



PANDEMIC INFLUENZA U • P • D • A • T • E



Public Health Prepares

December 21, 2005

Fast Facts

The first line of defense against a novel influenza virus that could cause a pandemic is a worldwide surveillance system coordinated by the World Health Organization (WHO).

This system makes it possible for the emergence of novel influenza A viruses to be detected as soon as possible. Novel influenza A viruses can be responsible for deadly influenza pandemics.

The task of identifying circulating strains of influenza--whether known or novel--is done by a worldwide network of 110 National Influenza Centers and many other WHO laboratories in 83 countries. From CDC in Atlanta, and from London, Melbourne, and Tokyo, the 4 *WHO Collaborating Reference Centers for Influenza* coordinate this surveillance system (See Page 4).

If You Are Asked . . .

How bad will the next influenza pandemic be?

There's no simple answer to that question. It all depends on how seriously ill the pandemic virus makes people, how rapidly the virus can spread from community to community, and the effectiveness of our pandemic prevention and response. The 1918 pandemic is an example of a worst-case scenario because the strain was highly contagious and quite deadly. This pandemic killed more Americans than all the wars of the 20th century. Since our world today is vastly more populated, and people now can travel the globe with ease, the spread of a next pandemic could be more rapid than in previous pandemics. However, remember there is currently no influenza virus circulating in the world that qualifies as a pandemic virus.

While it's upsetting enough to think about how many people could die, the impact of a pandemic must be considered in other ways too. After all, if millions of people became sick at the same time, major social consequences will occur. For example, if many doctors and nurses become ill, it will be difficult to care for the sick. We need to start thinking now about these possibilities and plan strategies to help reduce the social disruptions from pandemic influenza. There is a role for individuals, communities, and nations in this preparedness effort.

To learn more about pandemic influenza preparedness, link to www.pandemicflu.gov.

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In the event of a pandemic, good surveillance, timely vaccine development and production, and the ability to administer vaccine to large numbers of people in a short amount of time will be very important. CDC will take the lead in working with the Advisory Committee on Immunization Practices and the National Vaccine Advisory Committee to prioritize recommended target groups for use of antiviral medications and vaccines during a pandemic when supplies are limited.

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The vaccination program during a pandemic will probably be different from current annual flu shot programs in several respects

- More people will want and need to be vaccinated, so we will need a larger supply of vaccine.
- The warning period before a pandemic is likely to be short. Because the current vaccine manufacturing process takes a minimum of 6 months, it is likely that there will not be enough vaccine at the beginning of a pandemic to vaccinate everyone who wants it.
- It may be necessary for an individual to receive two doses of vaccine to be fully protected against the virus.

Time will be of the essence in making sure we can produce, test, and administer vaccine as quickly as possible. It will take several months for the first dose of pandemic vaccine to be ready and longer to manufacture enough to vaccinate the entire U.S. population.

Therefore, vaccine will be in short supply at the start of the pandemic. Under the most favorable conditions, by the time the first dose of vaccine would be given to the first person, many others will have already become ill or died. For this reason, surveillance to monitor ongoing changes in the H5N1 strain of avian influenza currently causing human infections and to monitor for other viruses with pandemic potential is needed to develop prototype vaccine candidates as quickly as possible. Further, because such a pandemic strain can arise anywhere, at any time, expanded global surveillance capacity is needed.

The Department of Health and Human Services' National Vaccine Program Office (NVPO) has responsibility for coordinating and ensuring collaboration among the many federal agencies involved in vaccine and immunization activities. NVPO is supporting an initiative to provide \$100 million for activities designed to ensure year round influenza vaccine capacity and to encourage incentives for the accelerated development, licensing and domestic production of cell-culture influenza. A contract for egg surge capacity worth about \$10 million has already been awarded.

For more information see RFP 2004-N-01101A Egg-Based Pandemic Influenza Vaccine Solicitations at the following site: www1.epls.gov/spg/HHS/CDC/PGOA/2004-N-01101A/listing.html

In upcoming newsletters, specific activities in these areas will be highlighted. For more information now please link to: www.pandemicflu.gov.

Update on H5N1: Global Activity Humans and Birds

Humans: During recent outbreaks since 2004 there have been 139 confirmed cases in humans and 71 deaths. They occurred in the following nations: Vietnam 93 cases and 42 deaths; Thailand 22 cases and 14 deaths; Indonesia 14 cases and 9 deaths; China 6 cases and 2 deaths; and Cambodia 4 cases and 4 deaths.

