Pandemics of the world

Part of: GS Prelims and GS-III- Health

COVID-19 is the most recent disease which was declared as pandemic by the World Health Organization.

Difference between Epidemic Vs Pandemic

Epidemic is a term that is often broadly used to describe any problem that has grown out of control. An epidemic is defined as "an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population."²

An epidemic is an event in which a disease is actively spreading. In contrast, the term pandemic relates to geographic spread and is used to describe a disease that affects a whole country or the entire world.³

While casual use of epidemic may not require such nuance, it's important to know the differences between these two terms (and similar ones like outbreak and endemic) when considering public health news. In addition, from an epidemiologic standpoint, terms like these direct the public health response to better control and prevent a disease.

A glimpse through major pandemics of the world which caused huge loss to life:

The Plague of Justinian

It killed between 30 million and 50 million people. The cause of the Plague of Justinian was infectious fever caused by Yersinia pestis.

Black death

Between 1347 and 1351, it spread throughout Europe, killing approximately 25 million people. It is believed to have been the result of plague – an infectious fever caused by bacterium Yersinia pestis. It was likely transmitted from rodents to humans by the bite of infected fleas.

Smallpox (15th – 17th centuries)

Smallpox claimed the lives of approximately 20 million people, close to 90% of the population, in the Americas. The pandemic helped Europeans colonize and develop the newly vacated areas. Smallpox is caused by infection with the variola virus transmitted through various ways.

Cholera (1817 – 1823)

The first cholera pandemic began in Jessore, India. It was the first of 7 major cholera pandemics that have killed millions of people. The World Health Organization has called cholera “the forgotten pandemic”. Its seventh outbreak, which began in 1961, continues to this day. It is caused by eating food or drinking water contaminated with a bacterium called Vibrio cholera.

Spanish Flu or H1N1 (1918 – 1919)
It is caused due to H1N1 virus. It infected around 500 million people, or a third of the world’s population, of that time. The pandemic was responsible for killing over 50 million people globally.

**Hong Kong Flu or H3N2 (1968 – 1970)**

Global fatalities were around one million. It was caused by an H3N2 strain of the influenza a virus. It is believed that the virus responsible for the Asian flu evolved and re-emerged 10 years later into this so-called “Hong Kong flu”. H3N2 was exceptionally contagious.


Since 1981, 75 million people have had the HIV virus and approximately 32 million have died as a result.

HIV/AIDS is a persistent epidemic that continues to impact millions of people every year. The HIV infection is caused by the human immunodeficiency virus (HIV). The virus can be transmitted through contact with infected blood, semen or vaginal fluids.


SARS, or severe acute respiratory syndrome, is an illness caused by one of the 7 coronaviruses that can infect humans. In 2003, an outbreak that originated in the Guangdong province of China became a global pandemic. It infected around 8,000 people and killing 774 of them. The consequences of the 2003 SARS pandemic were largely limited due to an intense public health response by global authorities.

**Swine Flu or H1N1 (2009 – 2010)**

It was a new form of the influenza virus which emerged in 2009. It infected approximately millions of people with global deaths in the range of 151,700 to 575,400. It is called the “swine flu” because it appeared to cross over from pigs to humans in transmission. 80% of the virus-related deaths occurred in people younger than 65.


It began in a small village in Guinea in 2014 and spread to a handful of neighbouring countries in West Africa. It is caused by infection with a virus of the Filoviridae family, genus Ebolavirus. The virus killed 11,325 of the 28,600 infected people, with most cases occurring in Guinea, Liberia, and Sierra Leone.

**Zika Virus (2017)**

Zika virus (ZIKV) is a member of the virus family Flaviviridae. It is spread by daytime-active Aedes mosquitoes, such as *A. aegypti* and *A. albopictus*. Its name comes from the *Zika Forest of Uganda*, where the virus was first isolated in 1947. *Zika virus is related to the dengue, yellow fever, Japanese encephalitis, and West Nile viruses*. Since the 1950s, it has been known to occur within a narrow equatorial belt from Africa to Asia. From 2007 to 2016, the virus spread eastward, across the Pacific Ocean to the Americas, leading to the 2015–2016 Zika virus epidemic.
The infection, known as Zika fever or Zika virus disease, often causes no or only mild symptoms, similar to a very mild form of dengue fever. While there is no specific treatment, paracetamol (acetaminophen) and rest may help with the symptoms. As of 2016, the illness cannot be prevented by medications or vaccines. Zika can spread from a pregnant woman to her baby. This can result in **microcephaly**, severe brain malformations, and other birth defects. Zika infections in adults may result rarely in **Guillain–Barré syndrome**.

**Coronavirus, or COVID-19 (2019 – present)**

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Worldwide cases have surpassed 500,000 with more than 24,000 deaths globally. It is believed to be transmitted from animals to humans. The vast majority of cases are reported from USA now. On March 11, the WHO characterized the outbreak as a pandemic. Estimates indicate that Coronavirus could eventually infect 40% to 70% of the global population. Practicing social distancing is recommended. The damage to the world economy threaten the worst recession since the Great Depression or the “panics” of the 1800s, depending on the scale of government responses.

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