



# Pandemic Flu—Planning for Individuals/Families

This guide is designed to help you understand the threat of a pandemic flu outbreak in our country and your community. It describes common sense actions that you can take in preparing for a pandemic. *Note*—this guide is for informational purposes only, always check with a health care provider about your specific situation.

## What Is an Influenza Pandemic?

An influenza (flu) pandemic is a widespread outbreak of disease that occurs when a new flu virus appears that people have not been exposed to before. Pandemics are different from seasonal outbreaks of influenza. Seasonal flu outbreaks are caused by viruses that people have already been exposed to; flu shots are available to help prevent widespread illness, and impacts on society are less severe. Pandemic flu spreads easily from person to person and can cause serious illness because people do not have immunity to the new virus.

A pandemic may come and go in waves, each of which can last for months at a time. Everyday life could be disrupted due to people in communities across the country becoming ill at the same time. These disruptions could include everything from school and business closings to interruption of basic services such as public transportation and health care. An especially severe influenza pandemic could lead to high levels of illness, death, social disruption, and economic loss.

## Differences between Seasonal Flu and Pandemic Flu

### Seasonal Flu

- ◆ Outbreaks follow predictable seasonal patterns; occurs annually, usually in winter, in temperate climates.
- ◆ Caused by influenza viruses that are similar to those already circulating among people.
- ◆ Usually some immunity built up from previous exposure.
- ◆ Symptoms include fever, headache, tiredness, dry cough, sore throat, runny nose, and muscle pain. Deaths can be caused by complications such as pneumonia.
- ◆ 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).
- ◆ Health systems can usually meet public and patient needs.
- ◆ Vaccine developed based on known flu strains and available for annual flu season.
- ◆ Adequate supplies of antivirals are usually available.
- ◆ Every year in the United State, on average:
  - Five to 20 percent of the population gets the flu;
  - More than 200,000 people are hospitalized from flu complications; and
  - About 36,000 people die from flu.



- ◆ Generally causes modest impact on society (e.g., some school closing, encouragement of people who are sick to stay home).
- ◆ Manageable impact on domestic and world economy.

### Pandemic Flu

- ◆ Occurs rarely (three times in 20th century, last in 1968)
- ◆ No previous exposure; little or no pre-existing immunity
- ◆ Likely to be more severe, affect more people, and cause more deaths than seasonal flu because people will not have immunity to the new virus.
- ◆ Symptoms similar to the common flu may be more severe and complications more frequent and/or serious.
- ◆ Healthy adults may be at increased risk for serious complications.
- ◆ Health systems may be overwhelmed
- ◆ Vaccine probably would not be available in the early stages of a pandemic
- ◆ Effective antivirals may be in limited supply
- ◆ Number of deaths could be quite high
- ◆ May cause major impact on society (e.g., widespread restrictions on travel, closings of schools and businesses, cancellation of large public gatherings)
- ◆ Potential for severe impact on domestic and world economy

### The Impact of a Pandemic

A pandemic may come and go in waves, each of which can last for six to eight weeks.

An especially severe influenza pandemic could lead to high levels of illness, death, social disruption, and economic loss. Everyday life would be disrupted because so many people in so many places become seriously ill at the same time. Impacts can range from school and business closings to the interruption of basic services such as public transportation and food delivery.

A substantial percentage of the world's population will require some form of medical care. Health care facilities can be overwhelmed, creating a shortage of hospital staff, beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may need to be created to cope with demand.

The need for vaccine is likely to outstrip supply and the supply of antiviral drugs is also likely to be inadequate early in a pandemic. Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

Death rates are determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations and the availability and effectiveness of preventive measures.

### Characteristics and Challenges of a Pandemic

#### 1. Rapid Worldwide Spread

- ◆ When a pandemic influenza virus emerges, its global spread is considered inevitable.
- ◆ Preparedness activities should assume that the entire world population would be susceptible.
- ◆ Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it.

#### 2. Health Care Systems Overloaded

- ◆ Most people have little or no immunity to a pandemic virus. Infection and illness rates soar. A substantial percentage of the world's population will require some form of medical care.
- ◆ Nations unlikely to have the staff, facilities, equipment and hospital beds needed to cope with large numbers of people who suddenly fall ill.

