

Pandemic vs. endemic vs. outbreak: Terms to know

July 15 2020, by From Mayo Clinic News Network



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Understanding epidemiological terms such as pandemic, endemic, and outbreak can be confusing. Mayo Clinic infectious diseases specialist Dr. Prithish Tosh offers some insight.

What is the difference among a pandemic, endemic and an outbreak?

A pandemic refers to a global epidemic—one that has spread over several countries or continents affecting a large number of people.

Dr. Tosh adds, "In epidemiologic terms, an outbreak refers to a number of cases that exceeds what would be expected. A pandemic is when there is an outbreak that affects most of the world. We use the term endemic when there is an infection within a geographic location that is existing perpetually."

"When we're talking about endemic infections, we're talking about viruses, bacteria and pathogens that exist within a geographic location," says Dr. Tosh.

Terms to know

- Outbreak—Refers to the number of cases (disease) that exceeds what would be expected
- Endemic—An infection within a [geographic location](#) that is existing perpetually
- Pandemic—A global epidemic

Dengue fever as an example

"An example of this is [dengue](#) fever. There are parts of the world where dengue fever is endemic, meaning that there are mosquitoes that are carrying dengue fever and transmitting it from person to person. But we also see imported cases and imported outbreaks in parts of the world where a disease is not endemic," says Dr. Tosh. " Most recently we saw an outbreak in the Big Island of Hawaii where somebody, unknown, must have come in with dengue fever, got bitten by mosquitoes, and then you had local chains of transmission where those mosquitoes then bit other people, they got dengue [fever](#), and so on and so on. In this case,

dengue fever is not endemic in the Big Island, however, there was an outbreak due to an imported disease with subsequent transmission."

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Citation: Pandemic vs. endemic vs. outbreak: Terms to know (2020, July 15) retrieved 18 April 2024 from <https://medicalxpress.com/news/2020-07-pandemic-endemic-outbreak-terms.html>

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