

Frequently Asked Questions - H1N1 Flu Virus

* Taken from the Public Health Agency of Canada

About H1N1 Flu Virus

Q1. What is the H1N1 Flu Virus?

H1N1 Flu Virus has been reported around the world, and the [World Health Organization \(WHO\)](#) has declared it a pandemic influenza virus. H1N1 is a strain of the influenza virus that in the past, usually only affected pigs. In spring 2009, it emerged in people in North America. This is a new strain of influenza and because humans have little to no natural immunity to this virus, it can cause serious and widespread illness.

For more information on the H1N1 flu virus, including symptoms, how to protect yourself, and when to seek medical care, visit our [H1N1 preparedness guide](#).

Q2. Is H1N1 Flu Virus contagious? How does it spread between people?

Yes, this virus is contagious. Since most of the people who have become ill have not been in direct contact with pigs, we know that the virus has spread from person to person.

More investigation is needed on how easily the virus spreads between people, but it is believed that it is spread the same way as regular seasonal influenza.

Influenza and other respiratory infections are transmitted from person to person when germs enter the nose and/or throat. Coughs and sneezes release germs into the air where they can be breathed in by others. Germs can also rest on hard surfaces like counters and doorknobs, where they can be picked up on hands and transmitted to the respiratory system when someone touches their mouth and/or nose.

Q3. Are all cases of H1N1 Flu Virus severe?

No. The majority of Canadian cases of H1N1 Flu Virus have experienced mild illness and have recovered at home. Overall, the World Health Organization is describing this pandemic as moderate.

Q4. What is the incubation period for H1N1 Flu Virus?

This is a new virus and we continue to learn more about it and how it spreads. However, we expect the incubation period for human swine influenza to be two to seven days.

Q5. If I get sick with H1N1 Flu Virus once, does that give me immunity or can I get infected with it again?

In most cases, when a person is infected with an influenza virus and recovers, they develop antibodies that provide them with immunity to that particular virus. Therefore, in the case of the H1N1 flu virus, the vaccine will be recommended to everyone, but is not necessary for people who have had a laboratory confirmed H1N1 flu virus infection.

Q6. How long does the virus live outside of the body?

The H1N1 Flu Virus can live outside the body on hard surfaces, such as stainless steel and plastic, for up to 48 hours and on soft surfaces, such as cloth, paper, and tissues for

less than 8-12 hours; however, it can only infect a person for up to 2-8 hours after being deposited on hard surfaces, and for up to a few minutes after being deposited on soft surfaces.

H1N1 Flu Virus in Canada

Q1. Does the Government of Canada expect to see more cases of H1N1 Flu Virus in Canada? Or a second wave of illness?

The Second Wave arrived in late October. Second Wave simply means there was an increase in H1N1 flu activity in several parts of the country; in other words an increasing number of Canadians being infected with the virus. This was expected. Although some cases have been severe, including some deaths, most of the cases continue to be mild. We continue to work with our international partners to learn more about this virus and to prepare for additional waves of illness and/or changes to the nature of the virus.

Q2. I understand Canada has experienced deaths related to the H1N1 Flu Virus. Does this mean the virus has grown in strength?

There is no evidence to suggest that the virus has become stronger.

It is important to realize that different strains of influenza result in about 2,000 to 8,000 Canadian deaths a year. We must take all influenza – not just the current strain – seriously, and take measures to protect ourselves.

How to protect yourself and others

Q1. What can I do to protect myself from infection?

The Public Health Agency advises Canadians to:

- Wash hands often with soap and warm water for at least 20 seconds, or use hand sanitizer.
- Keep your hands away from your face.
- Cough and sneeze into your arm, not your hand. If you use a tissue, dispose of it as soon as possible and wash your hands.
- Get immunized.
- Keep common surface areas—for example, doorknobs, light switches, telephones and keyboards—clean and disinfected.
- Eat healthy foods and stay physically active to keep your immune system strong.
- Keep doing what you normally do, but if you get sick, stay home.
- Check www.fightflu.ca for more information.
- Check www.voyage.gc.ca for travel notices and advisories.
- Talk to a health professional if you experience severe flu-like symptoms.

