



MEDICAL EMERGENCY: PANDEMIC INFLUENZA



General Information

An influenza (flu) pandemic is a worldwide flu outbreak that occurs when a new type of influenza virus appears and people have no immunity against the virus. The human population is highly susceptible to the novel virus because they have not been exposed to it before or have not been exposed to it in a long time. To adequately prepare for a possible pandemic influenza outbreak, the first step is to understand the different terms widely used to describe the flu:

Seasonal (or common) flu – is a respiratory illness that can be transmitted person to person. Most people have some immunity, and a vaccine is available. Seasonal flu occurs on a yearly basis.

Pandemic flu – is virulent human flu that causes a global outbreak, or pandemic, of serious illness. Because there is little natural immunity, the disease can spread easily from person to person. A pandemic may come and go in waves, each of which can last for six to eight weeks. Currently, there is no pandemic flu.

Avian (or bird) flu (AI) – is caused by influenza viruses that occur naturally among wild birds. Low pathogenic AI is common in birds and causes few problems. H5N1 is highly pathogenic, deadly to domestic fowl, and can be transmitted from birds to humans. There is no human immunity and no vaccine is available. H5N1 is of particular concern because it is one of the few avian influenza viruses to have crossed the species barrier to infect humans, and it is the most deadly of those that have crossed the barrier. So far, the spread of H5N1 virus from person to person has been limited and has not continued beyond one person. Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that the H5N1 virus could one day be able to infect humans and spread easily from one person to another.

The following table provides additional comparisons between seasonal influenza and pandemic influenza:

Seasonal Influenza	Pandemic Influenza
Caused by influenza viruses that are similar to those already circulating among people.	Caused by a new influenza virus that people have not been exposed to before. Likely to be more severe, affect more people, and cause more deaths than seasonal influenza because people will not have immunity to the new virus.
Symptoms include fever, headache, tiredness, dry cough, sore throat, runny nose, and muscle pain. Deaths can be caused by complications such as pneumonia.	Symptoms similar to the common flu but may be more severe with more serious complications.
Healthy adults usually not at risk for serious complications (the very young, the elderly, and those with certain underlying health conditions at increased risk for serious complications).	Healthy adults may be at increased risk for serious complications.
Every year in the United States, on average: <ul style="list-style-type: none"> 5% to 20% of the population gets the flu 	The effects of a severe pandemic could be much more damaging than those of a regular flu season. It could lead to high levels of



MEDICAL EMERGENCY: PANDEMIC INFLUENZA

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| <ul style="list-style-type: none"> ▪ More than 200,000 people are hospitalized from flu complications ▪ About 36,000 people die from flu | <p>illness, death, social disruption, and economic loss. Everyday life could be disrupted because so many people in so many places become seriously ill at the same time. Impacts could range from school and business closings to the interruption of basic services such as public transportation and food delivery.</p> |
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Issues associated with a pandemic can have far-reaching effects:

- **Development and distribution of vaccines to protect people from contracting the virus.** Because viruses change over time, a specific pandemic influenza vaccine cannot be produced until a pandemic influenza virus emerges and is identified. Once a pandemic influenza virus has been identified, it will likely take four to six months to develop, test, and begin producing a vaccine. As such, due to the rapid spread of an influenza pandemic and the time required to develop, test, produce, and distribute an effective vaccine, the disease will likely arrive in the United States before a "significant" number of people can be vaccinated. For this reason, any pandemic influenza preparation and response plan must include a mechanism for allocating the vaccine among the population. Note that after an individual has been infected by a virus, a vaccine generally cannot help to combat it.
- **Allocation of sparse healthcare resources.** There will be problems caused by shortages of medical supplies (e.g., vaccines and antiviral drugs), equipment (e.g., mechanical ventilators), hospital beds, and healthcare workers (HCW). Having a detailed system for allocating resources potentially can reduce such difficulties. This system ideally should be in place well before an influenza pandemic actually occurs. Also of particular concern is the real likelihood that healthcare systems, particularly hospitals, will be overwhelmed.
- **Societal disruption.** Institutions, such as schools and workplaces, may close because a large proportion of students or employees are ill. A large array of essential services may be limited because workers are off work due to pandemic influenza. Travel between cities and countries may be sharply reduced.

