

# PANDEMIC INFLUENZA

## Overview

Sources: Centers for Disease Control and Prevention and World Health Organization

A pandemic is a global disease outbreak that occurs when a new influenza virus emerges for which people have little or no immunity, and for which there is no vaccine. The disease spreads easily person-to-person, causes serious illness and can sweep across a country and around the world in a very short time.

It is difficult to predict when the next influenza pandemic will occur or how severe it will be. Wherever and whenever a pandemic starts, everyone around the world is at risk. Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it.

Health professionals are concerned that the continued spread of a highly pathogenic avian H5N1 virus across eastern Asia and other countries represents a significant threat to human health.

The H5N1 virus has raised concerns about a potential human pandemic because:

- It is especially virulent, that is, very active in causing injury or marked by rapid, severe and potentially life-threatening illness.
- It is being spread by migratory birds.
- It can be transmitted from birds to mammals and, in some limited circumstances, to humans, and
- Like other influenza viruses, it continues to evolve.

Since 2003, a growing number of human H5N1 cases have been reported in Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Thailand, Turkey and Vietnam. Most of these cases are all believed to have been caused by exposure to infected poultry. There has been no sustained human-to-human transmission of the disease, but the concern is that H5N1 will evolve into a virus capable of human-to-human transmission.

Influenza A (H5N1) is a virus subtype that occurs mainly in birds and is highly contagious among birds. Outbreaks of highly pathogenic H5N1 among poultry and wild birds are ongoing in a number of countries. H5N1 does not usually infect people; however, a small number of human cases of H5N1 infection have been reported in association with these outbreaks. Most of these cases have occurred from direct or close contact with infected poultry or contaminated surfaces. And while the H5N1 virus does not now infect people easily, infection in humans is very serious when it occurs. So far, more than half of people reported infected have died. Rare cases of human-to-human spread of H5N1 virus may have occurred, but there is no evidence of transmission beyond one person.

Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that H5N1 virus one day could be able to infect humans and spread easily from one person to another. Because these viruses do not commonly infect humans, there is little or no immune protection against them in the humans, and an influenza pandemic could begin. Experts from around the world are watching the H5N1 situation very closely and are preparing for the possibility that the virus may begin to spread more easily from person to person.

The 20th century had three influenza pandemics:

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1. **1918** – at least 675,000 U.S. deaths and up to 50 million deaths worldwide
2. **1957** – at least 70,000 U.S. deaths and 1-2 million deaths worldwide
3. **1968** – at least 34,000 U.S. deaths and 700,000 deaths worldwide

## Characteristics and Challenges of a Pandemic

- When a pandemic influenza virus emerges, its rapid 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 they cannot stop it.
- 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 need to cope with large numbers of people who suddenly fall ill.
- Death rates are high, largely determined by four factors:
  1. The number of people who become infected
  2. The virulence of the virus
  3. The underlying characteristics and vulnerability of affected populations
  4. The effectiveness of preventive measures
- Past pandemics have spread globally in two and sometimes three waves.
- The need for vaccine is likely to outstrip supply.
- The supply of 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.
- 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.

**For additional information on pandemic influenza, visit:**

[www.pandemicflu.gov](http://www.pandemicflu.gov)

[www.hhs.gov](http://www.hhs.gov)

[www.cdc.gov](http://www.cdc.gov)

[www.idph.state.il.us](http://www.idph.state.il.us)

[www.who.org](http://www.who.org)

## How Does Seasonal Flu Differ from Pandemic Flu?

Seasonal Flu	Pandemic Flu
Outbreaks follow predictable seasonal patterns; occurs annually, usually in winter, in temperate climates	Occurs rarely (three times in 20th Century - last in 1968)
Usually some immunity built up from previous exposure	No previous exposure; little or no pre-existing immunity
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 people may be at increased risk for serious complications
Health systems can usually meet public and patient needs	Health systems may be overwhelmed
Vaccine developed based on known flu strains and available for annual flu season	Vaccine probably would not be available in the early stages of a pandemic
Adequate supplies of antivirals are usually available	Effective antivirals may be in limited supply
Average U.S. deaths approximately 36,000/yr	Number of deaths could be quite high (e.g., U.S. 1918 death toll approximately 675,000)
Symptoms: fever, cough, runny nose, muscle pain. Deaths often caused by complications, such as pneumonia.	Symptoms may be more severe and complications more frequent
Generally causes modest impact on society (e.g., some school closings, encouragement of people who are sick to stay home)	May cause major impact on society (e.g. widespread restrictions on travel, closings of schools and businesses, cancellation of large public gatherings)
Manageable impact on domestic and world economy	Potential for severe impact on domestic and world economy