- ◆ Death rates are high, largely determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations and the effectiveness of preventive measures.
- ◆ Past pandemics have spread globally in two and sometimes three waves.

### 3. Medical Supplies Inadequate

- ◆ The need for vaccine is likely to outstrip supply.
- ◆ The need for antiviral drugs is also likely to be inadequate early in a pandemic.
- ◆ A pandemic can create a shortage of hospital beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may be created to cope with demand
- ◆ Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

### 4. Economic and Social Disruption

- ◆ Travel bans, closings of schools and businesses and cancellations of events could have major impact on communities and citizens.
- ◆ Care for sick family members and fear of exposure can result in significant worker absenteeism.

## Pandemic Flu Prevention and Treatment

Because a pandemic is caused by a new virus and is both widespread and more severe than seasonal influenza it poses special issues in prevention and treatment. The following general information about pandemic flu prevention and treatment may be helpful.

### Vaccines

Vaccines are the time-tested means for preventing influenza. The United States government has developed and stockpiled a supply of H5N1 human vaccine. This vaccine is sometimes referred to as “pre-pandemic”

### Will the seasonal flu shot protect me against pandemic influenza?

- ◆ No, the seasonal flu shot will not protect you against pandemic influenza. But flu shots can help you to stay healthy.
- ◆ Get a flu shot to help protect yourself from seasonal flu.
- ◆ Get a pneumonia shot to prevent secondary infection if you are over the age of 65 or have a chronic illness such as diabetes or asthma. For specific guidelines, talk to your health care provider or contact the Centers for Disease Control and Prevention (CDC). Contact information for the CDC is provided in the “Helpful Resources” section at the end of this guide.
- ◆ Make sure that your family’s immunizations are up-to-date.

vaccine. If the next pandemic comes from an H5N1 strain, this stockpiled supply may have some protective effect on the actual H5N1 strain causing the pandemic. Note that the vaccine is produced from H5N1 strains that currently exist, and that have not caused a pandemic. If the next influenza pandemic is caused by a different influenza strain, then the stockpiled “pre-pandemic” vaccine based on the H5N1 influenza strain will have no effect on the pandemic.

The appearance of an influenza pandemic virus would likely require creation of a vaccine. Researchers are making and testing possible H5N1 vaccines now.

Large amounts of vaccine cannot be made before knowing exactly which virus will cause the pandemic. It could then take up to six months before a vaccine is available and in only limited amounts at first.

Efforts are being made to increase vaccine-manufacturing capacity in the United States so that supplies of vaccines would be more readily available. In addition, research is underway to develop new ways to produce vaccines more quickly.

In the event of a flu pandemic, an effective vaccine may not be widely available. A prioritization plan will determine which individuals and groups will be vaccinated first.

### Treatment

Antiviral drug use is one important component of a multi-faceted response to an influenza pandemic. Antivirals are drugs that are used to prevent or cure a disease caused by a virus, by interfering with the ability of the virus to multiply in number or spread from cell to cell. Antiviral drugs can treat influenza infection, shortening the length of illness and preventing complications. When administered within a certain time frame before or after exposure to the influenza virus, antivirals also can prevent influenza infection in people at risk or who have been in close contact with someone who is ill. Research continues into effective antivirals, seeking medications that can reduce the severity of an influenza attack. Recent increases in the number and promotion of antiviral drugs for influenza have increased interest in the role of specific antiviral drugs for treatment of the flu. Use of antiviral drugs does not eliminate the risk of complications, and some complications can be life threatening.

### Pandemic Flu Challenges and Preparation

It is difficult to predict when the next influenza pandemic will occur or how severe it will be. The effects of a pandemic can be lessened if preparations are made ahead of time. As you plan, it is important to think about the challenges that you might face, particularly if a pandemic is severe. It may take time to find the answers to these challenges. Below are some situations that could be caused by a severe pandemic and possible

ways to address them. A checklist and fill-in sheets for family health information and emergency contact information have been provided at the end of this guide to help assist your planning and preparation.

### Social Disruption May Be Widespread

- ◆ Plan for the possibility that usual services may be disrupted. These could include services provided by hospitals and other health care facilities, banks, stores, restaurants, government offices, and post offices.
- ◆ Prepare backup plans in case public gatherings, such as volunteer meetings and worship services, are canceled.
- ◆ Consider how to care for people with special needs in case the services they rely on are not available.

