal flu.

What makes the virus a public health concern in the United States?

SARS-CoV2 appears to be contagious enough that China and other countries where it has shown up have been unable to completely block its spread, despite taking very aggressive measures. Most epidemiologists agree that the odds of widespread community spread of the virus in the U.S. are high. This is a concern because rates of severe disease and mortality are fairly high, at least among people over the age of 50.

I see reports of more deaths every day. How deadly is it?

It doesn't get a lot of press attention, but seasonal influenza viruses kill tens of thousands of people every year in the U.S. Current estimates of mortality rates for COVID-19—which may not be completely accurate because we do not know how many unreported or unconfirmed infections there are—suggest that this disease is more deadly than seasonal influenza. However, mortality rates are highly age-dependent and are only high for older people and people with other underlying health conditions.

Accurate estimates of these numbers in the middle of an outbreak are hard, but the case fatality rates for confirmed cases of COVID-19 in China are 1.3% for ages 50-59, 3.6% for ages 60-69, 8% for 70-79, and 14.8% for 80+. Mortality rates are much lower for younger people.

What can people do to prevent contracting COVID-19?

Transmission routes for coronavirus and influenza are similar, so the same prevention strategies apply to both. Wash your hands regularly with soap and water, as well as hand sanitizer; avoid touching your eyes, nose and mouth as much as possible; and keep your distance from anyone coughing or sneezing. The World Health Organization has more recommendations on its [website](#).

Are there treatments in development?

The National Institutes of Health and other government agencies are aggressively pushing the development of vaccines and anti-viral drugs that may help control SARS-CoV2. This is built upon basic research done by teams around the world to develop other [coronavirus](#) vaccines and therapeutics before this outbreak.

Unfortunately, these things take time, and there is not likely to be a licensed vaccine for 12 months or more. There is a promising antiviral drug that works well against related coronaviruses in animals, called Remdesivir, that currently is being tested in human COVID-19 patients.

Provided by University of Illinois at Urbana-Champaign

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