

Safeguarding Against Pandemic Influenza

Most people are familiar with influenza or the “flu,” a respiratory illness that makes hundreds of thousands of people sick every year. For most healthy people, the flu is not usually life-threatening. Pandemic influenza is another matter. It occurs when a new strain of influenza emerges that can be transmitted easily from person to person and against which people have no immunity. Unlike seasonal flu, it can kill the young and healthy as well as the frail and sick.

International Partnership on Avian and Pandemic Influenza

In September 2005, President Bush announced the International Partnership on Avian and Pandemic Influenza during the U.N. General Assembly to coordinate efforts and mobilize resources in the global movement to prevent a pandemic. The first meeting of the International Partnership took place October 6-7 in Washington, DC, hosted by the U.S. Department of State.

The meeting involved top foreign affairs, health and agriculture officials from 88 countries, as well as representatives from eight international organizations, including the World Health Organization, the Food and Agricultural Organization, and the World Organization for Animal Health.

Goals of the International Partnership:

- + Elevate the avian influenza issue on national agendas.
- + Coordinate efforts among donor and affected nations.
- + Mobilize and leverage resources.
- + Increase transparency in disease reporting and the quality of surveillance.
- + Build local capacity to identify, contain and respond to an influenza pandemic.

This global surveillance and preparedness network is helping detect and respond quickly to any outbreaks of disease. The Partnership requires countries that face an outbreak to immediately share information and provide samples to the World Health Organization. By requiring transparency, governments can rapidly respond to outbreaks.



President Bush addresses the United Nations General Assembly, September 14, 2005. (© AP/WWP)

U.S. National Strategy: Coordinating Efforts at All Levels

The U.S. government is concerned that the ongoing outbreaks of avian influenza in birds have the potential to turn into a human influenza pandemic that would have significant global health, economic, and social consequences.

In November 2005, President Bush outlined the National Strategy to Safeguard Against the Danger of Pandemic Influenza. The President discussed the avian and pandemic influenza threat and the U.S. strategy to detect outbreaks, expand domestic vaccine production capacity, stockpile treatments, prepare to respond to a pandemic, and ensure the health and safety of citizens.

Drawing on the combined efforts of government officials and the public health, medical, veterinary, and law enforcement communities, as well as the private sector, this strategy is designed to meet three critical goals:

- + detecting human or animal outbreaks that occur anywhere in the world;
- + protecting the American people by stockpiling vaccines and antiviral drugs while improving the capacity to produce new vaccines;
- + preparing to respond at the federal, state, and local levels in the event an avian or pandemic influenza reaches the United States.

The U.S. government has adopted \$3.8 billion pandemic influenza preparedness plan, with \$334 million devoted to a global pool of almost \$2 billion to help hard-hit and vulnerable nations combat outbreaks of avian influenza, which might escalate into a human pandemic.

U.S. assistance funds will be used to help nations develop and exercise national preparedness plans, improve disease surveillance, train local rapid-response teams and medical personnel, and support communications and public awareness campaigns to limit practices that contribute to the spread of viruses.

As part of the National Strategy, the U.S. is launching a Bio-Surveillance Initiative to help rapidly detect, quantify, and respond to outbreaks of disease and deliver information quickly to local, state, national, and international public health officials. The U.S. government is working with state and local public health officials and the medical community to develop effective pandemic emergency plans, including creating rosters of medical personnel ready to respond.

U.S. Assistance to Stricken Nations

2005

U.S. high-level and technical health delegations visit countries affected by H5N1 outbreaks to assess how best to direct U.S. assistance.

U.S. gives about \$38 million in technical assistance and grants to affected countries and to the World Health Organization to support pandemic preparedness.

2006

President Bush signs an emergency funding law that provides \$3.8 billion for pandemic flu preparedness, including funding for vaccine and cell-culture technology development. Of that amount, \$280 million is additional foreign assistance to help other nations detect and contain H5N1 avian influenza, in both animals and humans, improve planning and preparedness to respond to outbreaks, and reduce human exposure to infected animals.

The United States pledges more than \$334 million in grants and technical assistance to countries threatened by H5N1 at the International Pledging Conference on Avian and Pandemic Influenza in Beijing. Overall, the U.S. and other donors pledge almost \$2 billion to help contain the spread of H5N1 avian influenza and avert a global human influenza pandemic.

