

Influenza Pandemic

Key facts on pandemic influenza



What is influenza (“the flu”)?

Seasonal influenza, or “the flu,” is a common infection of the airways and lungs that can spread easily among humans. There are two types of influenza viruses that cause outbreaks each year: Influenza A and B. Animals can also be infected with influenza A.

How is it spread?

The influenza virus spreads through droplets that have been coughed or sneezed by someone who has the flu. You can get the flu if droplets land on the surface of your eye. You can also get the flu by shaking hands with an infected person or by touching contaminated surfaces, and then touching your own eyes, nose or mouth.

What are the symptoms of flu?

Influenza usually starts with the sudden onset of a headache, sore throat and muscle aches. The onset is often abrupt enough that people can remember precisely when it started. Most people recover from the flu in about a week.

What is the difference between a cold and influenza?

A cold is a mild infection of the upper respiratory passages caused by a variety of viruses. A cold may last for a week and symptoms include a runny nose, stuffy nose, cough and sore throat. A cold is caused by a rhinovirus, which is much different than an influenza virus. A person with a cold will not usually have a headache, fever or muscle aches. Symptoms such as nausea, vomiting and diarrhea do not usually accompany a cold.

How serious is the flu?

Most people recover from the flu in about a week. However, influenza may be associated with serious complications such as pneumonia, especially in infants, the elderly and those with underlying medical conditions. On average, the flu and its complications send about 20,000 Canadians to hospital every year, and an average 4,000 Canadians die.

What is the best way to avoid getting the flu?

The best way protection against influenza is getting the flu shot every year and practising basic hygiene, especially frequent hand washing or hand hygiene with alcohol hand rubs. When you get the flu shot, your body’s immune system develops protection (antibodies) against the strains of the virus in the vaccine. The antibodies help prevent infection or reduce the severity of the illness. Different flu viruses can affect people every year, so the vaccine needs to be updated annually. This is why it is important to be immunized each fall.

Other ways to reduce the risk of catching or spreading the flu include:

- **Washing Up** – Washing hands regularly with warm, soapy water for at least 20 seconds, or using alcohol hand rubs especially before and after eating, after using the bathroom, after coughing or sneezing, and after touching surfaces that may have been contaminated by other people.
- **Covering Up** – Using a tissue or raising your arm up to your face to cough or sneeze into your sleeve is the best way to avoid spreading the virus. It keeps infected droplets out of the air and off surfaces that will be touched by others, and stops you from contaminating your hands with the virus.

- **Cleaning Up** – If you've coughed or sneezed into a tissue, throw it away as soon as possible. You should also 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. And, if you do get the flu, stay at home and rest until you are feeling better.

What is avian influenza (“bird flu”)?

Wild birds are natural carriers of influenza A viruses. Usually these “bird flu” viruses cause the wild birds little or no harm. Domestic poultry (like chickens and turkeys) and animals, including pigs, can also get these viruses from wild birds and pass them on to other poultry and animals.

What is the bird flu virus that has made some domestic birds and humans sick?

In recent years, there has been growing concern about a particular strain of avian influenza virus – an H5N1 virus – that has spread through birds from Southeast Asia through Asia to parts of Europe and Africa. This strain has caused illness in some wild birds, but it has resulted in a high rate of death in domestic poultry. Millions of birds have been killed in an effort to prevent the spread of the virus.

Like other bird flu viruses, the H5N1 virus is not easily transmitted to humans. A limited number of people have contracted the virus through close contact with sick or dead birds. The death rate in these human cases has been high. But there is still no evidence that it can spread easily from person to person.

What is a pandemic?

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

What is an influenza pandemic?

If an influenza virus changes and becomes a new strain against which people have little or no immunity AND this new strain is easily spread from person to person, many people around the world could become ill and possibly die. This is referred to as an influenza pandemic. Influenza pandemics have occurred about three times per century.

What causes an influenza A virus to change?

