

Pandemic, Epidemic and Endemic: What Do These Terms Mean?

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AT THE beginning of 2020, most people assumed the COVID-19 pandemic would be over as quickly as it had begun. Unfortunately, that wasn't the case. And, as the pandemic drags on, many unfamiliar terms are being bandied about and frequently misused, which has led to a lot of confusion and fear.

When this pandemic started, many people understood the meaning of the term “epidemic,” but the term “pandemic” was less familiar. During an epidemic, there is widespread occurrence of an infectious disease in a certain region at a particular time. An example of this is influenza (flu).¹ But, a pandemic is a disease that spreads across countries and continents, usually affecting people worldwide.

It is not surprising that most people are unfamiliar with the term “pandemic” since the most severe pandemic until this current one was the 1918 Spanish flu caused by an H1N1 flu virus that originated from birds.² By the time it was over, it had infected one-third of the world's population and led to the death of more than 50 million people.

Pandemics happen when novel viruses (those that have not previously been recorded) emerge that can infect people easily and spread from person to person in an efficient and sustained way. And,

because the virus is new to humans, very few people have immunity against it.³ The result is many people get sick with the virus. Yet, how sick people get depends on many factors, including their health and age. Further, those with underlying chronic conditions can be more susceptible to severe complications.

As the current pandemic persists, the discussion of how and when it will end continues to change. When the first vaccines were released, discussion revolved around herd immunity to end the virus. Herd immunity is achieved when most of a population is immune to an infectious disease, providing indirect protection, or what is known as “population immunity.”⁴ Herd immunity protects both people who are and are not immune to the disease. Excellent examples of herd immunity in the United States are measles, mumps and rubella. Ninety percent of all children in the U.S. are vaccinated against these diseases by their second birthday, which offers protection to all people — even those who are unvaccinated.

Unfortunately, as time rolls on and the virus continues to mutate, discussion has changed from when herd immunity will be achieved, to when the virus will become endemic. An endemic disease occurs regularly, and the number of people who contract it remains relatively constant. An excellent example of an endemic disease is malaria, which affects approximately the same number of people every year.¹ In short, endemic disease continues to be a constant threat.

So, the question that needs to be considered is what it means for the population's health if the SARS-CoV-2 virus, which causes COVID-19,

becomes endemic. The optimistic view is that enough people will gain immunity to the virus by either being vaccinated and through natural infection, resulting in lower transmission rates and fewer COVID-19-related hospitalizations and deaths — even as the virus continues to circulate.⁵

So far, the unpredictability of this virus and its mutations have made setting a timeline of returning to normal impossible. And it's too early to tell if the Omicron variant's rapid spread will push us into the next phase,⁶ or whether there will be another variant. After all, viruses constantly change through mutation, and sometimes these mutations result in a new variant of the same virus. Consequently, until we reach the point of this virus becoming endemic, it is important to remain vigilant in protecting our health and the health of others. 

References

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