Pandemic Flu

The Public's Guide to Planning and Preparation

Texas Department of State Health Services,
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Introduction

Pandemic Flu: The Public's Guide to Planning

Welcome to "Pandemic Flu: The Public's Guide to Planning and Preparation," a document created by the Texas Department of State Health Services (DSHS) to give you information about planning for the next pandemic flu.

This document contains background flu information, details on DSHS's extensive planning efforts, an outline of the DSHS Pandemic Influenza Plan Operational Guidelines, and tips for how you can plan for and stay safe in a pandemic flu emergency. A Frequently Asked Questions section at the end of this document provides answers to many of the questions you may have.

The Threat of Pandemic Flu

Pandemic flu is one of the biggest health threats that may – or may not – affect Texas. Preparing to respond to a global outbreak of a deadly flu strain as if it were actually going to happen is absolutely essential.

Estimates are that pandemic flu could strike 90 million Americans and as many as one out of every two Texans. The impact of a pandemic, however, will be measured not only by how many people are sick or die. Major social and economic consequences also will occur. Health care availability may be limited. Stores and schools could close. Grocery stores could run out of food. Basic services we take for granted may not be available. We could be forced to provide a sustained response for months, rather than weeks or days. More than one wave of illness, each lasting

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There is real value in learning all you can and taking steps to protect yourself now, before a pandemic strikes.

as long as two months, may come in a year's time. And we could be on our own for the most part because everyone in our area, our state, our nation, our hemisphere, perhaps even our planet will be affected in some way.

Why Should I Care Now?

- Knowledge is power. There is real value in learning all you can and taking steps to protect yourself now, before a pandemic strikes.
- A severe outbreak could overwhelm the health care system and close businesses and schools.
- Pandemic flu could make you or your family members very ill, possibly leading to death.
- Taking charge of your personal health and safety will help lower your risk of getting the flu and help you better able to manage in the event of an emergency.

Many Are Planning

In the United States, the federal government, through the U.S. Department of Health and Human Services and the Centers for Disease Control and Prevention, has plans. The Texas Department of State Health Services has been working on state preparations for a pandemic flu outbreak for several years. And local health departments, emergency response groups and some Councils of Government have plans for their communities.

Internationally, the World Health Organization and a chain of countries and organizations have been working on plans that interconnect across the globe.

The threat of pandemic flu is a real possibility. The bottom line is that planning matters, and now is the time to solidify our efforts.

About the DSHS Plan

The DSHS plan, first developed in 2002, is called "Pandemic Influenza Plan Operational Guidelines." It is our state's comprehensive guide to dealing with pandemic flu and is broken down into pandemic flu periods and phases as outlined by the World Health Organization. This strategy allows for different levels of response at different locations.

The goal is to keep you, your family and your community safe from the effects of pandemic flu. Specifically, the plan seeks to minimize serious illness, hospitalizations and death while preserving the flow of day-to-day activities. It identifies roles and responsibilities and recommends prevention and treatment tactics. The plan will always be a work in progress and will be reviewed and updated as new information becomes available.

The full Texas Department of State Health Services Pandemic Influenza Plan Operational Guidelines document is available on the agency Web site at www.dshs.state.tx.us.

Flu Facts

If a pandemic strikes, everyone could be at risk, not just the elderly or those immune or chronic medical problems.

Definitions

Flu is a contagious illness caused by flu viruses. Flu attacks the nose, throat and lungs. Anyone, including healthy people, can get the flu, and serious health problems from the flu can happen at any age. Here are some definitions you need to know:

Seasonal Flu

Seasonal flu follows predictable yearly patterns, in Texas generally from October through March. People usually have some immunity built up from previous exposure to circulating seasonal flu viruses.

Avian Flu (Bird Flu)

Bird flu is an infection caused by bird flu viruses. These viruses occur naturally among wild birds worldwide. Wild birds can transmit infection to poultry. All human flu viruses began as bird flu viruses. Rarely, transmission is possible from sick or dead birds to people. The current bird flu, known as H5N1, is not considered a pandemic now because only extremely rare human-to-human transmission has occurred.

Pandemic Flu

A pandemic is a global disease outbreak. A flu pandemic is possible when an influenza virus makes a dramatic change that results in a new or novel virus to which people have little or no immunity. The new virus then begins to cause serious illness, spreads easily from person to person and can sweep around the world quickly.

History

Outbreaks of flu illness have been documented for at least 400 years. A total of 32 worldwide outbreaks, or pandemics, have been recorded, with the first described in 1580.

