

Our New COVID-19 Vocabulary—What Does It All Mean?

BY [KATHY KATELLA](#) APRIL 7, 2020

Yale Medicine experts provide a glossary of key terms you need to know.



Making sure you have accurate information is key to understanding how (and why it's important) to [prevent the spread of COVID-19](#). But that can be difficult when faced with the increasing amount of complicated terminology that has developed, seemingly overnight, around the coronavirus outbreak.

“If you want to be able to respond to things in a clear way, you must have a clear understanding of what we’re talking about,” says [Jaimie Meyer, MD, MS](#), a Yale Medicine infectious diseases specialist. “It’s important to understand these words because they can mean different things—for instance, quarantine and isolation are not the same thing.”

Here is a list (and explanation) of terms—separated into five sections—that are being used to talk about the COVID-19 pandemic—including quarantine and isolation—with information from the Centers for Disease Control

and Prevention (CDC), the World Health Organization (WHO), and Yale Medicine doctors.

What are coronaviruses?

Coronavirus

A family of viruses, seven of which are known to infect people. They get their name from the crown-like spikes—coronas—that appear on the viruses under a microscope. [Coronaviruses](#) can cause the common cold (which can also be caused by other viruses, such as rhinoviruses), as well as dangerous illnesses such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). SARS CoV-2, the coronavirus virus first discovered in December 2019, causes the disease now known as COVID-19.

SARS (Severe acute respiratory syndrome)

A coronavirus, which first infected humans in 2002, that reached epidemic proportions before it was contained—there have been no outbreaks since 2003. SARS causes fever, headache, body aches, a dry cough, hypoxia (oxygen deficiency), and usually [pneumonia](#). SARS and SARS CoV-2 are related genetically, but the diseases they cause are different.

SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2)

The new coronavirus that causes COVID-19, which is believed to have started in animals and spread to humans. Animal-to-person spread was suspected after the initial outbreak in December among people who had a link to a large seafood and live animal market in Wuhan, China. While no one knows for sure how SARS-CoV-2 spread from an animal (and what type of animal) to a human, SARS-CoV-2 is a betacoronavirus, which means it originated in bats.

COVID-19 (Coronavirus Disease 2019)

Just as the human immunodeficiency virus (HIV) causes acquired immunodeficiency syndrome (AIDS), the coronavirus SARS-CoV-2 causes [COVID-19](#). The symptoms of COVID-19 include cough, fever, and shortness of breath. While the disease appears to cause mild to moderate illness in most people, in others it has caused life-threatening pneumonia and death. Doctors and researchers continue to learn more about the disease, so information about symptoms, prevention, and treatment may change as more data becomes available.

Spread of disease

When a disease—and the virus that causes it—begins to spread, epidemiologists (who are considered the basic scientists of public health) take notice, looking for the frequency, patterns, and causes associated with it. Below

are definitions of a few of those epidemiological terms that you may hear or see reported in the news, especially as they relate to COVID-19.

Endemic

The baseline, or expected, level of the disease in the community—meaning it always exists, like the common cold and flu, which are usually at low, predictable rates.

Epidemic

This refers to a sudden increase in the number of cases of a disease, above what is typically expected in a particular area. COVID-19 is thought to have reached epidemic proportions in China in mid-January. “There is not really a date because there is no background [endemic] activity of this novel coronavirus in humans,” says Dr. Meyer.

Outbreak

This shares the same definition as epidemic, with one exception—an outbreak usually refers to a more limited geographic area. COVID-19 started as an outbreak in Wuhan, the capital city of the Hubei province in China at the end of December 2019, when the Chinese government confirmed that it was treating dozens of cases of pneumonia of unknown cause.

Pandemic

An epidemic that has spread over several countries or continents, impacting many people. Pandemics typically happen when a new virus spreads easily among people who—because the virus is new to them—have little or no pre-existing immunity to it. COVID-19, which was declared a pandemic by the WHO in early March, is the first pandemic known to be caused by the emergence of a new coronavirus.

The CDC recognizes [six stages to a pandemic](#)—it starts with an investigation phase, followed by recognition, initiation, and acceleration phases, which is when it peaks. Then, comes a deceleration phase, when the rate of infection decreases. Finally, there is a preparation phase, where the pandemic has abated, and public health officials monitor virus activity and prepare for possible additional waves of infection. Different countries—and various sections of the same country—can be in different phases of the pandemic at the same time. The U.S. is currently in the acceleration phase.