### Being Able to Work May Be Difficult or Impossible

- ◆ Find out if you can work from home.
- ◆ Ask your employer about how business will continue during a pandemic.
- ◆ Plan for the possible reduction or loss of income if you are unable to work or your place of employment is closed.
- ◆ Check with your employer or union about leave policies.

### Schools May Be Closed for an Extended Period of Time

- ◆ Help schools plan for pandemic influenza. Talk to the school nurse or the health center. Talk to your teachers, administrators, and parent-teacher organizations.
- ◆ Plan home learning activities and exercises. Have materials, such as books, on hand. Also plan recreational activities that your children can do at home.
- ◆ Consider child care needs.

## Transportation Services May Be Disrupted

- ◆ Think about how you can rely less on public transportation during a pandemic. For example, store food and other essential supplies so you can make fewer trips to the store.
- ◆ Prepare backup plans for taking care of loved ones who are far away.
- ◆ Consider other ways to get to work, or, if you can, work at home.

## People Will Need Advice and Help at Work and Home

- ◆ Think about what information the people in your workplace will need if you are a manager. This may include information about insurance, leave policies, working from home, possible loss of income, and when not to come to work if sick.
- ◆ Meet with your colleagues and make lists of things that you will need to know and what actions can be taken.
- ◆ Find volunteers who want to help people in need, such as elderly neighbors, single parents of small children, or people without the resources to get the medical help they will need.
- ◆ Identify other information resources in your community, such as mental health hotlines, public health hotlines, or electronic bulletin boards.
- ◆ Find support systems—people who are thinking about the same issues you are thinking about. Share ideas.

## Preparing for a Pandemic

### Stock a Supply of Water and Food

During a pandemic you may not be able to get to a store. Even if you can get to a store, it may be out of supplies. Public waterworks services may also be interrupted. Stocking supplies can also be useful in other types of

emergencies, such as power outages and disasters. Store foods that:

- ◆ **Are nonperishable** (will keep for a long time) and don't require refrigeration
- ◆ **Are easy to prepare** in case you are unable to cook
- ◆ **Require little or no water**, so you can conserve water for drinking

For your convenience, a helpful checklist of items to have on hand for an extended stay at home is included at the end of this guide.

### Stay Healthy

Take common-sense steps to limit the spread of germs. Make good hygiene a habit.

- ◆ Wash hands frequently for 15 to 20 seconds with soap and water.
- ◆ Cover your mouth and nose with a tissue when you cough or sneeze.
- ◆ Put used tissues in a waste basket.
- ◆ Cough or sneeze into your upper sleeve if you don't have a tissue.
- ◆ Clean your hands after coughing or sneezing. Use soap and water or an alcohol-based (60 to 95 percent alcohol) hand cleaner; rub these on the hands until the liquid or gel dries.
- ◆ Stay at home if you are sick.
- ◆ Clean your hands often when you or others are sick, especially if you touch your mouth, nose, and eyes.
- ◆ Always clean your hands before eating.
- ◆ Carry alcohol-based hand wipes or hand-sanitizing gels with you to clean your hands when you are out in public.
- ◆ Teach your children to use these hygiene practices because germs are often spread at school.

It is always a good idea to practice good health habits.

- ◆ Eat a balanced diet. Be sure to eat a variety of foods, including plenty of vegetables, fruits, and whole grain products. Also include low-fat dairy products, lean meats, poultry, fish, and beans. Drink lots of water and go easy on salt, sugar, alcohol, and saturated fat.
- ◆ Exercise on a regular basis and get plenty of rest.

### Cleaning and Disinfecting

The main way that illnesses like colds and flu are spread is from person to person by coughs and sneezes. This can happen when droplets from a cough or sneeze of an infected person move through the air and make contact with the mouth or nose of people nearby.

Droplets from an infected person can also make contact with environmental surfaces (like the tops of tables). The virus can then be spread from those surfaces if a person touches the droplets and then touches his or her own eyes, mouth, or nose before washing his or her hands.