Talk to your health care provider if you are at risk for complications and you experience even mild flu symptoms. People at risk are

- Children under five years
- Women who are pregnant
- People with chronic conditions such as heart or kidney disease, diabetes, asthma and chronic lung disease, suppressed immune systems, neurological disorders, liver disease, blood disorders and severe obesity

Q2. Should people who are at risk for complications take special precautions such as avoiding crowds?

It's important that people continue their daily lives during the pandemic. PHAC doesn't recommend that anyone avoid going to work or community social events if they are healthy. In other crowded situations that cannot be avoided, extra precautions should be taken such as frequent handwashing, to avoid picking up the virus. Pregnant women or others who are at risk for complications might consider carrying hand sanitizer for the same purpose.

Treatment and Prevention Measures

Q1. Are there drugs that can treat H1N1 Flu Virus?

Yes. Early research indicates that there are two prescription antiviral drugs, oseltamivir (Tamiflu) and zanamivir (Relenza) that are effective in treating the H1N1 Flu Virus.

Q2. What are PHAC's recommendations for the use of antivirals?

PHAC's recommendation is that antivirals be used to treat H1N1 Flu Virus when the illness is moderate to severe and the patient is at a great risk for complications. PHAC is not recommending that antivirals be given for a mild disease or on a preventive basis at this time. The reasons for this are:

- We do not have sufficient information to suggest that this influenza virus requires the use of antivirals. Most patients in Canada are recovering well on their own.
- There is a risk that the virus could be resistant to antiviral treatment if antivirals are overused to treat mild illness.
- The antiviral stockpile is a finite resource. We want to be sure not to run out before they are really needed.

Q3. How are antiviral medications made available if needed?

Antiviral medications are prescription drugs. They may be obtained from a pharmacy with a regular prescription.

There is a national stockpile of antiviral medication, and some provinces and territories also have their own stockpiles. Every province and territory has access to the national stockpile and antivirals have been distributed on a per-capita basis.

Q4. What is the difference between an antiviral and a vaccine?

Antivirals are drugs used for the prevention and early treatment of influenza. If taken shortly after getting sick (within 48 hours), they can reduce influenza symptoms, shorten the length of illness and potentially reduce the serious complications of influenza.

Antivirals work by reducing the ability of the virus to reproduce but do not provide immunity against the virus. The H1N1 Flu Virus can be treated with two different antivirals, oseltamivir (Tamiflu) and zanamivir (Relenza).

A vaccine is any preparation intended to produce immunity to a disease by stimulating the production of antibodies. Vaccines are the primary means to prevent illness and death from influenza. They stimulate the production of antibodies against the flu virus components included in the vaccine, providing immunity against the virus.

In order to provide the best protection, a vaccine must be tailored to fight off specific strains of influenza.

Q5. Should Canadians take any extra measures like wearing surgical masks to avoid catching H1N1 Flu Virus?

Canadians should continue to take normal precautions to protect themselves as they would from a regular flu. While we are investigating to learn more about how this virus spreads, our best advice is for Canadians to wash their hands frequently and thoroughly, cough and sneeze into their arms, rather than their hands, get immunized and stay home when ill.

The Public Health Agency of Canada does not recommend that members of the general public wear surgical masks to protect against contracting H1N1 Flu Virus. Evidence shows that this is not effective in preventing transmission of influenza in the general public. People often use masks incorrectly, or contaminate themselves when putting masks on and taking them off, which could actually increase the risk of infection.

The exception is people who are ill with H1N1 Flu Virus or people who are exhibiting flu-like symptoms. In order to protect those in close contact, like doctors, nurses, and caregivers at home, these people may be asked to wear a face mask.

