



**Influenza (pandemic) Vaccination Program
Question and Answers**

Prepared by

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Influenza (pandemic) Vaccination Program Questions and Answers

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Adapted from the Immunization Action Coalition (with permission) and the Centers for Disease Control and Prevention (CDC).

Influenza Pandemics

Pandemic Definitions

1) What is a pandemic?

A pandemic is an epidemic that occurs over a wide geographic area and affects an unusually large number of people.

The Centers for Disease Control & Prevention (CDC), the World Health Organization (WHO) and Department of Defense (DoD) have surveillance programs to monitor and detect influenza activity around the world. The organizations are specifically looking for the emergence of possible pandemic strains of influenza virus in human and animal populations.

2) Has an avian influenza pandemic happened yet?

No, no widespread outbreak of avian influenza has started spreading among people yet. Over a hundred human infections have occurred, but these have not readily spread to other people.

3) What would happen if an influenza pandemic occurred?

Pandemic influenza would result from an extremely contagious influenza virus that spreads quickly. Usually, influenza infections are most lethal among elderly people. But in the influenza pandemic of 1918, influenza caused serious illness and death even among healthy young adults, including military personnel.

Pandemic viruses emerge when there is a major change in the proteins on the surface of the virus, resulting in a new subtype of the influenza A virus. These new influenza subtypes often come from animals, such as birds or pigs. Pandemics may occur outside fall and winter, the traditional flu season. While people may have some immunity to seasonal outbreaks of influenza, they may not have immunity to pandemic influenza, because it comes from a new kind of influenza virus.

History

1) What is the history of influenza pandemics in the United States?

During the 20th century, new influenza A virus subtypes caused three pandemics, all of which spread around the world within a year of being detected.

- 1918-19, the "Spanish flu," [type A, subtype H1N1], caused the highest number of influenza deaths ever recorded. More than 500,000 people died in the United States, and 50 to 100 million people may have died worldwide. Influenza killed almost as many soldiers in 1918 as enemy weapons did. Many people died within the first few days after infection, and others died of complications. Nearly half of those who died were young, healthy adults. Influenza A (H1N1) viruses still circulate today.
- 1957-58, "Asian flu," [type A, subtype H2N2], caused about 70,000 deaths in the United States. First identified in China in late February 1957, the Asian flu spread to the United States by June 1957.
- 1968-69, "Hong Kong flu," [type A, subtype H3N2], caused about 34,000 deaths in the United States. This virus was first detected in Hong Kong in early 1968 and spread to the United States later that year. Influenza A (H3N2) viruses still circulate today.

Both the 1957-58 and 1968-69 pandemics were caused by viruses containing a combination of genes from a human influenza virus and an avian influenza virus. The 1918-19 pandemic virus appears to have had an avian origin also.

2) Can a pandemic be prevented?

No one knows for sure. Influenza viruses mutate all the time, in ways that are hard to predict.

The first priority is to reduce opportunities for human exposure to the largest reservoir of the virus: infected poultry. This is achieved through the rapid detection of poultry outbreaks and the emergency introduction of control measures (such as destroying infected or exposed poultry).

The risk of influenza viruses spreading to humans increases when outbreaks of highly pathogenic (harmful) avian H5N1 influenza are widespread in poultry. As the number of human infections grows, the risk increases that a new virus subtype could emerge, triggering an influenza pandemic. This link between widespread infection in poultry and increased risk of human infection is occurring now in southeast Asia. All human cases and deaths detected so far are in countries with very widespread outbreaks in poultry.

Threat

1) How would a pandemic flu pose a threat to military operations?

Infected people who show symptoms become militarily ineffective during their infection. People who have no or little immunity to a particular strain of influenza are susceptible and can contract the infection. Infected people may be able to spread the virus before they actually show symptoms of illness. The disease can spread rapidly and infect large numbers of people, including military personnel.

2) As a servicemember, will I be involved in dealing with the avian flu, either domestically or abroad?

We don't know yet. At this time it is unknown what an individual service member's involvement in dealing with the avian flu would be. Depending on our requirements to protect and support the nation against aggressors, service members may be required to assist in either domestic or international efforts to control the disease. If an avian influenza pandemic occurred, service members will be given instructions regarding personal measures they can take to limit the spread of the disease.

3) Are servicemembers overseas at risk of catching avian flu?

Basically, no. Most cases of avian flu in humans have resulted from contact with infected poultry or contaminated surfaces. Service members in areas with identified cases of avian flu are encouraged to take appropriate precautions when dealing with poultry, agricultural areas, and situations that may include contaminated materials.