Cluster

A collection of cases occurring in the same place at the same time. In the U.S. in February and March, early clusters of COVID-19 developed in California, New York, and Washington state.

Community spread

Circulation of a disease among people in a certain area with no clear explanation of how they were infected—they did not travel to an affected area and had no close link to another confirmed case. This is sometimes

referred to as community transmission. In late February, a woman in California became the first patient confirmed in the U.S. WHO could not confirm how she got COVID-19.

Although scientists are still learning about COVID-19 as more data becomes available, the virus is thought to be spread mainly from person-to-person contact, as well as when a person touches a surface or object that has the virus on it and then touches the mouth, nose, or possibly eyes. What follows are some key words used in news outlets to discuss transmission of COVID-19.

Transmission

The time between when a person is infected by a virus and when he or she notices symptoms of the disease. Estimates of the incubation period for COVID-19 range from 2-14 days, but doctors and researchers may adjust that as more data becomes available.

Incubation period

A form of direct transmission, this is a spray containing large, short-range aerosols (tiny particles suspended in air) produced by sneezing, coughing, or talking. Droplet transmission occurs—in general and for COVID-19—when a person is in close contact with someone who has respiratory symptoms. “Although now there is the understanding that we may all spray droplets when we talk or breathe,” says Dr. Meyer. “You don’t necessarily have to cough or sneeze, it’s just that the coughing and sneezing propel the droplets further.”

Droplet transmission

When a patient is a carrier of an illness but does not show symptoms. People are thought to be most contagious for COVID-19 when they are most symptomatic, according to the CDC, although researchers are still investigating how its spread might be possible at other times, including during the incubation period (called “pre-symptomatic transmission”) and even after symptoms have resolved.

Asymptomatic

One person who, for unknown reasons, can infect an unusually large number of people. Infectious disease specialists say it is common for super-spreaders to play a large role in the transmission of viruses. In what’s known as the 80/20 rule, 20% of infected patients may drive 80% of transmissions.

Super-spreader

As COVID-19 spreads across the country and the globe, there has been an increasing urgency—from individuals, scientists, doctors, and lawmakers at local, state, and national levels—for people to follow “best practice” prevention guidelines in an effort to stop or, at least, delay the spread of the disease. Below are commonly used terms to describe this effort.

Preventing COVID-19

Flattening the curve

Slowing the spread of the virus. If you map the number of COVID-19 cases over time, the expectation is that it will peak at some point—on a graph this peak would mirror a surge in hospital patients. “Flattening the curve,” which involves strategies to decrease transmission of the disease, would result in fewer patients during that peak period. This, in turn, would mean hospitals would be better able to manage the demands of patients who are sick with COVID-19 and other illnesses.

Hand hygiene

A key strategy for slowing the spread for COVID-19. [Washing hands](#) with soap and water for at least 20 seconds is one of the most important steps to take to protect against COVID-19 and many other diseases.

Social distancing

Putting physical distance between yourself and other people. This means avoiding groups of people (parties, crowds on sidewalks, lines in a store) and maintaining distance (approximately 6 feet) from others when possible. [This is a key strategy for avoiding COVID-19 infection](#) and to flatten the curve.

Shelter-in-place order

This is a decree, usually from a government official, for people to stay in their homes with exceptions that include going out for essential needs, such as groceries, as well as outdoor activities like walking and biking in public spaces. People who work in critical services, like health care or law enforcement, or essential businesses, are usually excluded from these mandates.

Self-isolation

Basically a voluntary agreement, this means you are to remain at home and not go to work or school. You'll be expected to limit your movements outside (you can go for a walk and go shopping, though) and monitor your health for 14 days after returning from travel to a place known to have high numbers of COVID-19 infections.

Self-monitoring

This simply means checking yourself for COVID-19 symptoms, including fever, cough, or difficulty breathing. If you notice symptoms, you should self-isolate and seek advice by telephone from a health care provider or local health department to determine whether you need a medical evaluation.

Isolation

On a larger scale, isolation involves keeping people with confirmed cases of a contagious disease separated from people who are not sick. If you have a confirmed case of COVID-19, for example, you may be put into isolation for public health purposes—it may be voluntary or compelled by federal, state, or local public health orders.