Schools, Daycares and Postsecondary Institutions

Q1. What actions does PHAC recommend schools, daycares and postsecondary institutions take to address H1N1 flu virus?

The H1N1 flu virus can spread easily among young people, PHAC has developed [guidelines for daycares and K-12 schools](#) as well as [postsecondary institutions and board schools](#) to help reduce the risk of transmission within school settings.

These guidelines make recommendations on how to teach students and staff about proper handwashing and covering coughs and sneezes, as well as increased measures in isolating the ill, disinfecting common surfaces, and reporting outbreaks to local public health authorities.

Q2. What are PHAC's recommendations regarding school closures?

The Public Health Agency of Canada continues to recommend against the widespread proactive closure of schools. This measure may not be effective in preventing transmission, and the benefits of keeping schools open currently outweighs the risk of transmission in these settings. This recommendation will continue to be reviewed based on the situation in Canada.

Q3. Under what circumstances should schools close?

PHAC does not recommend widespread proactive school closures, but in certain circumstances, the reactive closure of some schools might be necessary. This would be a local decision in accordance with provincial/territorial legislation. One situation where school closure might be considered is if the number of school absenteeism and/or staff shortages impacts the safety of school operations.

H1N1 Flu Vaccine

Q1. I've heard of a Canadian study that says I'll be at greater risk for getting the H1N1 virus if I received a seasonal flu shot last year. Should I avoid getting a seasonal flu shot this year?

No, but you should consult with your provincial or territorial health authority for their plans for the timing of seasonal and H1N1 immunizations.

Q2. There are recent Canadian studies suggesting that people might be more susceptible to the H1N1 virus if they have been vaccinated against the seasonal flu.

Similar studies from other countries have not shown this. PHAC asked an international expert panel to review the studies. This panel concluded that the Canadian studies hold merit and are worthy of further research.

At the same time, the Panel also concluded that various vaccine program options remain valid – so in the end, provinces and territories will make their own decisions, based on the impact of the virus in their jurisdiction and their capacity to deliver immunization programs. Canadians should consult the recommendations from their provincial or territorial office of health.

Q3. Why aren't different provinces and territories planning to give flu shots exactly the same way?

The delivery of healthcare is a provincial/territorial responsibility in Canada. The Public Health Agency of Canada makes recommendations on immunization, but the rollout of immunization programs, including timelines and target groups, is ultimately the decision of provincial/territorial governments.

There has never been a one-size fits all approach to seasonal vaccines in Canada and this year is no different. Provincial and territorial Chief Medical Officers of Health know their populations and are best placed to decide how to roll-out vaccine programs in their jurisdictions. They base some of their decisions on logistics, capacity and how many people are likely to get immunized.

Q4. How much vaccine is the government ordering?

The government has purchased 50.4 million doses of H1N1 flu vaccine on behalf of the provinces, territories and federal populations. Most of the order is for [adjuvanted](#) vaccine; 1.8 million of the doses are for [unadjuvanted](#) vaccine.

The Government of Canada has a longstanding contract with GlaxoSmithKline to maintain vaccine production capacity in Canada in order to meet Canada's pandemic vaccine needs promptly and effectively.

The order of unadjuvanted vaccine will be available by mid-November. In order for [pregnant women](#) across the country to have access to the unadjuvanted vaccine as early as possible, the Government of Canada has purchased 200,000 doses of unadjuvanted H1N1 vaccine from CSL Australia, which will be available to the provinces and territories as early as the first week of November.

Q5. What if we end up needing more than 50 million doses of vaccine? Will the government be able to buy more and who will pay for it?

Through our contract with GSK we have the opportunity to place further orders at a later date if we feel that there is a requirement for more vaccine to meet the needs of the

Canadian people. The cost sharing of additional purchases would be negotiated at the time.

Q6. Will the vaccine be free for all Canadians, even those in provinces and territories that do not provide free seasonal influenza vaccine programs?

