

8.L.1.2 - Explain the difference between epidemic and pandemic as it relates to treatment, spread, and prevention of disease.

Students know that:

-A disease outbreak happens when a disease occurs in greater numbers than expected in a community or region, or during a season. An outbreak may occur in one community or even extend to several countries. It can last from days to years. Sometimes a single case of a contagious disease is considered an outbreak. This may be true if it is an unknown disease, is new to a community, or has been absent from a population for a long time. An outbreak can be considered as an **epidemic or pandemic**.

-Epidemic and pandemic are similar terms that refer to the spread of infectious diseases among a population. There are two main differences between epidemic and pandemic . The term **pandemic** normally is used to indicate a far higher number of people affected than an epidemic. **Pandemic** also refers to a much larger region being affected. In the most extreme case, the entire global population would be affected by a **pandemic**.

-The terms epidemic and pandemic usually refer to the rate of infection, the area that is affected or both. An **epidemic** is defined as an illness or health-related issue that is showing up in more cases than would normally be expected. It occurs when an infectious disease spreads rapidly to many people. In 2003, the severe acute respiratory syndrome (SARS) epidemic took the lives of nearly 800 people worldwide.

-In the case of a pandemic, even more of the population is affected than in an epidemic. A **pandemic** typically is in a widespread area (**usually worldwide**) rather than being confined to a particular location or region and affect global populations. An **epidemic is not worldwide**. For example, malaria can reach epidemic levels in regions of Africa but is not a threat globally. Whereas a flu strain can begin locally (epidemic) but eventually spread globally (pandemic). This is not unusual for a new virus, because if people have not been exposed to the virus before, their immune systems are not ready to fight it off, and more people become ill. Swine flu started in Mexico city where it was feared to lead to epidemic proportions in North America, now that the flu has been found in New Zealand, Israel, Scotland and many other countries, it has become pandemic. The 1918 Spanish flu and the Black Plague are extreme examples of pandemics. Keep in mind, though, that a pandemic doesn't necessarily mean millions of deaths - it means a geographically widespread epidemic.

-Influenza pandemics have occurred more than once. Spanish influenza killed 40-50 million people in 1918. The Asian influenza killed 2 million people in 1957. The Hong Kong influenza killed 1 million people in 1968. An influenza pandemic occurs when: A new subtype of virus arises. This means humans have little or no immunity to it; therefore, everyone is at risk. The virus spreads easily from person to person, such as through sneezing or coughing. The virus begins to cause serious illness worldwide. With past flu pandemics, the virus reached all parts of the globe within six to nine months. With the speed of air travel today, public health experts believe an influenza pandemic could spread much more quickly. A pandemic can occur in waves. And all parts of the world may not be affected at the same time.

Summary Questions:

1. How do an epidemic and pandemic differ?
2. Give some examples of an epidemic?
3. Give some examples of pandemics?
4. Why does an influenza pandemic put so many at risk?