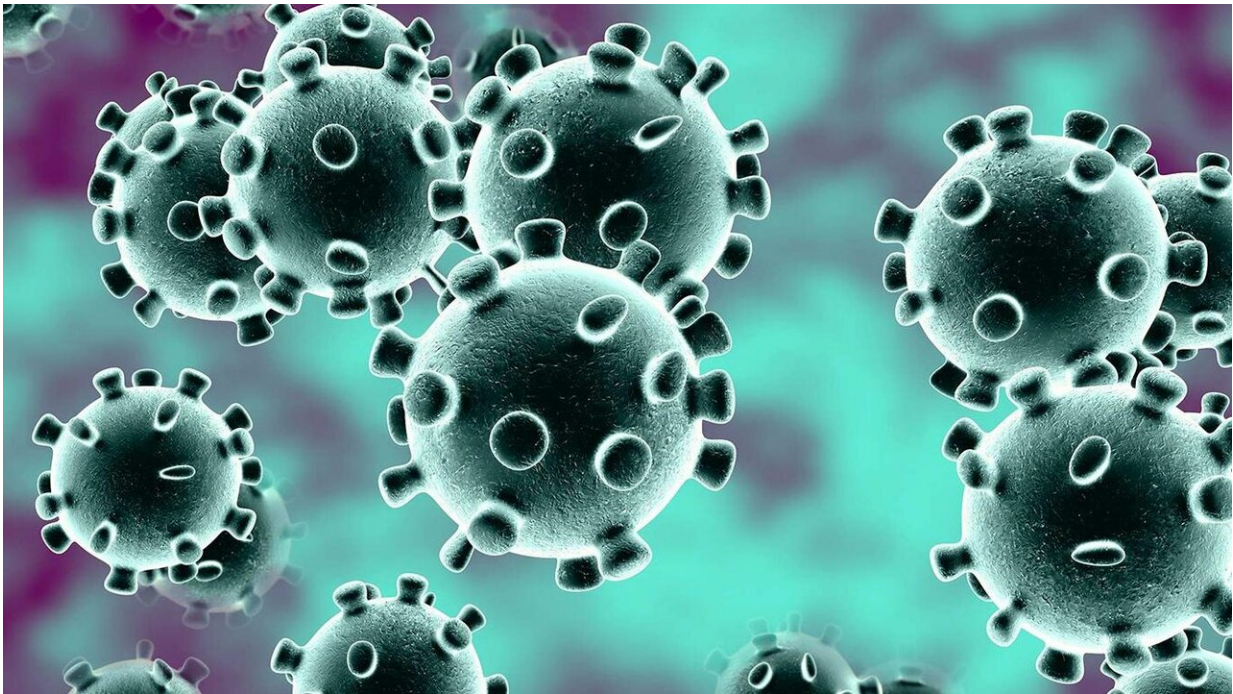


# Video: Infectious disease specialist answers common questions about COVID-19

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Credit: Centers for Disease Control and Prevention

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A [contagious respiratory disease](#) that was first detected in China in December 2019 has spread worldwide. The 2019 novel (new)

[coronavirus](#) has been named SARS-CoV-2 and the disease it causes is called coronavirus disease 2019, or COVID-19.

Although health officials here and abroad are working to track and contain the growing epidemic, the Centers for Disease Control and Prevention expects widespread transmission of COVID-19 in our country.

As an infectious disease specialist and hospital epidemiologist at the University of Chicago Medicine, my job is to prepare for outbreaks such as COVID-19 while caring for patients at our academic medical center on Chicago's South Side.

The extent of this outbreak is rapidly evolving and risk assessment changes daily, but here's what we know about COVID-19 as of today:

## **What is a coronavirus? What is a novel coronavirus?**

A coronavirus is the name for a large set of illnesses, including the common cold and other respiratory infections. The term "novel" coronavirus means it's a new form of the virus.

## **Where and how did COVID-19 begin?**

We learned about this particular virus shortly after a cluster of severe pneumonia cases were reported on New Year's Eve 2019 in Wuhan, which is in the Hubei Province of China. On Jan. 9, virologists and other public health researchers identified the strain as a novel coronavirus, which was tied to a specific "wet market" in the city of Wuhan, where they sell fish and other live animals.