## PREPARING FOR A PANDEMIC

Education and outreach are critical to preparing for a pandemic. Understanding what a pandemic is, what needs to be done at all levels to prepare for pandemic influenza, and what could happen during a pandemic will help everyone make informed decisions.

The Macon County Health Department is actively planning and preparing with state and city government agencies for a possible pandemic, along with planning and preparing for any other possible public health emergency.

However, as stated in the recently published *National Strategy for Pandemic Influenza*, “Private citizens must recognize and understand the degree to which their personal actions will govern the course of a pandemic. The success or failure of infection control measures is ultimately dependent upon the acts of individuals.

A series of checklists have been prepared to help guide individual and corporate efforts. You will find checklists to help you plan at [www.pandemicflu.gov](http://www.pandemicflu.gov)

The effects of a pandemic can be lessened if everyone – federal, state, county and city entities along with individuals, families and businesses – make plans and execute preparations *in advance* of an influenza outbreak.

## Individual Preparedness

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.

Links for checklists and fill-in sheets for family health information and emergency contact information have been prepared to help guide your planning and preparation.

[Pandemic Flu Planning Checklist for Individuals and Families \[Personal Planning Checklist\] \[PDF - 1.15MB\]](#)

Pronto pondremos a su disposición esta información en español.

[Family Emergency Health Information Sheet \[PDF - 1.14MB\]](#)

[Emergency Contacts Form \[PDF - 114KB\]](#)

[Guide for Individuals and Families \[PDF - 8.06MB\]](#)

The Guide contains the information found in the above three links, and related background information.

- 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 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 childcare 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.
- 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.

## **Be Prepared**

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 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

## **Stay Healthy**

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

- Wash hands frequently 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 hand cleaner.
- Stay at home if you are sick. .
- 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.

## **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) Hotline at: 1-800-CDC-INFO (1-800-232-4636). This line is available in English and Spanish, 24 hours a day, 7 days a week. TTY: 1-888-232-6348. Questions can be e-mailed to [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov).

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.

## **Business Preparedness**

Each winter, the flu kills approximately 36,000-40,000 Americans, hospitalizes more than 200,000, and costs the U.S. economy over \$10 billion in lost productivity and direct medical expenses. As staggering as these figures are, health experts are now warning about a far more lethal kind of flu - a pandemic flu that could kill over a half of a million

people in the U.S., hospitalize 2 million more, and cost our economy an estimated \$70-\$160 billion.

Most experts agree that there is a growing and significant threat of a global pandemic, but that there is no way to predict either exactly when it might occur or the severity of the impact.

In the event of pandemic influenza, businesses will play a key role in protecting employees' health and safety as well as limiting the negative impact to the economy and society. In addition to the threat that a pandemic could pose to human health world-wide, few industries will be insulated from the economic effects resulting from absenteeism in the workplace or from the downstream effects stemming from supply-chain and travel disruption.

Planning for pandemic influenza is critical. Companies that provide critical infrastructure services, such as power and telecommunications, also have a special responsibility to plan for continued operation in a crisis and should plan accordingly.

As with any catastrophe, having a contingency plan is essential. The U.S. Chamber of Commerce is encouraging preparedness for an influenza pandemic within the business community. It is important for business owners and leaders to be knowledgeable about the risks associated with the threat of an influenza pandemic and, in turn, to be adequately prepared for the possibility of a pandemic that would have significant social and economic costs.

The Chamber and the Trust For America's Health (TFAH) have developed a brochure that will help guide businesses through the pandemic planning process.