The most severe and famous in recent history is the 1918 Spanish flu pandemic that killed 675,000 people in the United States. Converted to today's population, this would equal nearly 2 million deaths. Many people today still remember the Hong Kong flu of 1968-1969 that killed 34,000, and the Asian flu of 1957-1958 that killed 76,000.

Seasonal flu leads to about 34,000 deaths in this county year, many of which could be prevented with a flu vaccination.

Risk

If a pandemic strikes, everyone could be at risk, not just the elderly or those immune or chronic medical problems. For instance, the pandemic of 1918-1919 resulted in the death of 20 million to 40 million people worldwide with a disproportionate number of them young adults.

Consequences

The impact of a pandemic will be measured not only by the number of deaths but also in terms of the major social and economic consequences that will occur if millions of people become ill at the same time. Hospital capacity could be overwhelmed, and as physicians and nurses become ill, health care at all levels could be affected. Schools, businesses and services such as electricity may be affected.

Looking Ahead

The next pandemic will take anywhere from a few weeks to three months to reach North America following its discovery overseas. A pandemic probably will not begin in North America for several reasons:

- Commercial poultry in the United States is raised indoors without contact with wild birds.
- The poultry industry screens its birds for disease.
- State and federal inspections and regulations are in place for handling sick flocks.
- While the virus can be picked up by handling infected dead birds or by contact with their feces, there is limited contact between the general public and wild birds or poultry in North America.

Outline of DSHS Operating Guidelines

Pandemics Happen in Phases

The DSHS plan is divided into phases that follow the stages of an actual pandemic defined by the World Health Organization. The plan greatly details the activities that will occur in each phase. From analyzing where people can be treated to coordinating laboratory analysis to handling vaccine delivery to managing staffing, the plan outlines specific measures to be taken by DSHS, Health Services Regions and local health departments to handle this kind of event.

The phases of a pandemic include:

Interpandemic

This is the period between pandemics. It has two phases. In Phase 1, no birds have been found to have a novel virus that could threaten humans. In Phase 2, a novel virus has been found in birds but has not spread to humans.

Pandemic Alert

This is a period of heightened awareness. This period has three phases. In Phase 3, humans have been infected but few if any cases of person-to-person transmission have occurred. In Phase 4, small clusters of human transmission have happened but not often. In Phase 5, larger clusters are happening more frequently.

Pandemic

This period is when there is ongoing infection in the general public.

Subsided

This is the interval between waves of infection. During this period, the plan focuses on an assessment of resources, quick evaluation of plan performance with adjustments as needed, continued use of personal and community focused prevention strategies and assessment of communication strategies with adjustments as needed.

Postpandemic

This is the end of the pandemic and points to a return to Interpandemic Period. It is a time for evaluation – assessing response efforts and social impacts.

Within Each Phase, DSHS Has Outlined Five Key Activities

1. Planning and Coordination

Activities outline backup for responsibilities of local governments and health departments and how DSHS will coordinate resources if the need cannot be met locally.

Examples

- Completing plans for operations
- Outlining flow of requests for assistance
- Coordinating resources such as personnel and ambulances

2. Situation Monitoring and Assessment

Calls for detecting circulating flu strains and evaluating death and illness rates. Initially, checking for pandemic flu will not be much different from that of seasonal flu. Lab tests will be conducted using the best methods to identify the strain.

Examples

- Arranging for transportation of specimens
- Testing specimens
- Securing more lab space

3. Prevention and Control

Calls for taking action to prevent and control the spread of the virus. These actions can include personal, non-drug actions, such as washing hands or safely taking care of a family member with symptoms. These actions also can include using vaccines and antivirals when they become available.

Examples

- Prioritizing who will be given antivirals or vaccine during any shortages
- Tracking to ensure two doses of vaccine are given when needed
- Addressing antiviral storage issues
- Educating the public on need for quarantine and isolation

4. Health Systems Response

Calls for care facilities such as hospitals and nursing homes to have emergency management plans that address pandemic flu. It also recommends that doctor's offices develop plans to see large numbers of patients at a time

Examples

- Designating separate entrances at hospitals
- Organizing a telephone care system
- Establishing fever clinics
- Providing access for special populations

5. Communication

Calls for distributing timely and accurate information to public heath officials, doctors and nurses, the media and the public.