Servicemembers and their families are advised to avoid contact with birds and live poultry, and avoid going to bird parks, poultry markets and farms. Avoid touching birds and poultry, especially their droppings, which may carry the avian flu virus. If servicemembers or family members have been in contact with birds or poultry, they should immediately wash their hands thoroughly with liquid soap and water. Individuals should observe food hygiene when handling, cooking and eating poultry in these affected areas and eat only poultry and eggs from approved sources that have been thoroughly cooked.

4) How should US citizens traveling in high-risk countries protect themselves from avian flu?

The U.S. Centers for Disease Control and Prevention (CDC) currently advises that travelers to

countries in Asia with known outbreaks of avian influenza avoid poultry farms, contact with animals in live food markets, and any surfaces that appear to be contaminated with feces from poultry or other animals. The CDC advises travelers to clean their hands often with soap and water or waterless alcohol-based hand-rubs to help prevent disease transmission. In addition, as a precaution, all foods from poultry, including eggs, should be thoroughly cooked. The CDC further advises any travelers with a fever and a respiratory illness returning from countries with avian flu outbreaks to seek prompt medical attention.

DoD Pandemic Influenza Planning Efforts

1) What is the primary goal of the DoD Pandemic Influenza Plan?

DoD plans mirror guidelines published by the Department of Health and Human Services (DHHS) and WHO. Current response strategies are limited by the availability of rapid diagnostic capabilities, limited supplies of antiviral medications, and no licensed vaccine. Initial DoD efforts must focus on limiting influenza spread, targeted antiviral therapy, and hygienic measures.

2) What stage of Pandemic Influenza Planning are we in now?

By the World Health Organization (WHO) classification system, the current pandemic phase is “pandemic alert period, phase 3.” WHO defines this phase as: human infections with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact. For more information on the WHO pandemic influenza classification system, go to www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html.

3) How is the seasonal kind of influenza we see each winter different than an influenza pandemic?

Key Differences Between Annual Flu And Pandemic Flu

Annual Flu	Pandemic Flu
Occurs every year during the winter months.	Can occur in any season and historically occurs three to four times a century.
Affects 5-20 percent of the U.S. population.	Depending on the severity of the virus, experts predict an infection rate of 25-50 percent of the population.
Annually kills between 500,000 and 1 million people world wide including 36,000-40,000 in the U.S.	The “Spanish Flu” of 1918 killed 500,000 in the U.S. and 50 million worldwide.
Most people recover within a week or two.	Usually associated with a higher severity of illness and a higher risk of death.
Deaths generally confined to “at risk” groups: <ul style="list-style-type: none"> the elderly (over 65 years of age) the young (children aged 6-23 months) people with existing medical conditions like lung diseases, diabetes, cancer, kidney, or 	All age groups may be at risk for infection, not just “at risk” groups. Otherwise fit adults could be at relatively greater risk, based on patterns of previous epidemics. For example, adults under age 35 (a key segment of the U.S. workforce) were disproportionately affected during the 1918 pandemic.

- heart problems
- people with compromised immune systems.

Avian (Bird) Influenza Viruses

History and Threat

1) Where in the world is avian influenza?

There have been outbreaks of avian H5N1 influenza in poultry reported in many parts of the world, including Asia, eastern parts of Europe, and elsewhere. WHO is working to support national health authorities in their investigations in countries with the current outbreak.

Avian influenza in birds was first identified in 1901. The first documented infection of humans with an avian H5N1 influenza virus occurred in Hong Kong in 1997.

2) Where have avian H5N1 influenza infections in humans been detected?

Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO

Date of onset	Indonesia		Viet Nam		Thailand		Cambodia		TOTAL	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
26.12.03-10.03.04	0	0	23	16	12	8	0	0	35	24
19.07.04-08.10.04	0	0	4	4	5	4	0	0	9	8
16.12.04- to date	9	5	64	21	3	1	4	4	80	31
Total	9	5	91	41	20	13	4	4	124	63

Notes

Total number of cases includes number of deaths. WHO reports only laboratory-confirmed cases.

http://www.who.int/csr/disease/avian_influenza/country/cases_table_2005_11_07/en/print.html

3) Are all of the currently reported outbreaks in birds equally dangerous for humans?

Avian influenza outbreaks caused by the H5N1 subtype are presently of the greatest concern for human health.

