
Pandemic Influenza Fact Sheet

Influenza pandemic

An influenza pandemic occurs when a new influenza strain to which humans have no immunity emerges, mutates and spreads globally. Three influenza pandemics have occurred during the 20th Century. The deadliest was in 1918 and resulted in as many as 50 million deaths worldwide. The most recent was in 1968 and caused about 700,000 deaths around the world. During the last four centuries, an influenza pandemic has emerged about once every 30-40 years.

Pandemics take a toll on the worldwide population

Approximately 30 to 50% of the population might fall ill during an influenza pandemic.

An influenza pandemic occurs when a virulent human influenza virus, to which humans have no previous immunity, emerges, mutates and spreads globally to cause an outbreak or pandemic. Pandemic influenza has the potential to cause serious illness in a significant proportion of the global population. Because there is little or no pre-existing natural immunity in the population, pandemic influenza viruses could spread quickly from person to person and have historically resulted in severe disease and high morbidity and mortality.

Virus mutation facilitates spread

Influenza Viruses

A(H1N1) (swine) influenza, or “swine flu”, (as defined by the World Health Organization) is “a highly contagious acute respiratory disease of pigs, caused by one of several swine influenza A viruses, usually of the H1N1 subtype. Although A(H1N1) (swine) flu viruses are normally species specific and only infect pigs, they do sometimes cross the species barrier to cause disease in humans. Previous outbreaks and sporadic human infection with swine flu have been reported, and generally the clinical symptoms are similar to seasonal flu and range from asymptomatic infection to severe pneumonia resulting in death.

A(H1N1) “Swine flu”

People usually get swine flu from infected pigs, however human-to-human transmission has occurred in some instances. If a swine virus established efficient human-to-human transmission, it can cause an influenza pandemic.

The WHO has moved the pandemic threat level of A(H1N1) to Phase 6,

signifying an alert that the spread of the A(H1N1) virus is now expected to traverse the globe and those nations where the virus has yet to arrive should expect to eventually see cases and be prepared to respond.

Global health authorities have identified H5N1 avian influenza as one of the influenza strains with the greatest pandemic potential. H5N1 is not only currently circulating in birds around the world, but has already proven its ability to infect humans.

H5N1 "Bird flu"

In most cases, available influenza viruses against normal seasonal influenza do not provide protection against a new pandemic virus. A new vaccine must then be developed, which is precisely targeted against the new virus. The purpose of pandemic vaccination is to prime the immune system to better defend against infections from a pandemic influenza virus.

Seasonal vaccines not sufficient in a pandemic situation

The World Health Organization Pandemic Alert Phases

The World Health Organization (WHO) has defined a series of six phases of pandemic alert as a system for informing the world of the degree to which the outbreak has spread and of the need to launch progressively more intense preparedness activities.

WHO Pandemic Threat Levels

Level 1

No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.

Level 2

No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

Level 3

Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

Level 4

Small cluster(s) with limited human-to-human transmission but spread

is highly localized, suggesting that the virus is not well adapted to humans.

Level 5

Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).

Level 6

Pandemic phase: increased and sustained transmission in general population.

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