Examples

- Issuing health alerts to health care providers
- Translating messages into languages other than English
- Updating Web site with key information

What You Can Do

Practice Good Health Habits

- Wash your hands regularly or use a hand sanitizer.
- Cover your mouth and nose with a tissue when you cough or sneeze, throw the tissue away, then wash your hands.
- Stay away from sick people.
- If you are sick, stay home from work.
- If your children are sick, keep them home from school and child care centers.
- Stay away from crowds.

Improve Your Health

- The healthier you are, the better your body can resist germs.
- Get the seasonal flu shot.
- Quit smoking.
- Make better food choices.
- Exercise regularly.
- Get enough sleep.
- Get regular checkups.

Be Prepared for an Emergency

- Have a family emergency plan. You may need to be isolated for as many as 10 days.
- Understand that you may have to change what you do or when you do it. You may need to:

Wash your hands regularly or use a hand sanitizer.

Have a family emergency plan.

- Stop traveling
- Shop for groceries when stores are not crowded (early or late)
- Stop attending large gatherings such as sports or entertainment events
- Work from home
- Care for your children if school and child care centers are closed.

Locate Emergency Supplies

Be able to locate these items quickly in a health emergency:

- Birth certificates
- Immunization records for children and adults
- Driver license or other photo ID
- Social Security cards
- Health insurance cards and policies
- Prescription medications and containers
- Any unfilled written prescriptions
- List of medications taken by family members
- Three- to five-day supply of water (one gallon of water per person per day)
- Three- to five-day supply of canned and other non-perishable foods
- Special foods for diabetics and others with special dietary needs
- Baby food, formula, diapers and other supplies for infants
- Fruits and vegetables
- Manual can opener
- Water-purifier, such as unscented chlorine

bleach or iodine tablets

- Soap, toothpaste, tissue and other personal hygiene supplies
- Alcohol-based hand sanitizer
- Disposable cleaning cloths or wipes
- First aid kit
- Extra eyeglasses, contacts and solutions
- Sleeping bags or blankets, sheets, pillows

Taking Care of a Family Member

During a pandemic, there probably will not be enough hospital beds in Texas to care for every infected person.

Care at Home

During a pandemic, there probably will not be enough hospital beds in Texas to care for every infected person. That's why it's best to know how to care for family members who develops flu symptoms.

Call the Doctor

If you or a family member has flu symptoms listed below, call your doctor immediately. Your doctor's office staff may ask you questions over the phone to help them determine the best thing for you to do. Early in the outbreak, you might be asked to visit the office. Doctors have rapid tests to identify the flu virus, but the tests can't distinguish between avian flu and other flu viruses. For that reason, specimens from anyone with a suspected case of bird flu would be sent to a DSHS laboratory for identification. Later in the outbreak your doctor may recommend you go to another location for testing or treatment.

Fever Clinics and Other Options

Hospital emergency rooms may become overwhelmed with sick patients early in a pandemic. Alternate options may be used such as "fever clinics" where people with flu-like illness can be examined and treated without exposing other people being seen for other reasons. Other options may include "flu hospitals" specializing in flu care or "alternate treatment centers" set up especially for patients not sick enough to need hospital care. Learn how to care for yourself and your family at home.

Visiting a Health Care Provider

- Tell the reception staff immediately that you think you have the flu.
- You may be asked to wear a mask and/or sit in a separate area to protect others from getting sick.

Home Care: Supplies

- A thermometer appropriate for the age of the child and an adult thermometer.
- Plenty of fluids: water, fruit juice, infant electrolyte replacement drinks
- Simple foods that family members like and will eat when sick such as broth, chicken noodle soup, macaroni and cheese, gelatin.

Cold or Flu: Know the Symptoms

Symptoms	Cold	Flu
fever	rare	characteristic, high (102°-104° F); lasts 3-4 days
headache	rare	prominent
general aches, pains	slight	usual; often severe
fatigue, weakness	mild	can last up to 2-3 weeks
extreme exhaustion	never	early and prominent
stuffy nose	common	sometimes
sneezing	usual	sometimes
sore throat	common	sometimes
chest discomfort, cough	mild to moderate; hacking cough	common; can become severe; may result in pneumonia

(Source: National Institute of Allergy and Infectious Diseases)

Home Care: Medications

- Doctors may prescribe an antiviral medication that may reduce the length and severity of the illness and may also prevent complications such as pneumonia. Remember: Antivirals must be started with 48 hours of first sign of symptoms to have an affect on the illness.
- Antibiotics don't work on viruses and will not be prescribed for flu. Antibiotics may be prescribed for flu complications such as pneumonia.