One way a new strain can emerge is if a person is sick with a human flu virus and then also becomes infected with a bird flu virus. The two different viruses could then mix together, creating a new subtype of influenza A virus. Because it's a new virus, people would have little to no immunity to it. Another way a bird flu virus can change is if it undergoes a number of mutations which could result in a new virus that can infect people and be transmitted among humans.

Is there currently a pandemic strain of the bird flu virus in Canada?

No. There is no influenza pandemic at this time anywhere in the world.

Is there a vaccine available for protection against pandemic influenza?

Canada is one of the few countries in the world prepared to have a vaccine manufacturer develop and supply a pandemic influenza vaccine as soon as a new strain is identified. Under a 10-year contract signed in 2001 between the Government of Canada and ID Biomedical (now GlaxoSmithKline

Biologicals), the company will be able to produce enough vaccine for all Canadians in the event of an influenza pandemic.

Vaccines are the first line of defense against a pandemic, but it could take at least six months to produce the vaccine for a new virus. This complex process cannot begin until the pandemic begins and the new virus has been identified. This means that a vaccine will probably not be available when the first wave of the pandemic strikes Canada.

There is a global effort to develop prototype pandemic vaccines, including H5N1 vaccines, as part of pandemic preparedness.

Will the annual flu shot provide protection from pandemic influenza?

No. The annual flu shot only covers the strains of human influenza that are expected to be in circulation during that year's flu season. While getting a flu shot each year is the most effective way to avoid getting seasonal flu, it will not provide protection from any new influenza strain that emerges to create a pandemic.

What is the difference between a vaccine and an antiviral?

When you get a vaccine against an influenza virus (usually in the form of an injection or “shot”), it introduces a virus to your body that is either dead or in a weakened state and is harmless. Your body quickly produces antibodies against the vaccine virus. These antibodies provide you with immunity against the virus for about four to six months. If you are exposed to the influenza virus during that time, the antibodies you have created will either prevent you from

getting sick or will help reduce the severity of your illness. Unlike vaccines, antivirals do not stop you from getting sick by providing immunity. An antiviral is a medicine that you take by swallowing a pill or liquid, or by breathing it in. The medicine works by either destroying the virus or interfering 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.

Does Canada have enough antivirals stockpiled to treat Canadians in the event of a pandemic?

Federal, provincial and territorial governments have established a national stockpile of antivirals for use in the event of an influenza pandemic. Additional supplies are being acquired, including antiviral solution for young children and other people who cannot swallow capsules. Governments intend to increase the stockpile to 55 million doses—enough to treat the estimated number of Canadians who will require medical attention during a pandemic.

What is the expected impact of an influenza pandemic in Canada?

Just as we do not know when the next pandemic will strike, we cannot predict how severe it will be. That will depend on the influenza strain that emerges, how easily it spreads, which groups of people are affected, and how effectively we respond. Assuming a moderately severe pandemic, and in the absence of a pandemic vaccine and antivirals, it is estimated that between 15 and 35 percent of Canadians could become ill, 34,000 to 138,000 individuals may need to be hospitalized; and between 11,000 and 58,000 deaths could occur.

What can I do to prepare myself and my family in the event of an influenza pandemic?

Staying informed and understanding the potential challenges you may face in your community in the event of a flu pandemic can help you to prepare for a variety of scenarios. Fact sheets and check lists for individuals and families, communities and businesses are available on the Public Health Agency of Canada website at www.phac-aspc.gc.ca

What is the Canadian Pandemic Influenza Plan?

The Canadian Pandemic Influenza Plan for the Health Sector was created by federal, provincial and territorial officials, and more than 200 experts, to explain how Canada will prepare for and respond to a pandemic influenza outbreak. The Plan was created for government departments of health, emergency workers, public health officials and health care workers. It includes an emergency response plan, along with guidelines and checklists. An updated version of the Plan was released in December, 2006. The Plan is available on-line at www.pandemicplan.gc.ca

For more information on pandemic influenza, visit www.influenza.gc.ca