2020/04/14

# Some useful references on COVID-19 for “English for Physics”

## YouTube videos:

Bio animation 7:27　2020/03/28

https://www.youtube.com/watch?v=5DGwOJXSxqg

Exponential growth and epidemics 8:56　2020/03/08

https://www.youtube.com/watch?v=Kas0tIxDvrg

log-log graph by physicists 7:15　2020/03/27

https://www.youtube.com/watch?v=54XLXg4fYsc

PCR　3:55　2014,04/21

https://www.youtube.com/watch?v=iQsu3Kz9NYo

PCR 6:51 2017/01/31

https://www.youtube.com/watch?v=X2JuQHspT8w

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## Glossary on Webpages:

(References used for Maeno’s “COVID-19 Glossary”)

US News (USA)

https://health.usnews.com/conditions/articles/coronavirus-glossary

by Lisa Esposito, April 2, 2020.

Kaiser Family Foundation (San Francisco, USA)

https://www.kff.org/glossary/covid-19-outbreak-glossary/

Aljazeera (Doha, Qatar)

https://www.aljazeera.com/news/2020/03/coronavirus-terminology-explained-covid-19-glossary-200323064432820.html

Daily Sabah (Turky)

with Some illustration

https://www.dailysabah.com/life/health/coronavirus-glossary-lockdown-the-curve-essential-worker-and-more

The New York Times (USA)

https://www.nytimes.com/2020/03/18/us/coronavirus-terms-glossary.html
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2020.4/21, rev: 2020.5/12

# Coronavirus Glossary

From US News unless specified otherwise

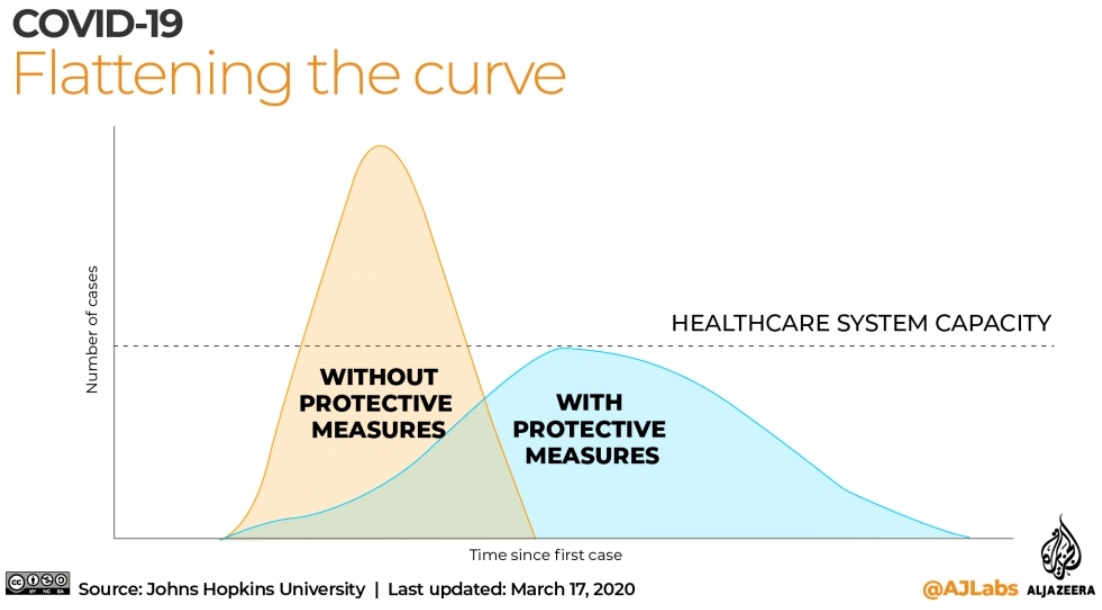
**Community spread.** Community spread of the coronavirus means people living within an area have become infected, including some people who aren't certain how or where they became infected. For example, they haven't recently traveled to a country experiencing an outbreak, or haven't knowingly been exposed to someone with confirmed COVID-19.
市中感染

**COVID-19.** This stands for the coronavirus disease of 2019, when it was first identified. Originally called the "2019 novel coronavirus," is the highly contagious diseases be spreading across most parts of the globe. It is believed to spread primarily by respiratory droplet from infected people. Fever, cough and shortness of breath are hallmark symptoms. Currently there is no vaccine or proven treatment for the virus that may cause severe respiratory disease, typically pneumonia,fairly mild flu-like symptoms and recover within a week or two.

**Epidemic.** An epidemic is a significant, often sudden increase in the number of cases of an infectious disease that rises above what's usually expected for a population in a certain geographic area. 伝染病

**Flatten the curve.** The COVID-19 "curve" refers to the trajectory of how the disease spreads. On a graph, an early, high curve reflects a surge in cases that can overwhelm the health care system in a country, leading to shortages in intensive care beds and lifesaving equipment. By implementing population-wide measures like social distancing early, the onset of cases can be delayed with rises more gradually with a lower peak of total cases.