**"It's Not Flu as Usual" Brochure**

[www.uschamber.com/NR/rdonlyres/eb2q3qxydlavvcyxqwhc5x1s2ldeas2lzdibjnpjvsf5ap\\_halsr2nd5o2c4wqzhnzw4k6auon2nmtpcyfqs3nlvkvye/bizflubrochure.pdf](http://www.uschamber.com/NR/rdonlyres/eb2q3qxydlavvcyxqwhc5x1s2ldeas2lzdibjnpjvsf5ap_halsr2nd5o2c4wqzhnzw4k6auon2nmtpcyfqs3nlvkvye/bizflubrochure.pdf)

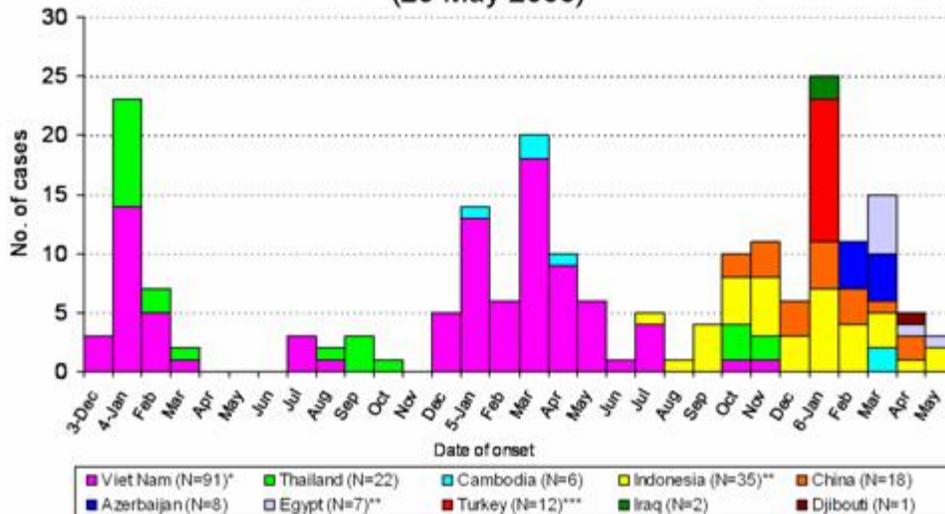
A Business Pandemic Influenza Planning Checklist is available at [www.pandemicflu.gov/plan/businesschecklist.html](http://www.pandemicflu.gov/plan/businesschecklist.html).

**MAP of affected areas with confirmed human cases of H5N1 avian influenza since 2003**

[http://gamapserver.who.int/mapLibrary/Files/Maps/Global\\_H5N1inHumanCUMULATIVE\\_20060524.png](http://gamapserver.who.int/mapLibrary/Files/Maps/Global_H5N1inHumanCUMULATIVE_20060524.png)

## Human Avian Influenza A/H5N1 Cases by Onset Date and Country

(23 May 2006)



As of 23 May 2006, total of 218 cases were reported officially to WHO.

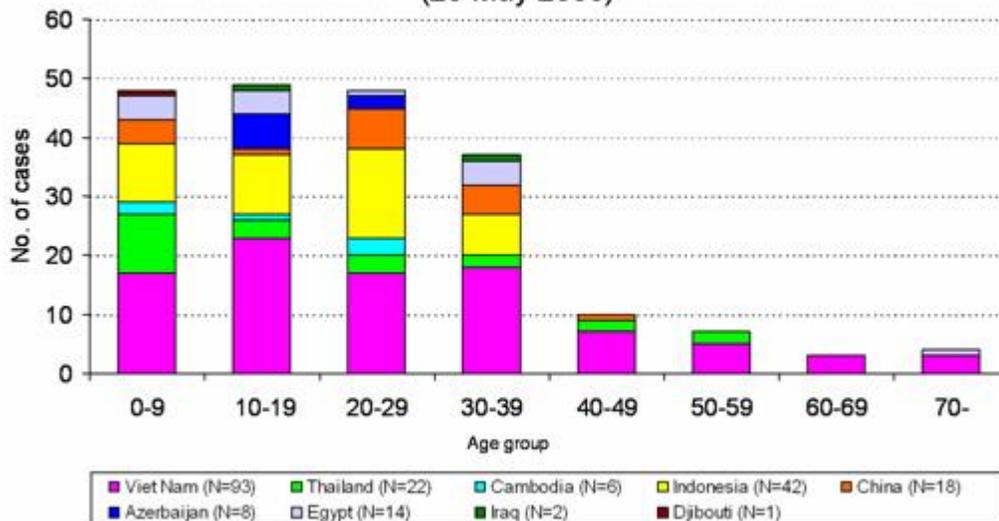
\* The 2 asymptomatic cases in Viet Nam were excluded.

