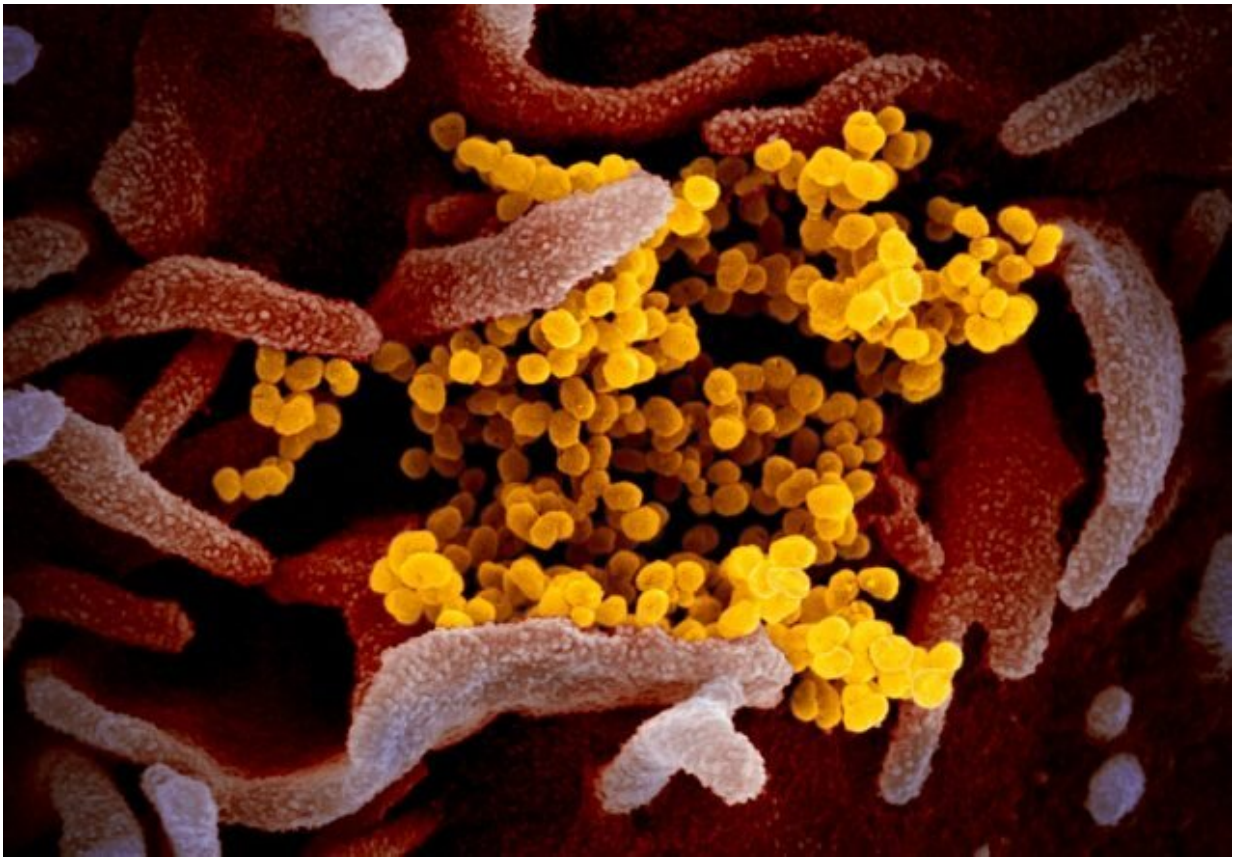
How to prepare for a coronavirus outbreak in the U.S.

February 28 2020, by Sarah Fecht



A scanning electron microscope image of the virus that causes COVID-19 (yellow) emerging from a patient's cells (pink). Credit: NIAID-RML

The U.S. Centers for Disease Control and Prevention warned on Tuesday that the novel Chinese coronavirus could soon start spreading

through American communities, causing potentially "severe" disruptions to daily life. The agency urged schools, businesses, and the general public to be prepared.

On Wednesday, the CDC reported a new case of coronavirus in a Californian who was not exposed to anyone known to be infected, and who had not traveled to countries where the virus is circulating. The case may indicate that the virus is already spreading through American communities, but public health officials are still investigating.

This strain of coronavirus (known as COVID-19), has infected more than 81,000 people and killed nearly 3,000, mostly in China. But as the virus has spread to dozens of countries, and as the number of cases spikes in South Korea, Italy, Iran, the CDC acknowledged on Tuesday that it will become increasingly difficult to prevent the virus from gaining a foothold in the U.S.

