



INFORMATION

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WHAT YOU NEED TO KNOW ABOUT PANDEMIC INFLUENZA

Considerable attention has been given recently to the prospect of an influenza pandemic sweeping the globe and causing serious illness and death. The following questions and answers will help give you a better understanding of what an influenza pandemic is and how Canada is preparing to respond to an outbreak.

What is influenza (“the flu”)?

Human influenza, or the flu, is a respiratory infection caused by the influenza virus. There are two types of influenza virus that cause outbreaks each year: influenza A and B.

How is influenza spread?

The influenza virus spreads through droplets that have been coughed or sneezed into the air by someone who has the flu. You can get the flu by breathing in these droplets through your nose or mouth, or by the droplets landing directly on your eyes. You can also contract the virus by shaking hands with infected people or by touching contaminated surfaces then transferring the viruses to your own eyes, nose or mouth.

What are the symptoms of influenza?

Influenza typically starts with a headache, chills and cough, followed by a fever, loss of appetite, muscle aches and fatigue, a running nose, sneezing, watery eyes and a throat irritation. Nausea, vomiting and diarrhoea may also occur, especially in children.

What is the best way to avoid getting influenza?

Immunization provides the best protection for many diseases and illnesses, including influenza. Each year, millions of Canadians receive the influenza vaccine, or “flu shot,” to avoid contracting influenza from different virus strains that routinely circulate in the community.

You can reduce the risk of catching or spreading influenza by practicing basic hygiene:

- Wash your hands regularly with warm, soapy water for at least 20 seconds, especially before and after eating, after going to the bathroom, after coughing and sneezing and after touching surfaces that may have been contaminated.
- Cough and sneeze into a tissue or your sleeve to avoid spreading the virus through infected droplets or contaminating your hands with the virus.
- Throw away used tissues promptly.
- Frequently clean and then disinfect household surfaces such as door handles and light switches that may have been contaminated.
- Encourage all members of your household, especially children, to follow these practices.
- If you do get the flu, stay at home and rest until you are feeling better.

What is a pandemic?

A pandemic is the worldwide spread of a specific disease to which people have little or no immunity.

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What is an influenza pandemic?

An influenza pandemic can occur when a radical change takes place in an influenza A virus, causing the emergence of a new strain against which people have little or no immunity. If this new subtype, or strain, has the ability to spread easily from person to person, many people around the world could become ill and possibly die. This is referred to as an influenza pandemic.

What causes an influenza pandemic to occur?

One way a new strain can emerge is if a person who is sick with a human influenza virus also becomes infected with an avian influenza virus and the two viruses re-assort, or “mix.” This means that the avian influenza virus acquires some of the human influenza genes, potentially creating a new subtype of influenza A virus against which people have little or no immunity. Another way a change can occur is for an avian influenza virus to undergo a number of changes or mutations resulting in the ability of the new strain to infect people and spread among humans.

What is avian influenza (“bird flu”)?

Wild waterfowl are natural carriers of influenza A viruses. Usually these avian influenza (“bird flu”) viruses carried by wild birds cause them little or no harm. Other birds such as domestic poultry and animals, including pigs, can also contract and transmit influenza viruses.

What is the bird flu that has caused illness in domestic birds and some humans in Asia?

Currently, an avian influenza H5N1 strain is circulating in Southeast Asia and parts of Europe, infecting many poultry populations and some humans. This strain of influenza is “highly pathogenic,” meaning it is highly deadly to poultry. This H5N1 influenza virus has infected a limited number of people, but there is no evidence it is spread from person to person.

What do “H” and “N” refer to when identifying a virus?

Influenza viruses are classified by the characteristics of two proteins: hemagglutinin, or “H” protein, and neuraminidase, or “N” protein. There are 16 H subtypes and 9 N subtypes that can exist in any combination. Some combinations are more pathogenic (deadly) to birds but this does not mean they are more likely to cause disease in humans.

Who decides whether an influenza outbreak is a pandemic?

The declaration of a pandemic influenza outbreak would be made by the World Health Organization (WHO).

How would we know if a pandemic has started?

One scenario would be for an outbreak of respiratory illness to be detected in one region of the world, followed rapidly by clusters in other regions. Laboratory investigation would reveal that the cause of infection is a new influenza strain against which humans have little or no protection.

What is the difference between a vaccine and an antiviral?

Vaccines are used to protect Canadians from many serious illnesses, including influenza. A vaccine provides immunity by stimulating the body to produce antibodies to fight off different strains of a virus. The antibodies are effective for four to six months. When you are exposed to the influenza virus strain, the antibodies will help either to prevent the infection or to reduce the severity of the

flu. A vaccine is usually administered by injection (e.g., the annual flu shot) and includes a form of the virus that is dead or weakened – so it is harmless to people.

Unlike vaccines, antivirals do not prevent illness by providing immunity. An antiviral is a medicine taken by mouth or by inhalation that destroys a virus or interferes with its ability to grow and reproduce. It can be given to patients when they are sick to reduce symptoms, to shorten the length of illness and to minimize serious complications.

Is there a vaccine available for protection against pandemic influenza?

A vaccine for protection from a pandemic strain of influenza cannot be produced until the new strain has emerged and been identified. It will then take about six months to develop and produce the vaccine. Therefore, a vaccine will not be available at the start of a pandemic and may be in short supply during the initial stages of the outbreak.

Canada has a 10-year contract with a manufacturing company for the production of a pandemic vaccine, should one be required. Although the vaccine itself cannot be produced until the new strain emerges, having a contract with a domestic supplier allows Canada to build the infrastructure and systems to produce enough pandemic vaccine for all Canadians in the event of a pandemic.

Will the annual flu shot provide protection from pandemic influenza?

No. The annual influenza vaccine includes the influenza strains expected to be in circulation during that year's flu season. While annual immunization is the most effective way to avoid getting seasonal flu, it will not provide protection from a new influenza strain that emerges to create a pandemic.

During a pandemic influenza outbreak, how many Canadians would become ill or die from the disease?

It is estimated that, without vaccines and antivirals, between 15 and 35 percent of the population – representing between 4.5 million and 10.5 million Canadians – could become ill. In addition, it is estimated that in Canada, between 2 million and 5 million people would require medical care, between 34,000 and 138,000 people could require hospitalization and between 11,000 and 58,000 deaths could occur.

Does Canada have a plan to protect Canadians in the event of a pandemic influenza outbreak?

The Canadian Pandemic Influenza Plan, first published in February 2004, was developed by federal, provincial and territorial governments with input from more than 200 experts. The plan maps out how we will prepare for and respond to a pandemic influenza outbreak. It includes an emergency response plan as well as guidelines and checklists designed to assist all jurisdictions in their emergency planning. The plan is primarily focused on health sector preparedness and response. It is adapted and updated as the situation evolves.

**To get more information, you may visit the following Web site:
www.pandemicinfluenza.gc.ca**