In assessing risks to human health, it is important to know exactly which avian virus subtypes are causing the outbreaks in birds. For example, the outbreak of avian influenza reported in Taiwan was caused by the H5N2 subtype, which is not highly pathogenic (not very harmful) in birds and has never been known to cause illness in humans. The outbreak announced in Pakistan was caused by H7 and H9 subtypes, and not by H5N1.

However, urgent control of all outbreaks of avian influenza in birds – even when caused by a subtype of low pathogenicity – is very important. Certain avian influenza virus subtypes, initially of low pathogenicity, can rapidly mutate (within 6 to 9 months) into a highly pathogenic subtype, if allowed to circulate in poultry populations.

4) Apart from H5N1, have other avian influenza viruses ever infected humans?

Two other avian subtypes have caused illness in humans, but the outbreaks were not as severe as those caused by the H5N1 subtype.

The H9N2 subtype, which is not highly pathogenic in birds, caused mild cases of illness in two children in Hong Kong in 1999 and in one child in mid-December 2003, also in Hong Kong.

An outbreak of highly pathogenic H7N7 avian influenza in birds, which began in the Netherlands in February 2003, caused the death of one veterinarian (from acute respiratory distress syndrome), and mild illness in 83 poultry workers and members of their families.

5) Why are we worried about the outbreak of bird flu, which could mutate into a human virus?

Most people in the world would not have immunity to this new virus and the result would be a pandemic that could cause significant numbers of death world wide.

Avian Influenza Infection

Characteristics

1) What is avian influenza (“bird flu”)?

Avian influenza is an infectious disease of birds caused by influenza type A viruses. All kinds of birds appear to be susceptible, although some species are more resistant to infection than others. It is also called “bird flu.”

2) Can avian influenza infect people?

Yes, over 120 human cases of this disease have occurred overseas, mainly in southeast Asia. These people had close contact with sick birds before they were infected themselves. In some Asian countries, raw or under-cooked poultry blood is an ingredient for traditional meals. Avoid consuming any dish that contains raw or under-cooked poultry blood, such as raw duck blood pudding.

3) What is influenza A H5N1?

This is the particular subtype of influenza virus that is causing the current epidemic of bird flu overseas. The letters and numbers (H5N1) refer to different proteins on the surface of the virus, allowing scientists to distinguish between subtypes of influenza.

4) How is avian influenza spread to humans?

People need to have close contact with infected birds, poultry manure, or poultry blood to get infected with avian influenza. The virus is found in bird feces and respiratory secretions. There is no evidence of sustained person-to-person transmission of the virus at this time.

5) If I was exposed to avian influenza in birds, how long would it take for me to become sick?

The incubation period for avian influenza in humans is not known precisely, because there have been relatively few cases. But is probably between 3 and 7 days.

6) Does human infection with H5N1 happen often?

No, it happens rarely. The first documented human infections with the H5N1 avian subtype occurred in Hong Kong in 1997. In that first outbreak, 18 persons were hospitalized and 6 of them died. The source of infection in all cases was traced to contact with diseased birds in live poultry markets (17 cases) or on farms (1 case).

The human cases coincided with outbreaks of highly pathogenic H5N1 avian influenza in poultry. Very

limited human-to-human transmission of the H5N1 subtype was documented in health care workers, family members, poultry workers, and workers involved in destroying the birds. Though H5 antibodies were detected in these groups, indicating infection with the virus, no cases of severe disease occurred. Antibodies were detected in 10% of the poultry workers studied, and in 3% of the workers who destroyed the birds.

In February 2003, the H5N1 subtype again jumped from birds to infect two members of a family (a father and his son) when they returned to Hong Kong following travel in southern China. The father died but the son recovered. A third member of the family, the boy's sister, died of a severe respiratory illness in China. No samples were available for determining the cause of her death. This 2003 outbreak spread wider than the 1997 event but the cases seem to have a close connection to poultry and there is no evidence of sustained human to human transmission.

7) Is there evidence of efficient human-to-human transmission now?

No. However, in Thailand in September 2004, the Ministry of Health announced possible human-to-human transmission within a family cluster. Thai officials concluded that the mother could have acquired the infection either from some environmental source or while caring for her daughter, and that this represents a probable case of human-to-human transmission. While the investigation of this family cluster provides evidence that human-to-human transmission may have occurred, evidence to date indicates that transmission of the virus among humans has been limited to family members and that no wider transmission in the community has occurred. Continued vigilance is needed to determine whether the epidemiological situation in humans remains stable.

Symptoms

1) What are the symptoms of avian influenza in people?