These markets have been known to transmit viruses before. For cultural reasons in the region, people want to see the specific animals they're

buying be slaughtered in front of them, so they know they're receiving the products they paid for. As a result, particles of infectious viruses or bacteria can be aerosolized and, in rare instances, jump from animals to people. It's how SARS, another coronavirus, started in 2003.

## **How did the virus come to the United States?**

The first known patients in the U.S. contracted the virus while traveling in other countries or after exposure to someone who had been to China or one of the other affected areas. But now, a few cases here cannot be traced to these risk factors. This is concerning because it suggests the illness may be spreading across communities for which the source of infection is unknown, which we call community spread/transmission. We don't know how severe this will be, but it may cause significant disruptions in our daily lives.

## **How does COVID-19 spread?**

This virus is really transmissible and can spread easily from person to person even before a person develops symptoms. It's carried on respiratory droplets when we talk, sneeze, and cough and these can land on surfaces or in someone's mouth or nose. When it comes to respiratory droplets, 6 feet is the magic distance. That's how far these tiny, infected droplets can travel. Being within 6 feet of someone who is sick can get you or your personal space contaminated with COVID-19.

When droplets land on surfaces, we can pick them up with our hands and transfer them to our eyes, mouth, and nose when we touch our faces. This is why hand hygiene is so important. Good hand hygiene means washing our hands not just after we're using the restroom or before we're eating but regularly throughout the day. Respiratory secretions (like snot and sputum) are also be infectious, so cover your coughs and sneezes,

use disposable tissues, throw them away when you're done, and wash your hands afterward. Keep your work surfaces clean and wipe off your keyboard and your phone.

## **What are the symptoms of COVID-19? Is it deadly?**

It typically causes flu-like symptoms. Some patients—particularly the elderly and others with other chronic health conditions—develop a severe form of pneumonia.

If you are experiencing symptoms, it is important to know when to see a doctor.

Patients develop symptoms like fever, muscle and body aches, cough, and sore throat about 5-6 days after infection. Most people will feel pretty miserable for a week and get better on their own. Some people won't get as sick, but it's still important not to be out and about, so as not to spread the disease. A minority of patients will get worse instead of better. This usually happens after 5-7 days of illness and these patients will have more shortness of breath and worsening cough. If this happens, it's time to contact your doctor again or even go to an emergency room. Be sure to call first so they know you are coming.

The numbers of people who have been diagnosed and how many have died are changing daily. As of early March, there have been over 125,000 confirmed cases, with a death toll of about 4,500 (more than 3,000 in mainland China). But these numbers are just estimates; it's still unclear how many people have actually been infected worldwide. Most of the deaths have been in adults over 60 years old who had other health concerns.

## **Is everyone at risk for catching COVID-19?**

Yes. It doesn't appear anyone is naturally immune to this particular virus, and there's no reason to believe anybody has antibodies that would normally protect them. However, children appear to be among those least likely to have a bad outcome from contracting the disease.

The lack of previous experience with this virus is part of the reason public health officials are working so hard to contain the spread of this particular coronavirus. When viruses are both new (which means the population is highly susceptible) and can easily pass from person to person (a high transmission rate), they can be very dangerous.

## **Why do some people with the COVID-19 get sicker than others?**

It looks like only about 20% of people who contract this novel coronavirus need to be hospitalized. The other 80% get what feels like a bad cold and recover at home. A lot of this has to do with underlying medical conditions. People who are more vulnerable to any kind of infection—because of their age or chronic health conditions—are more at risk for getting really sick from COVID-19.

That said, some otherwise healthy people do seem to be getting sicker from this infection than we would expect. We don't understand why that is or what might be different about these patients. If you have COVID-19 and you are getting sicker and sicker instead of better and better, you should contact your doctor or visit an ER. Be sure to call first so they know to expect you.

## **Who are the most at-risk for contracting a severe case of COVID-19?**

The most vulnerable populations for having a bad outcome with

COVID-19—including needing to be in the hospital or on a ventilator—are people over the age of 60 (especially men) with additional medical concerns. This includes people who are smokers, who have hypertension (high blood pressure) and diabetes, people who have low immune systems, people with underlying lung disease or who take medicines to suppress their immune systems because they have some sort of autoimmune condition or cancer.