Working with other partners, U.S. funding will help countries to:

- develop and exercise national preparedness plans
- improve surveillance and rapid response systems
- train and equip national response teams, animal handlers, and medical staff
- monitor and evaluate the use and distribution of animal vaccine
- produce and test vaccines for humans
- support communications and public awareness campaigns to limit practices that spread the bird flu virus among animals and place humans at risk of exposure
- support the influenza-related research work of international technical agencies, private-sector partners, and non-governmental organizations

Ten Things You Need to Know About Pandemic Influenza

1. **Pandemic influenza is different from avian influenza.**

Avian influenza refers to a large group of different influenza viruses that primarily affect birds. On rare occasions, these bird viruses can infect other species, including pigs and humans. The vast majority of avian influenza viruses do not infect humans. An influenza pandemic happens when a new subtype emerges that has not previously circulated in humans.

For this reason, avian H5N1 is a strain with pandemic potential, since it might ultimately adapt into a strain that is contagious among humans. Once this adaptation occurs, it will no longer be a bird virus – it will be a human influenza virus. Influenza pandemics are caused by new influenza viruses that have adapted to humans.

2. **Influenza pandemics are recurring events.**

An influenza pandemic is a rare but recurrent event. Three pandemics occurred in the previous century: “Spanish influenza” in 1918, “Asian influenza” in 1957, and “Hong Kong influenza” in 1968. The 1918 pandemic killed up to 50 million people worldwide. That pandemic, which was exceptional, is considered one of the deadliest disease events in human history. Subsequent pandemics were much milder, with an estimated 2 million deaths in 1957 and 1 million deaths in 1968.

A pandemic occurs when a new influenza virus emerges and starts spreading as easily as normal influenza – by coughing and sneezing. Because the virus is new, the human immune system will have no pre-existing immunity. This makes it likely that people who contract pandemic influenza will experience more serious disease than that caused by normal influenza.

3. **The world may be on the brink of another pandemic.**

Health experts have been monitoring a new and extremely severe influenza virus – the H5N1 strain – for almost eight years. The H5N1 strain first infected humans in Hong Kong in 1997, causing 18 cases, including six deaths. Since mid-2003, this virus has caused the largest and most severe outbreaks in poultry on record. In December 2003, infections in people exposed to sick birds were identified.

4. **All countries will be affected.**

Once a fully contagious virus emerges, its global spread is considered inevitable. Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it. The pandemics of the previous century encircled the globe in six to nine months, even when most international travel was by ship. Given the speed and volume of international air travel today, the virus could spread more rapidly, possibly reaching all continents in less than three months.

5. Widespread illness will occur.

Because most people will have no immunity to the pandemic virus, infection and illness rates are expected to be higher than during seasonal epidemics of normal influenza. Current projections for the next pandemic estimate that a substantial percentage of the world's population will require some form of medical care. Few countries have the staff, facilities, equipment, and hospital beds needed to cope with large numbers of people who suddenly fall ill.

6. Medical supplies will be inadequate.

Supplies of vaccines and antiviral drugs – the two most important medical interventions for reducing illness and deaths during a pandemic – will be inadequate in all countries at the start of a pandemic and for many months thereafter. Inadequate supplies of vaccines are of particular concern, as vaccines are considered the first line of defense for protecting populations. On present trends, many developing countries will have no access to vaccines throughout the duration of a pandemic.

7. Large numbers of deaths will occur.

Historically, the number of deaths during a pandemic has varied greatly. Death rates are largely determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations, and the effectiveness of preventive measures. Accurate predictions of mortality cannot be made before the pandemic virus emerges and begins to spread. All estimates of the number of deaths are purely speculative.

8. Economic and social disruption will be great.

High rates of illness and worker absenteeism are expected, and these will contribute to social and economic disruption. Past pandemics have spread globally in two and sometimes three waves. Not all parts of the world or of a single country are expected to be severely affected at the same time. Social and economic disruptions could be temporary, but may be amplified in today's closely interrelated and interdependent systems of trade and commerce. Social disruption may be greatest when rates of absenteeism impair essential services, such as power, transportation, and communications.

9. Every country must be prepared.

WHO has issued a series of recommended strategic actions (see Internet resources) for responding to the influenza pandemic threat. The actions are designed to provide different layers of defense that reflect the complexity of the evolving situation. Recommended actions are different for the present phase of pandemic alert, the emergence of a pandemic virus, and the declaration of a pandemic and its subsequent international spread.

10. WHO will alert the world when the pandemic threat increases.

WHO works closely with ministries of health and various public health organizations to support countries' surveillance of circulating influenza strains. A sensitive surveillance system that can detect emerging influenza strains is essential for the rapid detection of a pandemic virus.