Home Care: Adults

- Stay home and rest, especially while you have a fever.
- Stop smoking and avoid secondhand smoke, which can make cold symptoms worse.
- Drink plenty of fluids such as water, hot tea with lemon, and fruit juices. Fluids help loosen mucus. Fluids also are important if you have a fever because fever can dry up your body's fluids, leading to dehydration.
- Don't drink alcohol.
- Gargle with warm salt water a few times a day to relieve a sore throat. Throat sprays or lozenges also may help relieve the pain.
- Use saline (salt water) nose drops to help loosen mucus and moisten the tender skin in your nose if nasal congestion is a problem. You also may take over-the-counter medications. Breathe moist air from a hot shower or from a sink filled with hot water to help clear a stuffy nose.
- If the skin around your nose and lips becomes sore from repeated rubbing with tissues,

apply petroleum jelly to the area. Disposable tissues containing lotion also may help.

- Elevate your head at night with an extra pillow. This may help you rest if coughing keeps you awake.
- Warm soup may soothe a sore throat, unstuff a clogged nose and hydrate a thirsty body.

High Risk and Complications

- Some infected people may have life-threatening complications such as pneumonia and acute respiratory distress syndrome, which causes the air sacs in your lungs to fill with fluid rather than with air, leading to severe breathing difficulties.
- If you are at high risk from complications of the flu, you should call your health-care provider if you develop flu-like symptoms.
- Those at high risk for complications include people 65 years or older, people with chronic medical conditions, pregnant women and children younger than 5 years of age.

Signs of an Emergency

- Difficult or painful breathing
- Shortness of breath at rest or when doing very little
- Wheezing
- Coughing up bloody sputum
- Pain or pressure in the chest or abdomen
- Fever for 3 to 4 days without improvement or improvement then sudden high fever and return of symptoms
- Sudden dizziness

- Extreme drowsiness or difficulty wakening
- Confusion or disorientation
- New inability to function, if an independent elder
- Severe earache
- Severe or persistent vomiting, if an elder

Source: Mayo Clinic (2005)

Children and the Flu

While we are unsure of how any new flu virus causing a pandemic will affect infants, we know that seasonal influenza illness is more severe in children under 5 years of age.

Infants usually develop higher temperatures, and unexplained fever may be the only sign. Central nervous system symptoms may appear in up to 20 percent of infants and children and can be signs of meningitis. Nausea, vomiting, diarrhea and abdominal pain occur in 40 percent to 50 percent of sick children, mainly those 3 years old and younger. Flu can develop into croup, pneumonia and bronchitis.

Go to the Doctor

See a doctor if you child has flu symptoms and:

- Is younger than 3 months
- Has heart or lung disease or any chronic illness requiring regular medical care
- Has a disease or condition that compromises immunity
- Takes aspirin regularly for a medical condition

Children's Symptoms

Determining and reporting symptoms in children can be a challenge because infants and children can't tell you how they feel. Symptoms that are specific and physical are easy because you can see them. You also need to look for other changes:

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- **Fever:** Write down the number and when and how it was taken.
- **Mood:** Is your child crying more than usual? Does your child seem tired or listless? Does your child appear to be irritable or over stimulated?
- **Sleep:** Note the time and duration of regular sleep and naps for the last 12 hours or since the onset of illness.
- **Eating:** List all food (solids and liquids) the child has consumed with amounts and times. Note if the child was unable to keep any of these foods down.
- **Urination:** Changes in amount or frequency.
- **Medicines:** Keep track of any medicine your child is regularly taking or any you may have given as a result of this illness. Know the dosage and times given.

Source: Alberta Government (2005)

Signs of Emergency in Children

- Fast breathing, trouble breathing, or change in breathing patterns
- Bluish skin color
- Not drinking enough fluids
- Not urinating enough
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Loss of interest in most things and listlessness
- Flu-like symptoms that improve but then return with fever and worse cough
- Fever with a rash

- "Just doesn't seem right" and you are concerned
- Full or sunken area on the top of the child's head
- Limp or unable to move
- Excessively sleepy to the point of being difficult to arouse or unresponsive
- Signs of headache and/or stiff neck, especially if combined with fever and listlessness and their eyes are sensitive to light
- Confusion
- Seizure

Source: Alberta Government (2005)

Home Care: Protecting Children

- If you get flu-like symptoms and there is another adult who is not ill, ask that person to care for the child.
- Try to minimize contact with your child as much as possible. Cover your nose and mouth with a tissue when sneezing or coughing, and put your used tissue in a wastebasket.
- Wash your hands or use an alcohol-based hand rub frequently and as soon as possible if you have sneezed or coughed.
- Before engaging in any activity within 3 feet of your child (including feeding, changing, rocking, reading to your child), put on a surgical mask (available in most drugstores) and thoroughly wash and dry your hands. Do not remove your surgical mask until you are done and you have put your child down.
- Observe your child closely for symptoms of respiratory illness.