The symptoms are similar to that of other forms of influenza, including fever, sore throat, cough, headache and muscle aches and pains.

2) What should I do if I have any of these symptoms?

Many people get respiratory infections every day and the probability that someone's symptoms are from avian influenza is extremely low. If you have just returned from Asia and you are experiencing any of the symptoms outlined above, you should seek medical advice and describe your recent travel and activities, including any visits to farms or markets in Asia. Remember your symptoms are highly unlikely to be caused by avian influenza.

Treatment

1) Is there treatment for avian influenza?

An antiviral drug called oseltamivir (Tamiflu®, Roche) kills influenza A (H5N1) virus in laboratory tests. Tests in mice show that Tamiflu® reduces the risk of infection by 60% to 80%. However, if Tamiflu is overused, viruses can develop resistance, meaning the viruses develop an ability to evade the drug's killing action. DoD ordered 24 million capsules of Tamiflu in September 2005 as a strategic reserve to protect U.S. Forces, as well as military beneficiaries living outside the continental United States. This supply is sufficient to treat 17,000 people sick with avian influenza, to prevent infection for 350,000 other people, and to provide a contingency stockpile. This supply is sufficient to treat several hundred thousand people sick with avian influenza, to prevent infection for other people, and to provide a contingency stockpile.

2) What side effects are expected when someone takes Tamiflu?

Most problems noted during tests of Tamiflu were indistinguishable from the symptoms of influenza.

More common side effects may include: Abdominal pain, diarrhea, headache, nausea, vomiting.

Less common side effects may include: Bronchitis, insomnia, vertigo.

3) What is the advantage of taking Tamiflu?

Tamiflu speeds recovery from seasonal influenza. When started during the first 2 days of the illness, it hastens improvement by about a day and a half. It also can prevent seasonal influenza if treatment is started within 2 days after exposure to someone infected with influenza. Tamiflu is one of a relatively new class of antiviral drugs called neuraminidase inhibitors.

As influenza virus takes hold in the body, it forms new copies of itself and spreads from cell to cell. Neuraminidase inhibitors fight the virus by preventing the release of new copies from infected cells. Tamiflu is taken in liquid or capsule form. Another drug in this class, called zanamivir or Relenza, is taken by inhalation.

4) How should one take Tamiflu?

To provide benefit, Tamiflu must be started within two days of the onset of symptoms, or exposure to seasonal influenza. If you have the flu, continue taking it twice daily for 5 days, even if you start to feel better sooner. To prevent the flu, take it once a day for at least 7 to 10 days. Protection lasts as long as you take the drug.

If Tamiflu upsets your stomach, try taking it with food. With the liquid suspension, shake the bottle before each use. If you miss a dose, take it as soon as possible. If it is within two hours of your next dose, skip the missed dose and go back to your regular schedule.

5) Who should not take Tamiflu?

If Tamiflu gives you an allergic reaction, avoid it in the future.

6) Are there any special warnings for taking this medication?

If you have kidney disease, the doctor may have to cut your daily dose of Tamiflu in half.

The effectiveness of Tamiflu has not been studied in people with weakened immune systems. The drug has not been studied in people with liver disease.

Tamiflu works only on viruses. It won't stop bacterial infections that may have flu-like symptoms or bacterial infections that may develop while you have the flu. If your symptoms persist, check with your doctor. For more information, see www.tamiflu.com

Food Safety

1) If the avian influenza virus is in poultry, how can the virus be killed?

Heating over 70 degrees Celsius for 30 minutes will kill the virus. At 80 degrees C, the virus is killed in 1 minute. Good hygiene by hand washing and cleaning of surfaces will remove the virus.

2) Is it safe to eat cooked chicken meat?

Chicken meat should be cooked properly. If the virus was present in chicken meat it would be killed during the cooking process. All uncooked chicken meat, including frozen meat should always be handled hygienically. Wash hands and surfaces after contact with raw meat and separate raw meat from other raw foods.

In some countries, traditional meals contain raw poultry blood. Avoid consuming any dish that includes raw or under-cooked poultry blood, such as raw duck blood pudding.

3) Is it safe to eat eggs?

Egg shells may be contaminated with bird feces. Wash eggs before consumption. It is important to apply careful hygiene when handling an egg such as: washing the outside of eggs or washing hands after handling an egg. Eggs should not be separated into yolk and white by bare hands. Proper cooking of eggs is recommended. Particular care needs to be taken with foods that contain eggs that are not cooked, such as mayonnaise and mousse.