Slowing a virus's spread to lower the peak number of cases and related demands on hospitals and infrastructure.




**Incubation period.** The incubation period for a disease is the time from which you're exposed to the organism – such as a virus or bacteria – by which it's caused until you develop the first symptoms. Evidence so far suggests that the incubation period for the virus that causes COVID-19 may range

from two to 14 days, according to the CDC. You are contagious during this time, even if you're not yet showing symptoms, or asymptomatic. 潜伏期間

**Isolation.** Isolation is used to separate someone with a suspected or confirmed case of COVID-19 from others to avoid transmitting the disease. In facilities such as hospitals or nursing homes, isolation typically requires the person to be moved into a separate room. Self-isolation or home isolation is when someone with confirmed or suspected COVID-19 who is in stable condition (not requiring hospital care) stays at home, ideally in a separate bedroom. 隔離

**Novel coronavirus.** Scientists use the word "novel" to distinguish the new form of coronavirus (SARS-CoV-2) currently making people sick from previous types of coronaviruses (such as SARS and MERS). Because it is a novel virus that no one has previously been exposed to, that means no one has had a chance to build immunity (with the possible exception of people who have recently recovered from COVID-19).

**Pandemic.** When a disease has rapidly spread across many nations, the World Health Organization makes the determination whether it is has risen from epidemic to the level of a pandemic – meaning it has spread across a large international region or worldwide. On March 11, the WHO declared COVID-19 a pandemic.

（Wikiedia）

**Polymerase chain reaction** (**PCR**): PCR is a method used widely in molecular biology to make millions to billions of copies of a specific DNA sample rapidly, allowing scientists to take a very small sample of DNA and amplify it to a large enough amount to study in detail. PCR was invented in 1983 by the American biochemist Kary Mullis. Using PCR, copies of very small amounts of DNA sequences are exponentially amplified in a series or cycles of temperature changes. PCR is now a common and often indispensable technique used in medical laboratory and clinical laboratory research for a broad variety of applications including biomedical research and criminal forensics.

(Video) 3:55 2014,04/21 https://www.youtube.com/watch?v=iQsu3Kz9NYo

**Quarantine.** A state, period, or place of isolation in which people or animals that have arrived from elsewhere or been exposed to infectious or contagious disease are placed. People who have been exposed to a communicable disease, who themselves are not yet sick, are sometimes placed under quarantine to separate them from the general public until it's clear they won't spread the infection. Quarantine has recently been imposed on people in specific locations where multiple COVID-19 cases have occurred or have the high potential to occur, such as individual cruise ships or nursing homes. 検疫

(Daiky Sabah、KFF)

***R* naught ($R_0$) / reproductive rate**: It is the infection rate of a disease, the expected number of people that each carrier will infect. $R_0$ estimated for the virus that causes COVID-19 is around 2 to 3, which is slightly higher than that for seasonal influenza ($R_0$ ~1.2-1.3), but far lower than more contagious diseases such as measles ($R_0$ ~12 - 18). 基本再生産数

**Social distancing.** This encompasses a range of public health measures to put space between people and limit the spread of a contagious disease. Canceling events such as festivals and conferences, limiting the number of people in gatherings, shifting office employees to telecommuting, closing schools and nonessential businesses, confining restaurant meals to take-out only and restricting nursing home visitors are examples of social distancing. The term is being replaced by "physical distancing" to emphasize that people should still try to stay socially connected while putting physical distance between oneself and others.

**State of emergency**: A temporary system of rules to deal with an extremely dangerous or difficult situation. A nationwide state of emergency has been declared in Japan due to the country's worsening coronavirus outbreak. 緊急事態（宣言）

**Superspreader** A superspreader is an individual who transmits an infectious disease to multiple other people. Superspreader events can occur in environments where many people are in close quarters for sustained periods, such as the coronavirus outbreaks originating in some nursing homes, cruise ships and church gatherings.

**Underlying medical condition.** Recent data from China and Italy suggests that people with underlying medical conditions (and older adults) are more vulnerable to severe complications and death from COVID-19. These underlying conditions include cancer, lung diseases like COPD, diabetes and autoimmune diseases. 既往症

**Ventilator.** A ventilator is a machine that supplies oxygen to the lungs of a patient with severe respiratory problems when oxygen levels in the patient's bloodstream drop below a certain point. So that the ventilator can deliver oxygen to the patient, a tube is placed down the patient's throat, or intubation, to open up the patient's airways. Many hospitals in the U.S. face possible ventilator shortages as the number of COVID-19 cases continues to spike. 人工呼吸器

Daily Sabah (Turky)