Home Care: Treating a Child

- Dress a child in lightweight clothing and keep room temperature at 68° F (20° C).
- Offer fluids/breast feed frequently while child is awake.
- Involve the child in quiet activities.
- Elevate head of the bed; infants may be more comfortable in a car seat or baby swing.
- Use nonprescription medications as needed.
- Use a humidifier (except with asthmatic children).

Important:

- Do not give cool baths or alcohol rubs.
- Do not use aspirin or aspirin-containing products.

Source: Alberta Government (2005)

Quick Tip: Using a Humidifier

Clean humidifiers daily using hot water with one part bleach to 10 parts water to prevent bacteria and mold growth. Scrub the inside with a cloth or bottle brush to get into tight corners. Rinse well with hot water.

Travel and the Flu

If you're traveling to any region with bird flu outbreaks, consider these public health recommendations:

- **Avoid domesticated birds.** If possible, avoid rural areas, small farms and especially any close contact with domesticated fowl.
- **Avoid open-air markets.** These can be breeding grounds for disease.
- **Wash your hands.** One of the simplest ways to prevent infections of all kinds, hand washing, is also one of the best. When you're traveling, alcohol-based hand sanitizers, which don't require water, are an excellent choice. They're actually more effective than hand washing in killing bacteria and viruses that cause disease. Commercially prepared hand sanitizers contain ingredients that help prevent skin dryness. Not all hand sanitizers are created equal, however. Some "waterless" hand sanitizers don't contain alcohol. Use only the alcohol-based products.
- **Watch your children.** Keep a careful eye on young children, who are likely to put their hands in their mouths and who may not wash thoroughly.
- **Steer clear of raw eggs.** Because eggshells are often contaminated with bird droppings, avoid mayonnaise, hollandaise sauce, ice cream, and any other foods containing raw or undercooked eggs.

One of the simplest ways to prevent infections of all kinds, hand washing, is also one of the best.

- **Ask about a flu shot.** Before traveling, ask your doctor about a flu shot. It won't protect you from bird flu, but it may help reduce the risk of simultaneous infection with bird and human flu viruses.

Source: Mayo Clinic (2005)

Vaccines and Antivirals

Vaccines – Flu Prevention

Vaccines help protect people from getting seasonal flu. Although vaccination is the best way to prevent seasonal flu, at the beginning of a pandemic, vaccine supplies against the specific virus will be nonexistent. Producing a vaccine that matches the specific strain causing a pandemic can't begin until transmission between people begins. Routine vaccination against seasonal influenza may provide some protection depending on the flu virus.

Vaccine Availability

With current technology, the first doses of a vaccine are unlikely to become available for six to eight months after a pandemic begins. Current worldwide production capacity for flu vaccine is able to cover less than 5 percent of the world's population. National and international efforts to develop increase production and decrease response time are ongoing.

Vaccine – Key Points to Remember

- A vaccine for H5N1 is not available now.
- H5N1 has not yet mutated to be easily transmitted between humans, so it is not possible to make a vaccine specific for something that does not exist.
- Some newly developed vaccines may be close to the pandemic strain and may provide some protection from infection.
- New technologies are being developed that will allow quicker vaccine development and production.

Antivirals – Flu Treatment

Antivirals are medications that have shown to be effective in treating H5N1 flu if they are begun within 48 hours of the first symptoms. These medications do not cure flu but can reduce the length of illness and disease severity. They also can help prevent complications such as pneumonia, the typical cause of flu deaths.

Antivirals – Key Points to Remember

- Antivirals do not cure the flu.
- Antivirals must be taken within 48 hours of start of flu symptoms to have any effect.
- Antivirals may reduce the length of illness and may make the illness less severe.
- Your healthcare provider may order antivirals for your immediate family to try to prevent them from getting ill. This is called "post exposure prophylaxis."

Antivirals taken for prophylaxis protects you only as long as you are taking it. They do not make you immune. Only having the flu or vaccination can provide immunity.