\*\* The 7 cases in Egypt and 7 cases in Indonesia without reported date of onset were excluded.

\*\*\* Date of onset for Turkey are based on reporting date.

## Human Avian Influenza A/H5N1 Cases by Age Group and Country

(23 May 2006)

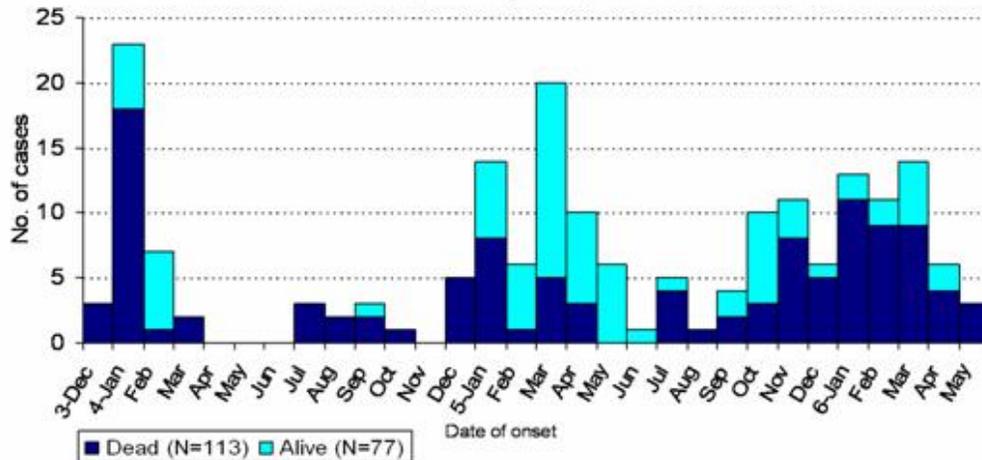


• As of 23 May 2006, total of 218 cases were reported officially to WHO.

• 12 cases in Turkey were excluded.

## Human Avian Influenza A/H5N1 Cases by Onset Date and Outcome

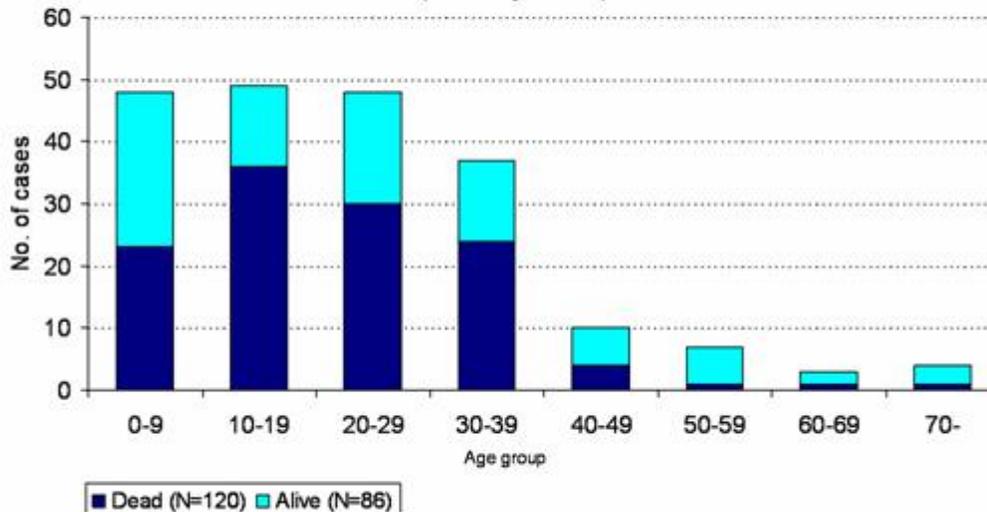
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