The following sections provide information on how to prevent and prepare before a pandemic influenza occurs, actions to take if one occurs, and suggestions on how to safely recover afterward. Actions are based on a compilation of recommendations from the following references:

Multi-Agency Website

www.pandemicflu.gov

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Centers for Disease Control and Prevention

Hotline 1-800-CDC-INFO (1-800-232-4636) available in English and Spanish, 24 hours a day, 7 days a week. TTY: 1-888-232-6348.



Prepare – Before a Pandemic

When a pandemic starts, everyone around the world could be at risk. The United States has been working closely with other countries and the World Health



MEDICAL EMERGENCY: PANDEMIC INFLUENZA

Organization (WHO) to strengthen systems to detect outbreaks of influenza that might cause a pandemic.

A pandemic would touch every aspect of society, so every part of society must begin to prepare. All have roles in the event of a pandemic. Federal, State, tribal, and local governments are developing, improving, and testing their plans for an influenza pandemic. Businesses, schools, universities, and other faith-based and community organizations are also preparing plans.

When planning and preparing for the next influenza pandemic, the following should be considered:

- Essential services including those provided by hospitals and other healthcare facilities, banks, restaurants, government offices, telephone and cellular phone companies, and post offices may be disrupted.
- Stores may close or have limited supplies of food and water. To prepare for this possibility you should store at least one to two weeks supply of non-perishable food and fresh water for emergencies.
- Transportation services may be disrupted and you may not be able to rely on public transportation.
- Public gatherings, such as volunteer meetings and worship services, may be canceled. Prepare contact lists including conference calls, telephone chains, and email distribution lists, to access or distribute necessary information.
- Consider that the ability to travel, even by car if there are fuel shortages, may be limited.
- In the event that local ATMs and banks are shut down, keep a small amount of cash or traveler's checks in small denominations for easy use.
- Being able to work may be difficult or impossible. Determine availability of leave to care for yourself or a family member and whether telecommuting can be implemented. Plan for possible loss of income if you are unable to work or your place of work temporarily closes.
- Schools, and potentially public and private preschool, childcare, trade schools, and colleges and universities may be closed to limit the spread of flu in the community and to help prevent children from becoming sick. Other school-related activities and services could also be disrupted or canceled. School closings would likely happen very early in a pandemic and could occur on short notice.
- Medical care for people with chronic conditions such as heart disease, high blood pressure, diabetes, asthma, or depression could be disrupted. Continue taking medication as prescribed by your doctor and make sure you have necessary medical supplies
- Ensuring that healthcare workers are adequately protected through vaccination if a vaccine is available; or making sure that antiviral drugs are available to ensure the health and safety of healthcare workers so that they can care for potential surges in influenza patients during a pandemic event.

These steps may help prevent the spread of respiratory illnesses such as the influenza virus:

- Cover your nose and mouth with a tissue when you cough or sneeze, and throw the tissue away immediately after you use it.
- Wash your hands often with soap and water, especially after you cough or sneeze. If you are not near water, use an alcohol-based (60-95%) hand cleaner.
- Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick as well.

MEDICAL EMERGENCY: PANDEMIC INFLUENZA

- If you get the flu, stay home from work, school, and social gatherings. In this way, you will help prevent others from catching your illness.
- Try not to touch your eyes, nose, or mouth. Germs often spread this way.

**Respond – During a Pandemic**

In the event of a pandemic influenza outbreak, the goal of response measures is to ensure timely recovery of the ill and prevent any further spread of the disease. At the individual level, you should:

- Stay home if you are ill unless medical attention is required, practice hand hygiene/cough etiquette, and model behavior for your children.
- Consider voluntary home quarantine if anyone is ill in the household.
- Identify trusted sources for information; stay informed about availability/use of antiviral medications/vaccines.
- Use Personal Protective Equipment (PPE) if necessary and practice individual protection strategies.
- Practice social distance by avoiding crowded social environments and limit non-essential travels.
- In the workplace, ensure that sufficient infection control supplies are available.
- Modify face-to-face contact; implement flexible worksite (telework) policies and flexible work hours (staggered shifts) if appropriate.

**Recover – After a Pandemic**

Recovery efforts after a pandemic influenza outbreak are similar to some of the response measures; in addition to ensuring the timely recovery of the ill and limiting further spread of the disease, other goals during the recovery phase should include resuming normal activities and preparing for possible subsequent outbreak waves. Actions to consider may include:

- Continue to practice voluntary home quarantine, social distancing, hand hygiene, and cough etiquette.
- Continue to stay informed about pandemic influenza related activities as implemented by CDC or State and local health departments.
- Ensure that adequate resources/supplies are available to respond to the next pandemic wave.