Conclusion

Clearly, the threat of pandemic flu is a real possibility. Knowing how the Texas Department of State Health Services plans to operate during a crisis can help you be informed and take the necessary steps to prepare. Taking charge of your personal health and safety will help lower your risk of getting flu and help you better manage in the event of an emergency.

Who Can I Call?

- CDC Emergency Response 770-488-7100
- Texas Department of State Health Services 888-963-7111
- DSHS Immunization Branch 800-252-9152
- DSHS Infectious Disease Control Unit 888-963-7111, ext. 7455

Info on the Web

www.dshs.state.tx.us
www.pandemicflu.gov

Frequently Asked Questions – Flu

What is flu?

Flu is a contagious illness caused by the flu virus. It attacks the nose, throat and lungs in people. Anyone, including healthy people, can get the flu. Serious health problems from the flu can happen at any age.

What are the types of flu viruses?

There are three types of flu viruses: A, B, and C. Flu type A viruses can infect people, birds, pigs, horses, seals, whales and other animals. Wild birds are the natural hosts for these viruses. Flu B viruses are usually found only in humans. Flu type C viruses cause mild illness in people.

How are seasonal flu, avian flu (bird flu) and pandemic flu different?

- Seasonal flu follows predictable yearly patterns, in Texas generally from October through March. Viruses associated with seasonal flu include flu A, flu B and flu C. People usually have some immunity built up from previous exposure to circulating seasonal flu viruses.
- Avian flu (bird flu) is an infection caused by bird flu viruses. These bird flu viruses occur naturally among birds worldwide. Rarely, transmission is possible from sick or dead birds to people.
- A pandemic is a global disease outbreak. A flu pandemic is possible when a flu A virus makes a dramatic change that results in a new or novel virus to which people have little or no immunity.

The new virus then begins to cause serious illness, spreads easily from person to person and can sweep around the world quickly.

How do you get the flu?

Flu is very contagious. It can be caught from breathing in droplets in the air from someone sneezing, coughing or talking. The flu also is spread when people touch something with the flu viruses on it such as a doorknob or handrail, and then touch their eyes, nose or mouth. People can spread flu from one day before symptoms appear to seven days after symptoms go away.

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Who is at risk?

If a pandemic strikes, everyone could be at risk, not just the elderly or those with compromised immune systems. For instance, the pandemic of 1918-1919 resulted in the death of 20 million to 40 million people worldwide with a disproportionate number of them young.

What are the symptoms of flu?

Symptoms of flu come on suddenly, one to four days after the virus enters the body. These symptoms include:

- Sudden fever (100.4° F or more)
- Headache
- Tiredness, sometimes extreme
- Dry cough
- Sore throat
- Nasal congestion
- Body aches

Children also may have an ear infection, nausea or vomiting. Young children with flu can develop high fevers and seizures. Generally, people start feeling better after the body's temperature returns to normal, in about three days, and are ready to return to their normal activities in about a week. Tiredness and a cough may linger for several more weeks.

What are some complications from the flu?

In people with chronic medical conditions such as heart or lung disease, kidney disease or diabetes, flu can lead to pneumonia and other life-threatening illnesses. Others at higher risk of complications include those with weakened immune systems, the elderly, the very young and pregnant women.

How is flu treated?

Four antiviral medicines – amantadine (Symmetrel®), rimantadine (Flumadine®), oseltamivir (Tamiflu®) and zanamivir (Relenza®) – are approved by the U.S. Food and Drug Administration for treating flu. All four usually work against flu A viruses. However, the drugs may not always work because flu virus strains can become resistant to one or more of these medicines. To be effective, antivirals should be taken within 48 hours of the beginning of symptoms.

Do antivirals cure the flu?

Antivirals do not cure the flu. They may reduce the length of the flu infection by a few days and may reduce the severity of symptoms. To be effective, antivirals should be taken within 48 hours of the beginning of symptoms.

How is flu prevented?

Vaccination is the best way to prevent seasonalflu and its severe complications. It takes about two weeks after vaccination for a person to be fully protected. A live, weakened vaccine given as a nasal spray also is available for people 5 to 49 who are in good health and are not pregnant.

A vaccine will need to be developed to match a new or novel virus strain that is transmitted person to person. Using the current method for developing vaccine, this could take six to eight months. New, better, quick methods are being developed.

Other prevention suggestions include:

- Wash your hands often, especially after being in contact with someone who has a respiratory infection or with children who get viruses easily.
- Avoid touching your eyes, nose or mouth.
- Use a tissue when you cough or sneeze, then throw the tissue away.
- Avoid close contact with those who are sick.
- Stay home if you are sick. Keep children at home if they are sick.
- Wipe surfaces such as bathroom and kitchen sinks, faucets and counters with a mixture of 1 part household bleach to 9 parts water.
- Take good care of yourself physically and emotionally.