Birds: From January 2004 through October 14, 2005, active outbreaks among birds have been confirmed in Vietnam, Thailand, Indonesia, China, Cambodia, Russia, Kazakhstan, Mongolia, Turkey, Croatia and Romania. South Korea and Japan have had no active outbreaks since March 2004.

For the most recent reports, please go to the following link: www.who.int/csr/outbreaknetwork/en/.

CDC Recommends . . .

Travel Recommendations & H5N1

CDC has *not* recommended that the general public avoid travel to any of the countries affected by H5N1. Persons visiting areas with reports of outbreaks of H5N1 among poultry or human H5N1 cases can reduce their risk of infection by observing the following measures:

Before any international travel to an area affected by H5N1 avian influenza

- Visit CDC's Travelers' Health website at www.cdc.gov/travel to educate yourself and others who may be traveling with you about any disease risks and CDC health recommendations for international travel in areas you plan to visit.

During travel to an affected area

- Avoid all direct contact with poultry, including touching well-appearing, sick, or dead chickens and ducks. Avoid places such as poultry farms and bird markets where live poultry are raised or kept, and avoid handling surfaces contaminated with poultry feces or secretions.

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- As with other infectious illnesses, one of the most important preventive practices is careful and frequent hand washing. Cleaning your hands often with soap and water removes potentially infectious material from your skin and helps prevent disease transmission. Waterless alcohol-based hand gels may be used when soap is not available and hands are not visibly soiled.
- Influenza viruses are destroyed by heat; therefore, as a precaution, all foods from poultry, including eggs and poultry blood, should be thoroughly cooked.
- If you become sick with symptoms such as a fever accompanied by a cough, sore throat, or difficulty breathing or if you develop any illness that requires prompt medical attention, a U.S. consular officer can assist you in locating medical services and informing your family or friends.

After your return

- Monitor your health for 10 days.
- If you become ill with a fever plus a cough, sore throat, or trouble breathing during this 10-day period, consult a health-care provider. *Before you visit a health-care setting, tell the provider the following: (1) your symptoms, (2) where you traveled, and (3) if you have had direct contact with poultry or close contact with a severely ill person. This way, he or she can be aware that you have traveled to an area reporting avian influenza.*

For more information, visit: www.cdc.gov/travel/ .

Pass This On . . .

HHS Convenes Pandemic Meeting

At the direction of President Bush, Secretary Mike Leavitt, U.S. Department of Health & Human Services (HHS), convened senior state and local officials from across the country to establish an integrated federal-state influenza-pandemic planning process. The White House Homeland Security Council, the U.S. Department of Homeland Security, and the U.S. Department of Agriculture also participated in the meeting. The Convening of States was held December 5, 2005, in Washington, D.C. Secretary Leavitt asked participants to begin preparing for a series of in-state pandemic-

planning summits to be held in each state over the next several months. The in-state summits will inform and involve public health, emergency response, education, political, economic and community leadership in the planning process. HHS also issued a State and Local Pandemic Planning Checklist which summarizes key planning activities to be undertaken by state and local public health and emergency planning officials.

HHS advised states to establish a Pandemic Influenza Coordinating Committee to draft and adopt a plan that will:

- Delineate the roles and responsibilities of state and local agencies and offices;
- Build on existing preparedness and response plans for bioterrorism events, SARS and other infectious disease emergencies;
- Address legal issues including those that affect hospital staffing, patient care and quarantine; and
- Be periodically reviewed and updated.

During the meeting, CDC Director Julie L. Gerberding, M.D., M.P.H., reminded state and local officials about the challenges that confront them. She noted that a public health response to a disease of this magnitude involves numerous challenges.

- A pandemic can occur any time during the year and can last much longer than seasonal influenza.
- In more advanced pandemic phases, the capacity to prevent or control transmission of the virus can become extremely difficult.
- Although the primary concern at present is the H5N1 avian influenza strain in Asia, an outbreak leading to a pandemic can occur anywhere in the world and may derive from viral strains of influenza other than H5N1.
- Comparing the onset and spread of the next pandemic to those of the 20th century is problematic for many reasons, including changes in population and social structures, medical and technological advances, and the increase in international travel.

For more information visit: www.pandemicflu.gov.

Where to Find Out More . . .

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Nonpharmaceutical Interventions for Pandemic Influenza, International Measures (WHO)

Since global availability of vaccine and antivirals against influenza caused by novel human subtypes is insufficient, WHO recommends nonpharmaceutical public health interventions to contain infection, delay spread, and reduce the impact of pandemic disease. For more information, visit:

www.cdc.gov/ncidod/EID/vol12no01/05-1370.htm.

