

### **What is pandemic influenza?**

Pandemic influenza is caused by an influenza virus. In order for a strain of influenza to be distinguished as pandemic, the following criteria must be met:

- The virus must be able to infect humans and cause high mortality;
- The global human population must have no immunity to the strain; and
- The virus must maintain efficient and sustained human-to-human spread.

Avian influenza H5N1 has the potential to cause a pandemic because it has the ability to infect humans and is a strain that people do not have immunity to.

### **How do pandemic viruses occur?**

New influenza viruses emerge as a result of a process called antigenic shift, which causes a sudden and major change in influenza A viruses. These changes occur when proteins on the surface of the virus combine in new ways as a result of mutation or exchange of genetic material between multiple influenza viruses. If such changes result in a new influenza A virus subtype that can infect humans and spread easily from person to person, an influenza pandemic can occur.

### **Will there be a vaccine for pandemic influenza?**

There is not a vaccine for avian influenza. Researchers are working with national governments to develop a vaccine. Even if a vaccine for H5N1 is developed, it might not match the actual pandemic strain since a major mutation must occur before H5N1 can cause a pandemic. It is most likely that a highly effective vaccine will be created after the pandemic strain is identified. It could take six to nine months after a pandemic starts for a vaccine to be developed and even then only small amounts would be available.

### **Will antiviral medication (such as Tamiflu) be effective against pandemic influenza?**

No one knows definitively whether antivirals such as oseltamivir (Tamiflu) will be effective against pandemic influenza. Oseltamivir and Zanamivir (Relenza®) have been used to successfully treat cases of avian influenza in other countries. Avian influenza has shown resistance to adamantanes, an antiviral medication that has been used to treat influenza A in the past, in part due to widespread use in poultry.

### **What can I do to prepare my practice and my patients for pandemic influenza?**

All of the following are excellent ways to prepare your practice and patients for a pandemic:

- ✓ Provide constant patient education on basic disease prevention methods.
- ✓ Encourage and offer seasonal influenza vaccine to patients and staff.
- ✓ Encourage staff to develop personal emergency plans that include emergency kits, communication plans, backup child care arrangements, and if possible, alternate work options (e.g. working from home).
- ✓ Develop emergency operating procedures for your practice. Include procedures for how you will function when a large percentage of your staff is absent. Also include procedures for how you will handle large patient volumes and where you will refer patients once you reach or exceed capacity.

### **Should I screen patients for exposure to avian influenza? If yes, who should I screen?**

At this time there is no reason to suspect patients with influenza-like illness (ILI) may have avian influenza. However, it is a good idea to ask about risk factors for acquiring disease. Have they traveled to an area of the world that is currently experiencing avian influenza, were they exposed to poultry or to persons who were ill with influenza like illness (ILI) after exposure to poultry? If a patient has ILI and a travel history that may have involved exposure to avian influenza, contact your state or local health department immediately.

### **What information do you have about using masks during a pandemic?**

Surgical mask and respirator use (N-95 or higher) is one component of a system of infection control practices to prevent the spread of infection between infected and non-infected persons where pandemic influenza patients might receive health care services (e.g., hospitals, emergency departments, out-patient facilities, residential care facilities, emergency medical services, home health care delivery). It should be noted that there is limited information on the use of surgical masks for the control of a pandemic in settings where there is no identified source of infection (in the workplace or in public places). There is no information on respirator use in such scenarios since modern respirators did not exist during the last pandemic.