We strongly recommend that these individuals begin curtailing all of their outdoor activities in accordance with the recent CDC guidelines. These people should not be traveling, and they should not be out in crowds. They should be staying home as much as possible. And if you haven't been instructed to work from home, you should ask about working from home if you are in one of these groups.

## **Does the pneumonia vaccine provide any protection against COVID-19?**

There is no antibiotic (they are designed for bacterial infections, not viral ones) to treat COVID-19. Scientists are already working on a vaccine, but we don't expect to have a good vaccine until spring of 2021 at the earliest. However, ongoing trials in China suggest that there are some existing antiviral drugs that may be helpful for the sickest patients. In fact, the University of Chicago is part of a multi-institutional team that has mapped a protein of SARS-CoV-2 and found drugs previously in development for SARS could be effective for COVID-19.

For now, doctors can only treat the symptoms, not the virus itself.

Similarly, the pneumonia vaccine protects against a type of bacterial pneumonia, not the COVID-19 virus. However, it's still important to get the pneumonia vaccine—particularly if you're over 65 or have a

compromised immune system. It can keep you safe from other illnesses that are circulating or shorten the severity of your sickness if you contract bacterial pneumonia.

## **What kind of medical care do patients with COVID-19 need?**

It's the 20% of COVID-19 patients who get really, really sick that worry many of us in the [infectious diseases](#) field. A lot of these critically ill patients wind up needing to be hospitalized for their pneumonia-like illnesses. They typically require critical care and ventilation—special machines that help them breathe. And some need to stay on ventilators for weeks at a time. It's this portion of patients that is most concerning. Depending on how many cases develop here in the U.S., providing that level of care for so many people over a number of weeks runs the risk of overwhelming the nation's health care system pretty quickly. We can help prevent this kind of "surge" in patients by practicing social distancing (see below for more explanation).

## **How do you screen patients for COVID-19?**

At UChicago Medicine, our teams are following guidelines from the U.S. Centers for Disease Control and Prevention. That means we're asking any patient who has respiratory symptoms and a fever if they've traveled to the affected areas in the past two weeks or been in close contact with someone who has COVID-19.

Patients who answer yes will immediately be given a face mask and put in an isolation room, which has special airflow designed to keep airborne germs from getting out into other rooms. Then, they'll be tested for the usual seasonal respiratory viruses and, if those are negative, tests will be sent for COVID-19 as well. Turnaround time on the COVID lab test is

1-2 days. People will need to remain in isolation until they're cleared. But they may not need to stay in the hospital. Most patients are well enough to rest at home while waiting for the test results.

We're also instructing our clinical teams to follow standard infection control protocols. Our doctors, nurses and other clinical staff will wear protective gear, such as gowns, gloves, masks and eye shields. That's what they do with anyone who has something like the flu and it's the same steps we followed during the SARS and MERS outbreaks. We're also reminding everyone to make sure to wash their hands regularly and avoid touching their faces—that's good practice any time of the year, and especially during flu season.

## **Should people be more concerned about the seasonal flu or COVID-19?**

There's widespread seasonal flu activity going on right now all around the U.S. But there are steps you can take to protect yourself from influenza. You can get an annual flu shot. You can take medication like Tamiflu that protects you from getting influenza after you've been exposed. You can cover your mouth and wash your hands to mitigate the spread. And, like clockwork, this year's influenza strain is going to die out in the spring because it will have run its course.

The challenge with COVID-19 is that we probably can't contain it and we don't know if we're really prepared as a country for a massive coronavirus epidemic. If we are lucky, it will slow down a bit over the summer, but the next few months look like they are going to be pretty tough for all of us. We need to be as ready as we can for whatever comes our way and know that we will get through it eventually.

## **How can I protect myself? Should I wear a face**



## **mask?**

Take the preventive actions you do for the cold and flu. This includes avoiding close contact with people who are sick; not touching your eyes, nose and mouth; washing your hands thoroughly and frequently; and cleaning and disinfecting objects and surfaces you come in contact with regularly.