Vaccination is the best way to prevent seasonal flu and its severe complications.

What is the difference between the flu and a cold?

The flu and the common cold are both respiratory illnesses, but they are caused by different viruses. Unlike flu, the common cold comes on gradually,

rarely causes fever and is usually limited to a sore throat, coughing, sneezing and a stuffy, runny nose. In general, the flu is worse than the common cold. Symptoms such as fever, body aches, extreme tiredness and dry cough are more common and intense and come on more suddenly. Colds generally do not result in serious health problems such as pneumonia, bacterial infections or hospitalizations.

Frequently Asked Questions – Bird Flu

What is avian flu (bird flu)?

It is an infection caused by bird flu viruses. These flu viruses occur naturally among birds. Wild birds carry the viruses in their intestines but usually do not get sick from them. However, bird flu is very contagious among birds and can make some domesticated birds, including chickens, ducks, and turkeys, very sick and kill them.

What is avian flu A (H5N1)?

Flu A (H5N1) virus – also called "H5N1 virus" – is a flu A virus that occurs mainly in birds, is highly contagious among birds, and can be deadly to them. Outbreaks of H5N1 have occurred the last several years among poultry and wild migratory birds in Asia and Europe. For the most up-to-date listing of where H5N1 has been reported, go to www.cdc.gov/flu/avian.

How does bird flu spread among birds?

Infected birds shed flu virus in their saliva, nasal secretions and feces. Susceptible birds become infected when they have contact with contaminated secretions or excretions or with surfaces that are contaminated by infected birds. Domesticated birds may become infected with bird flu virus through direct contact with infected waterfowl or other infected poultry, or through contact with surfaces (such as dirt or cages) or materials (such as water or feed) that have been contaminated with the virus.

There is no evidence that properly cooked poultry or eggs can be a source of infection for bird flu viruses.

Do bird flu viruses infect humans?

Bird flu viruses do not usually infect humans, but several dozen confirmed cases of human infection with bird flu viruses have been documented since 1997.

How serious is bird flu?

Infection with bird flu viruses in domestic poultry causes two main forms of disease that are distinguished by low and high extremes of infection. One form may go undetected and usually causes only mild symptoms (such as ruffled feathers and a drop in egg production). However, another highly contagious form spreads more rapidly through flocks of poultry. This form may cause disease in birds that affects multiple internal organs and has a mortality rate that can reach 90-100 percent of the flock often within 48 hours.

Is the current bird flu, H5N1, considered a pandemic?

No. The current bird flu is not considered a pandemic at this point because only extremely rare human-to-human transmission has occurred.

How do people become infected with bird flu viruses?

Most cases of bird flu infection in humans have resulted from direct or close contact with infected poultry such as domesticated chickens, ducks, and turkeys or surfaces contaminated with secretions and excretions from infected birds. The spread of bird flu viruses from an ill person to another person has been reported very rarely, and transmission has not been seen to continue beyond one person.

What are the symptoms of bird flu in humans?

Symptoms of bird flu in humans have ranged from typical human flu-like symptoms (fever, cough, sore throat and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress syndrome), and other severe and life-threatening complications. The symptoms of bird flu may depend on which specific virus and strain caused the infection.

How is bird flu in humans treated?

There are prescription medicines, called antivirals, approved for human influenza viruses. They may reduce the length of illness and severity of symptoms of bird flu infection if taken within 48 hours of the first sign of symptoms. However, flu viruses can become resistant to these drugs, so these medications may not always work.

Is there a risk for becoming infected with bird flu by eating poultry?

There is no evidence that properly cooked poultry or eggs can be a source of infection for bird flu viruses. The U.S. government carefully controls domestic and imported food products, and in 2004 issued a ban on importation of poultry from countries affected by bird flu viruses, including the H5N1 strain. The ban still is in place.

What precautions can be taken to reduce the risk for infection from wild birds?

Avoid touching wildlife, including wild birds. This protects you from possible exposure to illnesses and minimizes disturbance to the birds and animal. If

there is contact with wildlife do not rub your eyes, eat, drink, or smoke before washing your hands with soap and water.

Do not pick up diseased or dead wildlife. Contact your state, tribal, or federal natural resource agency if you find a sick or dead animal. Consider the risks before purchasing birds from live bird markets. These usually are raised in outdoor environments and may have come in contact with wild birds.