Quarantine

Unlike isolation, quarantine involves separating and restricting the movements of people who were exposed to a contagious disease to see if they become sick. The government may impose a quarantine on someone who was exposed to COVID-19 to avoid spread of the disease to others if they get sick.

The medical response

As the public does its part to help stop the spread of disease, health care workers on the front lines are caring for an increasing number of patients with COVID-19. The word “surge” is often used to describe the rapidly growing number of people in need of medical attention, a phenomenon that is already overwhelming hospitals around the country.

Drive-thru testing

Medical staff will take a “swab test” (usually done through the nose) to collect cells to test for COVID-19. These designated testing stations reduce the likelihood of further spreading the illness by allowing you to remain in your car, having the test taken through your open window. (The sample is then sent to a laboratory.) You will need an order from your primary care doctor before you can be tested for COVID-19, and tests are only available to people with symptoms. Testing for COVID-19 is free.

Anti-viral medicines

A class of drugs used to treat viral infections—not bacterial ones (which are treated with antibiotics). So far there are no FDA-approved drugs to treat COVID-19, but scientists are studying drugs approved for other diseases. There are also several investigational, or experimental, drugs being studied in several hundred clinical trials currently underway in countries around the world. For example, remdesivir is an investigational intravenous drug with broad antiviral activity that researchers have called “promising.” It is being tested in multiple sites in the U.S., including at Yale New Haven Hospital.

Personal protective equipment (PPE)

“Specialized clothing or equipment, worn by an employee for protection against infectious materials,” as defined by the Occupational Safety and Health Administration (OSHA). In health care settings, PPE may include gloves, gowns, aprons, masks, respirators, goggles, and face shields. The CDC provides recommendations for when and what PPE should be used to prevent exposure to infectious diseases.

Typically, and in a pre-COVID-19 world, health care workers use new PPE for each patient interaction, depending on the patient’s condition, which is why with the expected surge of COVID-19 patients, the supply of PPE in hospitals around the country is expected to run low—or out. These shortages may leave doctors, nurses, and other caregivers ill-equipped to protect themselves while caring for COVID-19 patients.

N95 respirator

Sometimes casually referred to as an “N95 mask,” this PPE is worn on providers’ faces, forming a tight seal around the nose and mouth. Though it looks like a surgical mask, an N95 is actually a respirator that filters out at least 95% of particles in the air. What’s more, it requires a 20-minute “fit test” to ensure proper fitting—and it

does not provide adequate protection for people with facial hair. The CDC does not recommend N95 respirators for public use.

Ventilator

This is a machine to help patients breathe when their lungs are damaged, and they can't get enough oxygen on their own. A ventilator takes over the work of breathing for a patient to allow the damaged lungs to heal; it is not itself a treatment. As there are no FDA-approved treatments yet for COVID-19, seriously ill patients are given supportive care, including supplementary oxygen and mechanical ventilatory support.

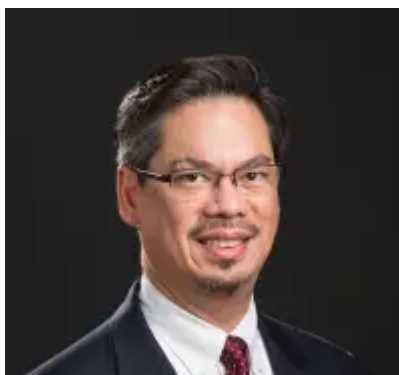
Vaccine

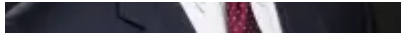
A vaccine triggers the immune system to help it build immunity to a disease. The immune system already has the capacity to react to diseases by producing substances called antibodies that remain in the body to fight them in the future. With a vaccine, you don't have to get the disease to develop immunity—the vaccine triggers the same process by providing the body with a tiny amount of a germ that has been weakened or killed, but small enough that it won't make you sick. Vaccines are introduced to the body via injection, mouth, or a nasal spray.

The National Institute of Allergy and Infectious Diseases (NIAID) is investigating a vaccine to protect people against COVID-19. An experimental vaccine, called mRNA-1273, has been developed by NIAID scientists and their collaborators at the biotechnology company Moderna, Inc. It could take at least a year before this or any other vaccine is available for the new disease.

[Click here to learn more about Yale's research efforts and response to COVID-19.](#)

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