Visit www.pandemicflu.gov for updates.

More Fast Facts . . .

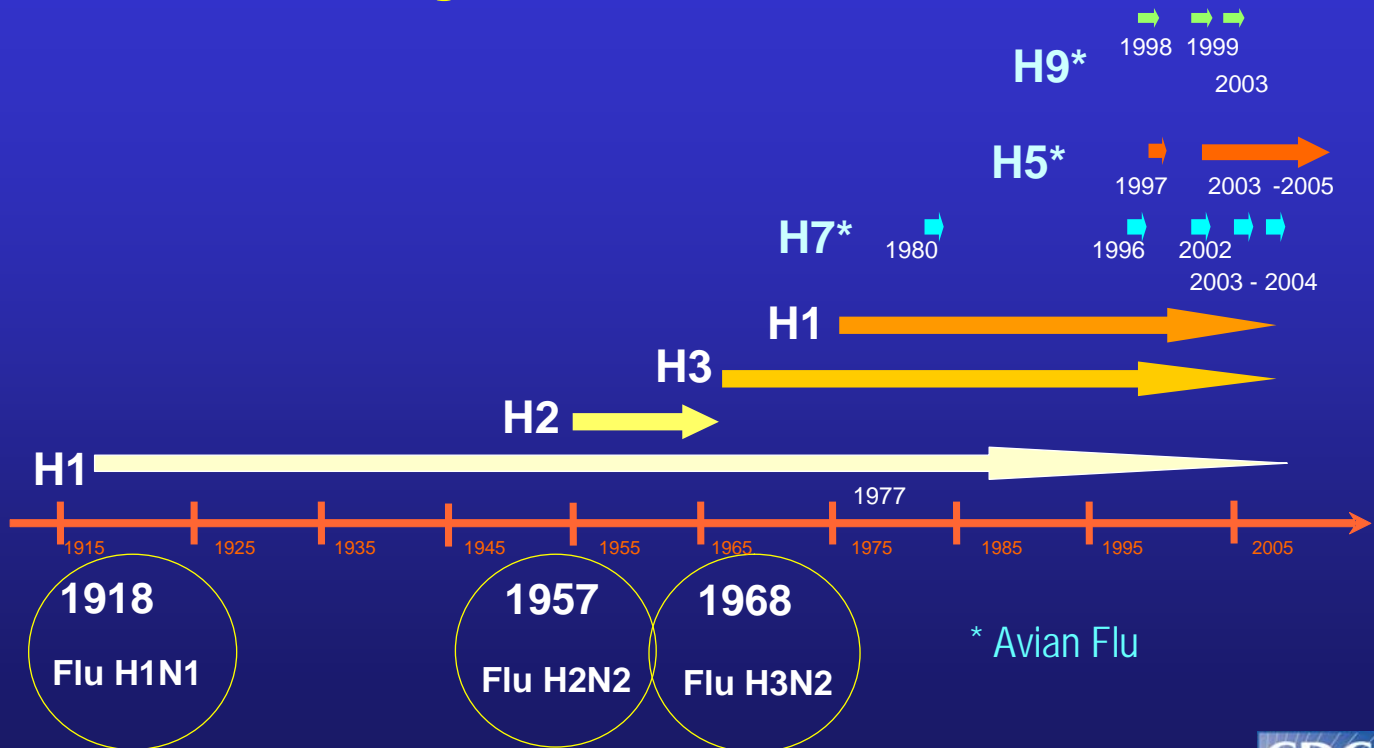
The four WHO Collaborating Reference Centers for Influenza provide the greatest level of laboratory services for influenza epidemics worldwide. The CDC

laboratory identifies the viral strain, down to its genetic structure; provides vaccine manufacturers with vaccine seed stock from these isolates; tests the sensitivity of the virus to antiviral medications; and tests the efficacy and safety of vaccines produced against the viral strain. This is done under BSL-3+ laboratory conditions, the second highest level of laboratory safety available at CDC or anywhere.

Pandemic Influenza Update: Reader's Feedback

The twice-monthly *Pandemic Influenza Update* is prepared by CDC's Priority Communication System. Information in this newsletter is time sensitive and evolving. Readers are welcome to comment by email to: PANUPDATE@CDC.GOV

Timeline of Emergence of Influenza A Viruses in Humans



For more information about the appearance of influenza strains, visit www3.niaid.nih.gov/news/focuson/flu/illustrations/timeline/timeline.htm