The virus also can be spread when an infected person coughs or sneezes into his or her hands and then touches a surface (like a phone, remote control, or toy) before washing his or her hands. Another person could become sick if he or she touches that surface and then touches his or her own eyes, mouth, or nose before washing. Flu viruses and other germs can live two hours or longer on hard environmental surfaces like tables, doorknobs, and desks. Surfaces are likely to be touched much more often than they can be cleaned and disinfected. Thus, it is important to wash your hands often, keep your hands away from your face, and keep such surfaces clean to help prevent the spread of germs.

### Use recommended surface cleaning practices:

- ◆ Follow label instructions carefully when using disinfectants and cleaners.
  - Pay attention to any hazard warnings and instructions on the labels for using personal protective items (such as household gloves).
  - Do not mix disinfectants and cleaners unless the labels indicate it is safe to do so. Combining certain products (such as chlorine bleach and ammonia cleaners) can be harmful, resulting in serious injury or death.
- ◆ Keep hard surfaces like kitchen countertops, tabletops, desktops, and bathroom surfaces clean and disinfected.
  - Clean the surface with a commercial product that is both a detergent (cleans) and a disinfectant (kills germs). These products can be used when surfaces are not visibly dirty.
  - Another way to do this is to wash the surface with a general household cleaner (soap or detergent), rinse with water, and follow with a disinfectant. This method should be used for visibly dirty surfaces.
  - Use disinfectants on surfaces that are touched often. Clean the surface as explained above before using disinfectants.
    - If disinfectants are not available, use a chlorine bleach solution made by adding one tablespoon of bleach to a quart (four cups) of water; use a cloth to apply this to surfaces and let stand for three to five minutes before rinsing with clean water. (For a larger supply of disinfectant, add  $\frac{1}{4}$  cup of bleach to a gallon (16 cups) of water.)
    - Wear gloves to protect your hands when working with strong bleach solutions.

- ◆ Keep surfaces touched by more than one person clean and disinfected. Examples of these surfaces include doorknobs, refrigerator door handles, and microwaves.
  - Clean with a combination detergent and disinfectant product. Or use a cleaner first, rinse the surface thoroughly, and then follow with a disinfectant.
  - Use sanitizer cloths to wipe electronic items that are touched often, such as phones, computers, remote controls, and hand-held games.
  - Use sanitizer cloths to wipe car door handles, the steering wheel, and the gear shift.

#### **Use recommended laundry practices:**

- ◆ Gently gather soiled clothing, bedding, and linens without creating a lot of motion or fluffing; for example, do not shake sheets when removing them from the bed.
- ◆ Clean your hands after handling soiled laundry items.
- ◆ Use washing machine cycles, detergents, and laundry additives (like softener) as you normally do; follow label instructions for detergents and additives.
- ◆ Dry the cleaned laundry items as you normally do, selecting the dryer temperature for the types of fabrics in the load. Line- or air-drying can be used to dry items when machine drying is not indicated.
- ◆ Clean your hands before removing clean laundry from the washer or dryer, especially if you have coughed or sneezed on your hands.

#### **Use recommended waste disposal practices:**

- ◆ Toss tissues into waste baskets after they have been used for coughs, sneezes, and blowing your nose.
- ◆ Place waste baskets where they are easy to use.

- ◆ Avoid touching used tissues and other waste when emptying waste baskets.
- ◆ Clean your hands after emptying waste baskets.

#### **Additional Information**

Disinfectant products (sanitizer cloths and liquid disinfectants) available from grocery stores, hardware stores, and commercial cleaning product suppliers have been registered with the U.S. Environmental Protection Agency (EPA). Always follow label instructions carefully when using these products. For more information about EPA-registered disinfectants, visit [www.epa.gov/oppad001/chemregindex.htm](http://www.epa.gov/oppad001/chemregindex.htm).

#### **Get Informed**

Knowing the facts is the best preparation. Identify sources you can count on for reliable information. If a pandemic occurs, having accurate and reliable information will be critical.