4) Is it safe to eat poultry? Does freezing/cooking destroy the bird flu virus? Is it safe to serve turkey for Thanksgiving dinner?

Eating properly handled and cooked poultry is safe. The U.S. government has banned imported poultry from countries affected by "bird flu," including H5N1 viruses.

Vaccine

1) Is there a vaccine to prevent H5N1 infection in humans?

Not yet, but one is being tested. The standard seasonal influenza vaccines will not protect against disease caused by the H5N1 subtype. The US Government is working with several vaccine manufacturers to develop H5N1 vaccines for humans.

The H5N1 vaccine furthest along in development is based on a type A, subtype H5N1 virus isolated in Vietnam in 2004. This vaccine is nicknamed "1203." Several million doses of this vaccine should be ready by spring 2006.

2) Are presently available vaccines useful in averting an influenza pandemic?

Yes, but in a precisely targeted way. Current vaccines, when administered to high-risk groups, such as workers destroying infected poultry, protect against circulating human subtypes and thus reduce the risk that humans at high risk of exposure to the bird virus might become infected with human and avian viruses at the same time. Such dual infections give the avian and human viruses an opportunity to exchange genes, possibly resulting in a new influenza virus subtype with pandemic potential.

Annual vaccines are produced for routine use in protecting humans during seasonal epidemics of H1N1 and H3N2 influenza. They offer no specific protection against infection with the H5N1 avian virus.

3) How long would it take to develop a vaccine for the a new subtype of virus?

Experts predict it would take up to six months to develop and produce a vaccine after the emergence of a new pandemic strain of influenza virus. Initially, vaccine production would allow protection of a few, then progressively more people.

Good Hygiene Measures

1) What is the best way to protect myself and my family from getting the avian influenza or pandemic influenza?

In the early stages of a pandemic, not enough vaccine will be available to protect everyone. So, it will be important to focus on personal hygiene (e.g., hand washing, covering coughs) to limit disease transmission. People can also limit the amount of interaction they have with strangers. The most effective initial steps are self-imposed travel restrictions and antiviral therapy for those who are infected. For infection-control recommendations for health-care facilities see:

Restriction of Movement

Quarantine

1) What is the difference between quarantine and isolation?

People who are healthy, without symptoms, but who might be infected can be quarantined, to protect people they might come in contact with. Quarantine comes from the Latin word for 40 days, which was how long people were watched, to see if they were infected with the plague in Medieval times.

Infected people, who are obviously contagious, are isolated. This procedure is also designed to protect people they might come in contact with.

Quarantine would often occur at home. Isolation is often accomplished in a hospital.

2) What is the legal basis of quarantine?

During a pandemic, it may be necessary to deviate from the normal rules of social interaction. Examples are quarantine (overruling individual freedom of movement), conversion of privately owned buildings for hospitals or care centers, permitting off-license use of medications, vaccination required to avoid quarantine, or implementation of emergency shifts in essential services. These decisions need a legal framework to ensure individual rights are intruded upon as little as possible.

For information on military regulations on quarantine and emergency health powers, please see:

Army Regulation 40–12/ SECNAVINST 6210.2A/ AFR 161-4, QUARANTINE REGULATIONS OF THE ARMED FORCES

www.vaccines.mil/documents/834r40_12.pdf

Department of Defense Directive Number 6200.3, May 12, 2003 Subject: Emergency Health Powers on Military Installations

www.dtic.mil/whs/directives/corres/pdf/d62003_051203/d62003p.pdf

Pandemic Influenza Timeline

Timeline

1) What is the history of pandemic influenza?

1580—First recorded influenza pandemic began in Europe and spread to Asia and Africa.

1700s—Influenza pandemics in 1729-30, 1732-33, 1781-82.

1800s—Influenza pandemics in 1830-31, 1833-34, and 1889-90. The last of the three—called the Russian flu—spread through Europe and reached North America in 1890.

1918-19—The "Spanish flu" circles the globe. Caused by an H1N1 flu virus, it is the worst influenza epidemic to date. There are more than half a million U.S. deaths; worldwide death estimates range from 50 million to 100 million. It was a very frightening disease, with unusually high death rates among young, previously healthy adults. The pandemic comes before the era of antibiotics—which are now

essential in treating the secondary bacterial infections that often kill flu-weakened patients—so it's difficult to say whether this flu would have the same dreadful impact in the modern world.

1924—The first outbreak of highly pathogenic avian influenza—bird flu—in the U.S. It does not spread among humans.