What precautions can hunters take to reduce the risk of infection?

Hunters should follow routine precautions when handling game, including wild birds. The National Wildlife Health Center recommends that hunters:

- Not handle or eat sick game.
- Wear rubber or disposable latex gloves while handling and cleaning game wash hands with soap and water or with alcohol-based hand products; and thoroughly clean knives, equipment and surfaces that come in contact with game.
- Not eat, drink, or smoke while handling animals.
- Cook all game thoroughly.

Frequently Asked Questions – Pandemic Flu

How much warning will we have before pandemic flu strikes North America?

The Asian flu in 1957 took six months to spread worldwide. But at that time, international and national air travel was not common, and the development of the interstate highway system was in its infancy. Considering our ability to travel worldwide in a short amount of time, current estimates predict we would have as little as one month advance warning.

How will we know it is here?

Health alerts and media reports will be widespread. The World Heath Organization will raise the pandemic phase level to Phase 6. The Centers for Disease Control and Prevention (CDC) and the Texas Department of State Health Services will distribute information as needed. The CDC will raise the pandemic phase level for the United States as appropriate. A network of providers and rapid laboratory testing of samples will be in place to confirm cases.

How will I know if I have it?

There is no way to know for sure by symptoms only. Medical tests will be needed to see if the pandemic strain is present. If you are at risk – have visited a country with it and exposed to sick or dead wild birds or chickens or have been in close contact to an infected person – you may be considered a "positive flu case" until lab tests prove otherwise. If the virus has begun to be easily transmitted and

you develop the flu at an unusual time of year (late spring or summer) without travel to the southern hemisphere (its flu season is opposite of ours), you may be considered a positive flu case until lab tests are completed. It is best to talk to your doctor if you suspect you have the flu.

Does the current seasonal flu vaccine protect against pandemic flu?

No. Flu vaccine for the current season does not provide protection against pandemic flu. However, if a pandemic does occur during our regular flu season (fall and winter) you risk being infected with two flu viruses at the same time.

Frequently Asked Questions – Animals

Can animals get the flu?

In general, most types of flu A viruses can cause disease in only one type of animal but occasionally can cross over to infect and cause illness in another animal species. Birds, especially water birds such as ducks and geese, are the natural reservoir of flu A viruses in nature. Flu A infections in birds are often called "bird flu" or "avian flu." Most wild birds do not become ill when infected with flu A. They can pass it to domestic poultry such as chickens and turkeys and to pet birds that can become severely ill and die. With rare exceptions, bird strains of flu A do not infect other types of animals or people.

- **Cats.** The dangerous strain of bird flu A, known as H5N1, has infected several types of animals including domestic and wild cats.
- **Horses.** Horses and other equines are susceptible to infection with some types of flu A. These infections in horses are often referred to as "equine flu." Younger animals are the most susceptible to the disease, and some may require veterinary care. Vaccines are available for horses and other equines through veterinarians.
- **Dogs.** Recently, a strain of equine flu has infected dogs. This strain of flu has been seen only in a few states and has been almost exclusively associated with dog race tracks and animal shelters where large numbers of animals are housed together in close contact. Symptoms range from a mild respiratory illness to severe disease that may result in death. At this time, no vaccine is available for

dogs. In general, cats are not susceptible to flu infection, with the exception of the H5N1 bird flu.

- **Pigs.** Pigs are highly susceptible to some types of flu A and may become infected with some human and bird strains in addition to strains that circulate mainly in pigs. There are vaccines available for pigs through veterinarians.
- **Other Wild Mammals.** Flu A viruses also have been isolated from a variety of wild mammals, particularly marine mammals such as seals and whales.

How is flu treated in animals?

Treatment of animals with flu consists generally of supportive care by a veterinarian. Except for domestic birds, the disease usually will run its course in a week or two, although some animals might become very ill and die. Antiviral drugs generally are not used for treating flu infections in animals. With the exception of horses, pigs and birds, no vaccines are available commercially for animals. Do not give your medications to pets or farm animals.

What should be done with animals that die of the flu?

Your veterinarian can tell you about safe disposal of animals that die from flu infection. In most cases, no special burial is required. However, if you suspect flu infection in domestic poultry, do not move the birds anywhere, even to a veterinarian. Do not attempt to dispose of dead birds yourself. Contact the Texas Animal Health Commission immediately at 1-800-550-8242 for assistance.