- ◆ Reliable, accurate, and timely information is available at [www.PandemicFlu.gov](http://www.PandemicFlu.gov).
- ◆ Another source for information on pandemic influenza is the Centers for Disease Control and Prevention (CDC).
- ◆ Look for information on your local and state government web sites. Links are available to each state department of public health at [www.cdc.gov/other.htm#states](http://www.cdc.gov/other.htm#states).
- ◆ Listen to local and national radio, watch news reports on television, and read your newspaper and other sources of printed and web-based information.
- ◆ Talk to your local health care providers and public health officials.
- ◆ As you begin your individual or family planning, you may want to review your state's planning efforts and those of your local public health and emergency preparedness officials. Many of the state plans and other planning information can be found at [www.pandemicflu.gov/plan/state/index.html](http://www.pandemicflu.gov/plan/state/index.html).

## Helpful Resources

### **PandemicFlu.gov**

<http://www.pandemicflu.gov>

The official U.S. government web site for information on pandemic flu and avian influenza. The web site provides general information, planning and response, monitoring outbreaks, health and safety issues, vaccines and medications, bird and animal issues, global activities, travel and research activities.

### **Centers for Disease Control and Prevention (CDC)**

1600 Clifton Road

Atlanta, GA 30333

Information Hotline: 800-CDC-INFO  
(800-232-4636).

TTY: 888-232-6348

<http://www.cdc.gov>

### **Pandemic Flu Information Page:**

<http://www.cdc.gov/flu/pandemic/>

The CDC offers a wide variety of disease prevention and intervention topics, publications, related links and much more. The pandemic influenza page provides specific information on pandemic flu, including key facts, planning checklists, preparedness, Q&A, information for specific groups, and links to other resources that can help.

## Pandemic Flu Planning Checklist for Individuals and Families

You can prepare for an influenza pandemic now. You should know both the magnitude of what can happen during a pandemic outbreak and what actions you can take to help lessen the impact of an influenza pandemic on you and your family. This checklist will help you gather the information and resources you may need in case of a flu pandemic.

### Plan for a Pandemic

- Store a supply of water and food.** During a pandemic, if you cannot get to a store, or if stores are out of supplies, it will be important for you to have extra supplies on hand. This can be useful in other types of emergencies, such as power outages and disasters.
- Store a supply of prescription medications.** Ask your doctor and insurance company if you can get an extra supply of your regular prescription drugs.
- Have nonprescription drugs and other health supplies on hand,** including pain relievers, stomach remedies, cough and cold medicines, fluids with electrolytes, and vitamins.
- Talk with family members and loved ones about how they would be cared for** if they got sick, or what will be needed to care for them in your home.
- Volunteer with local groups** to prepare and assist with emergency response.
- Get involved in your community** as it works to prepare for an influenza pandemic.

### Limit the Spread of Germs and Prevent Infection

- Wash hands frequently.** Teach your children to wash hands frequently with soap and water, and model the correct behavior.
- Cover coughs and sneezes.** Teach your children to cover coughs and sneezes with tissues, and be sure to model that behavior.
- Stay at home if you are sick.** Teach your children to stay away from others as much as possible if they are sick. Stay home from work and school if sick.

### Items to have on hand for an extended stay at home

The following are examples of items you should consider having on hand to be prepared if it becomes necessary for an extended stay at home:

#### Food and Non-Perishables:

- Ready-to-eat canned meats, fruits, vegetables, and soups
- Protein or fruit bars
- Dry cereal or granola
- Peanut butter or nuts
- Dried fruit
- Crackers
- Canned juices
- Bottled water
- Canned or jarred baby food and formula
- Pet food

#### Medical, Health, and Emergency Supplies:

- Prescribed medications and medical supplies such as glucose and blood-pressure monitoring equipment
- Soap and water, or alcohol-based hand wash
- Medicines for fever, such as acetaminophen or ibuprofen
- Medicines for cough and cold
- Thermometer
- Anti-diarrheal medication
- Vitamins
- Fluids with electrolytes
- Cleansing agent/soap
- Flashlight
- Batteries
- Portable radio
- Manual can opener
- Garbage bags
- Tissues, toilet paper, disposable diapers



## Emergency Contacts Form

Contacts	Name/Phone Number
Local Personal Emergency Contact	
Out-of-Town Personal Emergency Contact	
Hospitals Near:      Work _____	
School _____	
Caregiver _____	
Home	
Family Physician(s)	
State Public Health Department	
Pharmacy	
Employer Contact and Emergency Information	
School Contact and Emergency Information	
Caregiver Contact and Emergency Information	
Religious/Spiritual Organization	

Source: Department of Health and Human Services.

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