1957-58—The "Asian flu" causes the second pandemic of the 20th century. Caused by an H2N2 virus, it begins in China and kills 1 million people worldwide, including 70,000 Americans.

1968-69—The "Hong Kong" flu causes the latest pandemic. It was caused by an H3N2 virus and killed some 34,000 Americans. The relatively low death toll is thought to have been due to two factors. First, the virus contained the N2 protein humans had been exposed to before. Second, an H3 virus circulated around the turn of the century, giving some immune protection to elderly people who'd caught the flu back then.

Mid-1970s—Researchers realize that enormous pools of influenza virus continuously circulate in wild birds.

1976—Swine flu hospitalizes 230 Soldiers at Fort Dix, NJ. Thirteen were severely ill and one died. It's an H1N1 virus, and health officials worry that they are seeing the return of the 1918 H1N1 Spanish flu pandemic. As the virus is circulating among U.S. pigs, President Gerald Ford calls for an emergency immunization program. Despite delays, a quarter of the U.S. population is inoculated. There were 25 deaths from a rare paralytic complication of the vaccination (Guillain-Barre syndrome). Nobody else died of swine flu, which did not cause an epidemic.

1983—The second highly pathogenic avian influenza (HPAI) outbreak in the U.S. Caused by an H5N2 virus, it does not spread among humans. This severe poultry epidemic struck chickens, turkeys, and guinea fowl in Pennsylvania and Virginia. It was brought under control after the destruction of 17 million birds.**1996**—Highly pathogenic H5N1 bird flu isolated from a farmed goose in Guangdong, China.

May 1997—The first person known to catch H5N1 bird flu dies in Hong Kong. The virus has been causing an epidemic among poultry in the city.

Nov-Dec 1997—18 new human cases of H5N1 bird flu in Hong Kong, 12 with direct contact with infected poultry. Six people die. Officials destroy 1.4 million chickens and ducks.

April 2003—The Netherlands reports H7N7 bird flu in over 80 human cases with the death of one veterinarian.

Mid-2003—H5N1 bird flu spreads in Asia, but it is either undetected or unreported.

December 2003—Tigers and leopards in a Thailand zoo die of H5N1 bird flu after eating fresh chickens. It's the first time bird flu has been seen in large felines.

Jan 2004—Humans in Vietnam come down with H5N1 bird flu caught from poultry. There is a high death rate among infected people, but the disease does not spread from person to person. Then Thailand reports human H5N1 bird flu infections.

Feb 2004—The latest HPAI outbreak among U.S. poultry. A flock of chickens in Texas comes down with an H5N2 virus. A quick response by state and federal officials keeps the virus from spreading beyond this one small flock. There are no human cases.

Feb 2004—Vietnam investigates a family cluster of H5N1 cases. Person-to-person spread cannot be

ruled out, but the virus is not spreading among humans. Then Thailand reports H5N1 infection of domestic cats in a single household.

Oct 2004—H5N1 infection spreads among tigers in a Thai zoo.

Feb 2005—Cambodia reports its first human case of H5N1 bird flu. It is fatal. Apr 2005—China reports that wild birds are dying at a lake in central China. The lake is a major stop along migratory pathways. Within weeks, more than 6,300 wild birds are dead.

Jul 2005—Indonesia reports its first human case of H5N1 bird flu.

Oct 2005— H5N1 is reported in poultry in Turkey and Romania and in wild birds in Croatia.

Resources

Resources

1) Resources

Department of Health and Human Services: Pandemic Influenza Plan; 1 November 2005;
www.hhs.gov/pandemicflu/plan/

Department of Defense Guidance for Preparation and Response to an Influenza Pandemic caused by Bird Flu (Avian Influenza); 21 September 2004; www.vaccines.mil/documents/732DODGuidance-Flu.pdf

Information Paper; DoD Pandemic Influenza Planning Efforts; 28 September 2005;
www.vaccines.mil/documents/816InfoPaperFlu.pdf

Military Vaccine Agency, Influenza (Pandemic) www.vaccines.mil/default.aspx?cnt=disease/minidv&dID=57

World Health Organization; WHO checklist for influenza pandemic preparedness planning
www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/

DeploymentLINK: Avian and Pandemic Influenza;
http://www.deploymentlink.osd.mil/medical/medical_issues/immun/avian_flu.shtml

PandemicFlu.Gov. The official U.S. government Web site for information on pandemic flu and avian influenza.
<http://www.pandemicflu.gov>