The CDC does not recommend you wear a face mask to protect yourself from getting COVID-19 or other respiratory illnesses. Those who have COVID-19 and/or are showing symptoms should wear a mask to protect others from getting the virus. Any health care worker taking care of someone infected with COVID-19 also should wear a mask.

## **Will the flu shot protect people from COVID-19?**

Unfortunately, the flu shot is not effective against this virus. But it will help protect you from the flu, and the flu is still what you're more likely to catch right now.

## **Can drugs like Tamiflu protect patients from getting sick from COVID-19?**

No. Tamiflu is designed to fit into a molecule in the influenza virus, which doesn't appear to be part of COVID-19. However, there are other antiviral medications that may be helpful. We're still learning more about whether these drugs, like Kaletra (an antiretroviral for HIV patients), will prevent people from getting sick entirely or just help people recover faster. Still, there's a lot of hope in some of the early data we're seeing. There are also other antivirals being evaluated at the center of the outbreak in Wuhan.

## **What should I do if I think I am infected with COVID-19?**

If you think you may have COVID-19, reach out to your doctor right away. If you're going to your doctor's office or an emergency room, call ahead so someone can meet you outside to give you a face mask to help limit the spread of any germs. In the meantime, stay away from other people. If you live with others, choose a room or place in your home where you can be separated from the others. Don't share utensils or cups. Have someone wipe down bathroom surfaces with disinfectant regularly, keep their hands clean, and try to keep the windows open for air circulation. Don't forget to cover your coughs and sneezes.

## **Can I get tested for COVID-19 if I'm worried I've been exposed?**

Only if you are sick. The test to diagnose COVID-19 isn't useful unless you are sick and it's still more limited than any of us want it to be. Make sure you tell your doctor about any risks for COVID you may have so they can get you a test if you need it.

It's also worth mentioning that people shouldn't be worried if they go to their doctor's office and get tested for respiratory viruses and the results say they have a coronavirus. That's because coronavirus is the name for a whole group of viruses, including things like the common cold. Most doctors' offices can test for normal, everyday coronaviruses. If you see test results that say you have one, you shouldn't worry. If you are being tested for COVID-19, your doctor will be very, very specific and will walk you through any results that come back.

## **Is COVID-19 airborne?**

In infection control, we draw a line between things that are transmitted by traveling in the air briefly in respiratory droplets and things that are actually aerosolized and float around for a while. Think of droplets as small bits of fluid that you can feel and see when someone sneezes. You sneeze or cough and these droplets get on surfaces and then you touch them and get them on your hands, or they can fly right into your mouth or nose or eyes. That's how most coronaviruses are transmitted and that's how we think this one is too.

Aerosols are different. Think of hairspray after you use it in the bathroom. When you go back to the bathroom later, you may still be able to smell it because it's lingering in the air. Obviously, we're learning a lot about this virus, but most coronaviruses aren't airborne that way. Generally speaking, there may be times when some of these droplets or particles are airborne, but it's limited.

## **Someone on my plane was coughing next to me. Should I worry I will get COVID-19?**

If you have contact with someone who is known to have a confirmed case of COVID, you will be asked to stay home and watch yourself for symptoms. That is very different than if you have contact with someone who had contact with someone who either does or may have COVID-19.

Contacts of contacts—or people that are two people removed from an actual case or a possible case—do not need to take any precautions at this time. You have to wait and find out if the person you had contact with develops any symptoms. In the unlikely chance someone on your flight did have COVID-19, the local health department in your community will find you. If they don't, then you probably weren't exposed.

## **What is "community-based transmission" and why is**

## it important?

Public health officials have been talking a lot about "community-based transmission" of COVID-19 and it's not always clear how this is different from a person who picked up COVID while traveling abroad. Because of the travel alerts and the public health screening at airports, many people who traveled to a country with COVID risk are being asked to stay home and avoid contact with other people. When these people get sick, they have very few contacts and public [health officials](#) can track them down and ask them to continue to stay home. This is a containment approach to reducing spread of a new virus and it means that we can see the whole chain of transmission, tracking it from person to person.