"It's not so much of a question of if this will happen anymore but rather more of a question of exactly when this will happen," Nancy Messonnier, director of the National Center for Immunization and Respiratory Diseases, said on Tuesday.

The virus causes flu-like symptoms, including fever, cough, and shortness of breath. Some experts estimate that coronavirus may be more contagious and more deadly than seasonal flu, but there is still a lot that scientists don't yet know about it. The vast majority of cases have been very mild, hardly distinguishable from the common cold or the flu, and most people recover on their own.

As there is no vaccine or treatment for COVID-19, prevention and preparedness are particularly important. In the interview below, Irwin Redlener—a physician and director of the National Center for Disaster Preparedness at Columbia University, as well as a professor of pediatrics

and health policy and management—explains what individuals and organizations can do to protect themselves and the people around them.

Are we officially in pandemic territory with coronavirus?

If the World Health Organization designates this worldwide outbreak of the coronavirus a true "pandemic," it means there's a new virus that can be spread from person to person, that it can be fatal, and that it crosses international boundaries. But we're actually more or less there already. The majority of the cases and the majority of the fatalities are, of course, in China. But in South Korea, Iran, France, Germany, cases are spreading all at an unpredictable pace. It is likely the hold-off in declaring the pandemic mostly has to do with the fact that when that designation becomes formal, it can trigger a series of more aggressive measures to control the spread.

What sorts of aggressive measures do you mean?

Let's say we start seeing more cases among children—then one of first public health measures we might take is closing schools. And if you close schools, kids have to stay home, and they can't stay in group settings because the idea would be to keep children separated. So who's going to watch them? Not everybody has a nanny, and in New York City, the vast majority of people will worry about losing income if they have to stay home to take care of their children. There are many people, probably the vast majority of New Yorkers, whose incomes are hand-to-mouth already, so being out of work for them could be disastrous. And large numbers of people staying home to watch their kids could have a significant negative impact on the business economy. And if we want to really do whatever we can to reduce exposure and disease spread, we might consider stopping congregate events, reducing public

transportation, and so on. There would be many decisions that could be extraordinarily disruptive to most citizens.

Before it gets to that point, are there things we could start doing now to avoid a major outbreak?

There are things that we should do in general. One thing is that businesses, offices, and academic departments would want to maximize how people could work remotely if need be. It's not too soon to start thinking about these possibilities. How much of our work could we do remotely, with phones, Skype, internet and so on?

The second thing is, we have to get pretty obsessive about handwashing, including at least 20 seconds of scrubbing, and using hand sanitizers. It wouldn't hurt to be doing those kinds of things already. It's about good hygiene, and that helps with controlling even the spread of regular seasonal flu and colds. These are precisely the kinds of habits that would be useful to think about even if we weren't facing a rapidly spreading virus.

Also, if you're coughing and sneezing, you really should be staying home. And if you're in the vicinity of somebody who's coughing and sneezing, try to keep five to six feet between you and that individual with those symptoms.

[Editor's note: Other strategies for avoiding the spread of coronavirus include: sneezing into your elbow instead of your hands; using alcohol to disinfect surfaces; and stocking up on food and medical supplies]

Vulnerable populations—such as older people, or people who have compromised immune systems or long-standing chronic illnesses that might make them less able to tolerate a serious infection—should be

particularly careful. People with these conditions are more at risk of getting seriously ill.

What about face masks? Do they help?

Right now I'm on a street in Midtown NYC and I see no one walking around with face masks. Nor should they be.

There are two types of face masks. There are surgical masks, which can block large droplets from a cough or sneeze, but they're not very good at blocking small droplets that could contain the virus. The more advanced masks that can do that are called N-95 respirators. Those masks are effective, but they're actually difficult to breathe through and therefore difficult to wear. They're appropriate for medical personnel, but we don't really recommend them for the general population because they are so uncomfortable and they have to fit perfectly around the nose and mouth.

That's good advice for individuals. Are there things that communities and organizations could do to prevent the spread of the virus?

If cases start to ratchet up, then we might want to consider not going to large events where people could potentially be carrying the disease.

This all sounds a little intimidating. How worried should we be?

We should be attentive but not panicked. We should follow the advice of public health officials. We should be extremely careful with information that comes across social media. There's a tremendous amount of false information, myths and advice on the internet that people should ignore. It's just too difficult on social media to know what's true and what's not

true. If you want reliable information, go to cdc.gov or the NYC health department website. Reliable, accurate resources are critical at a time like this.

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