Pandemic Flu Questions and Answers

What is an influenza pandemic?

An influenza pandemic is a global outbreak of disease that occurs when a new influenza A virus appears or “emerges” in the human population, causes serious illness in people, and then spreads easily from person to person worldwide. Pandemics are different from seasonal outbreaks or “epidemics” of influenza. Seasonal outbreaks are caused by subtypes of influenza viruses that already circulate among people (for example, influenza A (H3N2) and A (H1N1) viruses have circulated among people since 1977). In contrast, pandemic outbreaks are caused by new subtypes, by subtypes that have never circulated among people, or by subtypes that have not circulated among people for a long time. Past influenza pandemics have led to high levels of illness, death, social disruption, and economic loss.

How does pandemic influenza differ from avian (bird) influenza and seasonal influenza?

For **pandemic influenza** to occur, three conditions must be met: a new influenza A virus appears or “emerges” in the human population, it causes serious illness in people, and it spreads easily from person to person worldwide. There is currently no pandemic influenza in the world.

Avian influenza is an infection caused by avian (bird) influenza (flu) viruses. These flu viruses occur naturally among birds worldwide.

Seasonal influenza (often called "the flu") is a contagious respiratory illness caused by influenza viruses. Seasonal flu occurs every year and can cause mild to severe illness in people. The best protection against seasonal flu is vaccination.

When did the last influenza pandemic occur?

The last influenza pandemic occurred in 1968-69. During the 20th century, the emergence of several new influenza A virus subtypes caused three pandemics, all of which spread around the world within a year of being detected.

The last influenza pandemic in 1968-69, called the "Hong Kong flu" [A (H3N2)], caused about 34,000 deaths in the United States. This virus was first detected in Hong Kong in early 1968 and spread to the United States later that year. Influenza A (H3N2) viruses still circulate today.

The 1957-58 "Asian flu" [A (H2N2)] caused about 70,000 deaths in the United States. First identified in China in late February 1957, the Asian flu spread to the United States by June 1957.

The highest number of known influenza deaths from pandemic influenza occurred in 1918-19 with the "Spanish flu" [A (H1N1)]. More than 500,000 people died in the United States, and as many as 50 million people may have died worldwide. Many people died within the first few days after infection, and others died of secondary complications. Nearly half of those who died were young, healthy adults. Influenza A (H1N1) viruses still circulate today after being introduced again into the human population in 1977.

Both the 1957-58 and 1968-69 pandemics were caused by viruses containing a combination of genes from a human influenza virus and an avian influenza virus. The 1918-19 pandemic virus appears to have an avian origin.

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When will the next influenza pandemic occur and how severe will it be?

Many scientists believe it is only a matter of time until the next influenza pandemic occurs. The severity of the next pandemic cannot be predicted, but modeling studies suggest that the impact of a pandemic on the United States could be substantial. In the absence of any control measures (vaccination or drugs), it has been estimated that in the United States a "medium–level" pandemic could cause 89,000 – 207,000 deaths, 314,000 – 734,000 hospitalizations, 18 – 42 million outpatient visits, and another 20 – 47 million people to be sick. Between 15% and 35% of the U.S. population could be affected by an influenza pandemic, and the economic impact could range between $71.3 and $166.5 billion.

Are there medicines to treat or prevent pandemic influenza?

Four different influenza antiviral medicines (amantadine, rimantadine, oseltamivir, and zanamivir) are approved by the U.S. Food and Drug Administration for the treatment and/or prevention of influenza. All four usually work against influenza A viruses. However, the drugs may not always work, because influenza virus strains can become resistant to one or more of these medicines. For example, the influenza A (H5N1) virus identified in humans in Asia in 2004 and 2005 has been resistant to amantadine and rimantadine. Monitoring of avian influenza viruses for resistance to influenza antiviral medications continues.

Is there a vaccine to protect people from pandemic influenza?

Currently, there is no vaccine to protect people from pandemic influenza. A vaccine probably would not be available in the early stages of a pandemic. When a new vaccine against an influenza virus is being developed, scientists work together to select the virus strain that will offer the best protection against that virus. Manufacturers then use the selected strain to develop a vaccine. Once a potential pandemic strain of influenza virus is identified, it will take several months before a vaccine will be widely available. If a pandemic occurs, the U.S. government will work with many partner groups to make recommendations guiding the early use of available vaccine.

For more information, visit www.cdc.gov/flu/pandemic,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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