When we find cases of COVID-19 that aren't part of a known transmission chain, these patients must have picked up COVID from somewhere. So, we have to assume there are invisible chains of transmission that could include lots and lots of missed cases. Basically, it tells us that our attempts to contain the virus have failed and, especially with COVID-19, it can be really difficult to find these invisible cases and stop the spread. Epidemiologists believe that each community-based case represents a bunch of other invisible cases and, often, this spurs widespread testing of everyone who has cough or cold symptoms in the area. This usually leads to finding a lot more cases in the subsequent weeks.

## What is "social distancing" and should I be doing it?

Social distancing is one of a number of "non-pharmacologic interventions" that can be used to slow spread of infections. This specifically refers to different ways of keeping people separated. Increasing the distance between desks at school or standing farther away from the next person in line at the grocery store are both social

distancing, as is working from home instead of an office and choosing to elbow bump or wave instead of shake hands. Canceling group gatherings and avoiding crowded public places are also crucial forms of distancing. Social distancing is a way we can all work together to spread ourselves out from other people and keep ourselves from spreading infection.

We shouldn't be staying at home or distancing because we're scared. The individual risk to any one of us is low. However, we should be distancing because we need to protect those of us who are at a higher risk. The speed at which this disease spreads throughout our community makes a big difference in terms of how many people are sick at the same time. If many people are sick at once, this could easily overwhelm our hospital system, and we may not have enough beds for all the patients that need care.

The only way we can prevent this from happening is by taking actions to stop spread of the disease. These actions that keep us at home and away from other people will protect the most vulnerable and keep our hospitals from becoming overcrowded should these people need more serious medical interventions.

You'll have to make your own personal risk assessment about things like using public transportation, going out to dinner, getting together with your friends and even attending religious services. Some people (like health care providers) will need to go to work even in the middle of a widespread outbreak and others will need to use public transportation and go to the grocery store no matter what. However, we can each do our part and stay home when we can to make it safer for everyone.

## **What if someone I live with becomes sick with COVID-19?**

If you are living with someone who has tested positive for COVID-19 and is being quarantined, you need to stay separate from that person as much as possible. Additionally, be very careful about maintaining good hand washing and cleaning of high-touch surfaces like doorknobs and countertops. When you do need to be in the same room as the individual, wear a mask.

## **What does quarantine mean for COVID-19? When should I consider quarantining myself?**

We use the word quarantine in a really specific setting. Normally, your physician or the public health department is going to be the ones recommending the practice of quarantine. If you or a family member gets sick with COVID-19, you could find yourself in a mandatory 14-day (or longer) quarantine, and you won't be allowed to leave your home, even to run errands. You would stay in the same place for the entire duration of the quarantine period.

## **Do I need to stock up on groceries and medication? Could we be locked down like in China?**

It's highly unlikely that the U.S. government would impose extreme movement restrictions unless absolutely necessary. For communities experiencing bad outbreaks, they will likely ask people to stay home and avoid public spaces for a while. These strategies can really help slow the spread of infection so that everyone doesn't get sick at the same time. Following these recommendations in any way you can will help protect the most vulnerable among us.

If you or a family member gets sick and has to be quarantined, it's important to be ready to do your part by staying home. In this situation, you probably need to have basic supplies on hand in the way of non-

perishable foods, prescription medications and comfort items to help keep you sane while you ride it out—as you would during a natural disaster. However, COVID doesn't threaten our water supply or electricity so hand-crank radios and pallets of water might be a bit overkill for this situation. Instead, maybe it's time to choose a few puzzles and catch up on your favorite binge watching. Having a bunch of enjoyable things to do if you have to stay home for a while can go a long way toward making the entire situation more bearable.

## **How should I be talking to my children about COVID-19?**

With all of the event cancelations and school closures, it's important we discuss what is happening with school-aged children who will likely be disappointed or scared by what they are hearing. The most important thing to let your children know is that they are going to be fine throughout this, and there are a lot of grownups working hard to help keep everybody safe. At the same time, we need our kids to also help keep others, including their parents and their grandparents, safe. We need their help with social distancing, washing their hands and covering their coughs.

Provided by University of Chicago

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