

Partner Key Messages on the 1918 Influenza Pandemic Commemoration

1918 Key Points

- 2018 marks the centenary of the 1918 influenza pandemic; a devastating, global public health tragedy.
- Many public health advances have been made since that time, such as improved understanding of influenza viruses, advancements in influenza vaccines, treatments, and preparedness planning and response.
- However, influenza viruses continue to pose one of the world's greatest infectious disease challenges, and the risk of the next influenza pandemic is always present.
- Public health experts, as well as domestic and international partners are working together to address remaining gaps, to minimize the effects of future influenza pandemics.

Defining an influenza pandemic

- An influenza (flu) pandemic is a global outbreak of a new flu virus. The new virus would be very different from current and most recent circulating seasonal influenza viruses. Most people, around the world, would not have immunity to the new influenza virus, so it is likely a lot of people would get sick.
- Pandemics occur when new influenza viruses appear that can easily infect people and spread from person to person in an effective and continuous way.
 - Different animals (like birds and pigs) are hosts to some influenza viruses that do not normally make people sick. Influenza viruses are changing all the time and can exchange genes. On rare occasions, this makes it possible for a virus typically hosted by animals to change so that it also makes people sick.
- There have been four influenza pandemics in the last 100 years: 1918, 1957, 1968, and 2009.

1918 by the numbers

- In 1918, a new influenza virus emerged causing a pandemic that killed an estimated 675,000 Americans and at least 50 million people worldwide.
- The flu pandemic of 1918 infected an estimated 500 million people worldwide—about one-third of the world's population.
- The 1918 pandemic produced the greatest influenza death total in recorded history.

Conditions of the pandemic

- The conditions of World War I (including overcrowding and global troop movement) helped the virus spread. The vulnerability of healthy young adults and the lack of vaccines and treatments created an unprecedented public health crisis. Much of the virus transmission can be attributed to crowding

in military camps and the urban environments. In addition, there were unhealthy wartime conditions, such as poor nutrition and sanitation.

- In 1918, many people got very sick, very quickly. The disease often progressed to organ failure and pneumonia. There were reports of some people dying in 24 hours or less. Pneumonia was the cause of death for most of those who died.
- Typically, seasonal influenza mortality is greatest among the youngest and oldest in a population. During the 1918 pandemic, the virus also affected young adults between 20 and 40 years of age. The average age of death was 28 years old.
- It was called the Spanish Flu not because the pandemic started in Spain. Spain was neutral in WWI and their news media extensively covered the pandemic. Other countries refused to admit having cases, so it looked like Spain was bearing the brunt of the pandemic which was not true.

Public health during the pandemic

- In 1918, scientists had identified many bacteria that caused illness, but they had not yet discovered viruses so could not identify the cause of influenza.
- No laboratory tests were available in 1918 to detect, isolate, or characterize influenza viruses.
- In 1918, there were no national systems to monitor influenza activity like there are today.
- In the spring and summer of 1918, influenza was not a reportable disease. By the fall, many cities established systems to monitor influenza-like activity

Progress in public health since the pandemic

- 100 years later, the world has made major advances in the science of influenza prevention and control.
- For more than 60 years, CDC has worked to address the continuing threat of influenza, including preparing for the next flu pandemic.
 - There have been many improvements in tests to diagnose influenza, vaccines to help prevent influenza, and drugs to help treat influenza and its complications. We also have situational awareness tools to help monitor influenza activity, and steps we can take in our communities to lessen the impact of influenza. These improvements leave the world better equipped to prepare for and respond to the next influenza pandemic.
 - Compared to 1918, we are better at monitoring illnesses, deaths, and the spread of diseases. We can now detect the appearance of pandemic influenza viruses. We also have a greater ability to:
 - Assess influenza complications and the effectiveness of influenza treatments
 - Develop pandemic influenza vaccines
 - Prevent illnesses by prescribing drugs
 - Stop the spread of illnesses without drugs (by handwashing, covering sneezes, closing schools, etc.)
 - There are a lot of medical advances to help fight an influenza pandemic that we did not have in the past, including:
 - Vaccines to help prevent seasonal influenza
 - Drugs to treat seasonal influenza
 - Antibiotics to treat secondary bacterial infections
 - Ventilators and intensive care units

- Personal protective equipment (gloves, gowns, masks, etc.)
- We now have many different kinds of tests to help diagnose influenza.
- Unlike in 1918, we now have a global influenza surveillance system to monitor influenza activity. We also have more efficient ways to quickly share information about influenza viruses with global partners.

Preparing for the next pandemic

- Influenza viruses continue to pose one of the world's greatest challenges, and the risk of pandemic influenza is always present.
 - Flu viruses constantly change, making it possible on very rare occasions for animal viruses to change so that they infect and spread among people efficiently. This means influenza pandemics will likely continue to occur.
 - Several factors increase the risk that a pandemic influenza virus will appear and spread quickly worldwide. These factors include rapid population growth, increased international travel, and the proximity of humans to animal reservoirs.
- As America's defense against health threats, CDC and its public health partners must take action to reduce the effects of future flu pandemics.
- While many advancements have been made, there is still much to do to improve our pandemic influenza preparedness.
 - More broadly effective vaccines are needed that can be made quickly. There is also a need to improve the global infrastructure to produce and distribute these vaccines.
 - More effective and less costly drugs are needed, especially for treating patients admitted to the hospital for influenza.
 - Better surveillance of influenza viruses in birds and pigs is needed worldwide.
 - The ability to quickly share virus specimens worldwide needs to be improved.
 - Better tests for influenza are needed, including more accurate and cheaper tests that can be used where patients are treated.

Some parts of the world need an improvement of medical infrastructure, equipment, and trained personnel to treat severely ill patients.

1918 Commemoration Publications

- Study: [The 1918 flu, 100 years later](#)[external icon](#) Science. 2018
- Study: [Readiness for Responding to a Severe Pandemic 100 Years After 1918](#)[external icon](#). American Journal of Epidemiology. 2018