Fact Sheet

Influenza:

The History of Pandemics and Outbreaks

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Pandemics

Flu pandemics have occurred throughout history. There have been four since 1918, each with different characteristics.

1918-1919

Illness from the 1918 flu pandemic, also known as the Spanish flu, came on quickly. Some people felt fine in the morning, but died by nightfall. People who caught the Spanish flu but did not die from it often died from complications caused by bacteria, such as pneumonia. During the 1918 pandemic:

- Approximately 20% to 40% of the worldwide population became ill
- An estimated 50 million people died
- Nearly 675,000 people died in the United States

Unlike earlier pandemics and seasonal flu outbreaks, the 1918 pandemic flu saw high mortality rates among healthy adults. In fact, the illness and mortality rates were highest among adults 20 to 50 years old. The reasons for this remain unknown.

1957-1958

In February 1957, a new flu virus, Influenza A H2N2 also known as "Asian Flu", was identified in the Far East. Immunity to this strain was rare in people younger than 65. A pandemic was predicted. Vaccine production began in late May 1957 and was available in limited supply by August 1957.

In the summer of 1957, the virus came to the United States quietly with a series of small outbreaks. When children returned to school in the fall, they spread the disease in classrooms and brought it home to their families. Infection rates peaked among school children, young adults, and pregnant women in October 1957. By December 1957, the worst seemed to be over.

Most influenza and pneumonia related deaths occurred between September 1957 and March 1958. Although the 1957 pandemic was not as devastating as the 1918 pandemic, about 69,800 people in the United States died. The elderly had the highest rates of death.

1968-1969

In early 1968, a new flu virus was detected in Hong Kong. The first cases in the United States were detected as early as September 1968. Illness was not widespread in the United States until December 1968. Deaths from this virus peaked in December 1968 and January 1969. Those over the age of 65 were most likely to die. The number of deaths between September 1968 and March 1969 was 33,800, making it the mildest flu pandemic in the 20th century. The same virus returned in 1970 and 1972.

There could be several reasons fewer people in the United States died due to this virus:

- The Hong Kong flu virus was similar in some ways to the 1957 pandemic flu virus. This might have provided some immunity against Hong Kong flu virus.

- The Hong Kong flu virus hit in December of 1968, when school children were on vacation. This caused a decline in flu cases because children were not at school to infect one another. This also prevented it from spreading into their homes
- Improved medical care and antibiotics that are more effective for secondary bacterial infections were available for those who became ill.

2009-2010

In the spring of 2009, a new flu virus spread quickly across the United States and the world. The first U.S. case of H1N1 (swine flu) was diagnosed on April 15, 2009. By April 21, the Centers for Disease Control and Prevention (CDC) was working to develop a vaccine for this new virus. On April 26, the U.S. government declared H1N1 a public health emergency.

By June 2009, 18,000 cases of H1N1 had been reported in the United States. A total of 74 countries were affected by the pandemic. H1N1 vaccine supply was limited in the beginning. People at the highest risk of complications got the vaccine first.

By November 2009, 48 states had reported cases of H1N1, mostly in young people. That same month, over 61 million vaccine doses were ready. Reports of flu activity began to decline in parts of the country, which gave the medical community a chance to vaccinate more people. 80 million people were vaccinated against H1N1, which minimized the impact of the illness.

The CDC estimates that 43 million to 89 million people had H1N1 between April 2009 and April 2010. They estimate between 8,870 and 18,300 H1N1 related deaths.

On August 10, 2010 the World Health Organization (WHO) declared an end to the global H1N1 flu pandemic.

Pandemic Flu Threats

The emergence of a new subtype of Influenza A does not guarantee that a pandemic will occur. Below are examples of pandemic threats after a new flu virus was discovered in humans.

1976

When the 1976 swine flu was identified at Fort Dix, New Jersey it was called the “killer flu.” Experts were concerned because they thought the virus was similar to the 1918 Spanish flu.

To prevent a major pandemic, the United States launched a vaccination campaign. In fact, the virus later named “swine flu”, never moved outside the Fort Dix area. Later, research on the virus showed that it would not have been as deadly as the 1918 flu if it had spread.

1977

In May 1977, a new flu virus was found in northern China. The virus spread quickly and became a worldwide epidemic in people under 23. Because the virus was similar to flu viruses found before 1957, people born before 1957 had been exposed to it and had some immunity.

By January 1978, the virus had spread around the world, including the United States. This outbreak was not considered a pandemic because most patients were children. To prevent future outbreaks, the virus was included in the 1978-1979 vaccine.

1997 and 1999

In 1997, at least a few hundred people caught H5N1 (avian flu) in Hong Kong. Like the 1918 pandemic, most severe illness affected young adults. Eighteen people were hospitalized. Six of those people died. This avian flu was unlike other viruses because it passed directly from chickens to people. Avian flu viruses usually spread from chickens to pigs before passing to humans.

To prevent the virus from spreading, all chickens in Hong Kong (approximately 1.5 million) were slaughtered. Because this flu did not spread easily from person to person, no human infections were found after the chickens were killed.

Currently, surveillance continues, led by the World Health Organization and the Centers for Disease Control, in an effort to identify, isolate and eradicate disease threats of this type before it can evolve to "pandemic status".

For more sources of information on this topic visit:

ST. CLAIR COUNTY HEALTH DEPARTMENT www.scchealth.co
MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES www.michigan.gov/mdhhs
CENTERS FOR DISEASE CONTROL AND PREVENTION www.cdc.gov
DEPARTMENT OF HEALTH AND HUMAN SERVICES www.flu.gov