Decision on vaccine delivery and the administration of flu clinics is a provincial / territorial responsibility. The Government of Canada intends to pay 60 per cent of the cost of the vaccine purchase. Each province and territory will have to assess their capacity to deliver immunization clinics, and will have to make decisions around cost based on a number of logistical and ethical criteria.

Vaccine Sequencing

Q1. What is vaccine sequencing?

While there will be enough H1N1 flu virus vaccine for all Canadians who need and want protection, not everyone can be immunized at the same time. Vaccine sequencing refers to the Government of Canada advice to provinces and territories on which groups and populations will benefit most from vaccination so that the timing and location of immunization clinics can be targeted appropriately.

Q2. What is the rationale for the primary groups?

People under 65 with chronic conditions: This group is at higher risk of complications. When evaluating the Canadian situation, it was observed that immunizing this group early would have the biggest impact on minimizing severe illness and death, even more so than those groups with a higher rate of infection, like school children.

Pregnant women: Pregnant women are at highest risk for severe disease if they do contract the virus. Additionally maternal immunization while pregnant may help to protect the infant after birth.

Children six months to less than five years of age: This group captures all pre-school age children who have a higher risk of severe disease than other children. Healthy children between six and 23 months of age are at particular risk of severe disease and hospitalization and are the primary focus of this target group. Healthy children aged two and less than five years of age are at higher risk of severe disease and hospitalization than older children.

Persons residing in remote and isolated settings or communities: People living in remote and isolated communities have limited access to medical care, so it is important to take all available measures to prevent illness. Immunizing these whole communities also creates the potential for developing mass immunity, which means once a significant proportion of the population is immunized, their immunity will protect the rest of the community. Additionally, given the high concentration of persons with chronic conditions in some remote Aboriginal Communities, priority immunization in these communities will help to lessen the risk of severe disease and deaths.

Health care workers involved in pandemic response or the delivery of essential health care services: Society has a responsibility to protect health care workers that will be exposed to the H1N1 virus in the course of their daily work. This also helps prevent the virus spreading to vulnerable patients. Protecting health care workers involved in the delivery of essential health services, from hospitals to laboratories, to pharmacies to those involved in vaccine production, helps protect essential health infrastructure.

Household contacts and care providers of persons at high risk who cannot be immunized or may not respond to vaccines: Some high-risk groups, like children under six months and those with weakened immune systems, cannot be immunized, so those around them should be immunized to reduce the risk of spreading the virus to these groups.

Populations otherwise identified as high risk: As the delivery of vaccines is a provincial/territorial responsibility, jurisdictions may identify other groups as priority recipients for the vaccine based on local conditions and disease spread.

Q3. What is the rationale for the other groups?

Children 5 to 18 years of age: Flu outbreaks are most common in school aged children. Although they are not at a high risk of severe disease or death, immunizing school aged children could contribute to reducing the spread of the virus to other more vulnerable groups.

First responders: Police and firefighters often respond to medical emergencies alongside healthcare workers and should also be offered protection as their jobs expose them to a risk of transmission.

Poultry and swine workers: Immunizing this group can help to protect against re-assortment of the flu virus -- this can occur when people with the H1N1 flu mix with sick animals, which could lead to co-infection with both human and animal flu viruses. This could result in changes in the H1N1 flu virus that could make it more difficult to prevent and/or treat.

Adults 19 to 64 years of age: As compared to adults over 65, this group has an increased rate of infection and a higher risk of severe outcomes.

Adults 65 and older: Immunization is one of the most effective ways to protect all members of our communities. Although healthy adults 65 and older are less likely to contract the virus, by encouraging all age groups to be immunized, we can reduce the chance of exposing vulnerable populations to the virus.

Q4. If I have been diagnosed with the H1N1 flu virus, do I have immunity and will I still need a vaccine?

In most cases, when a person is infected with an influenza virus and recovers, they develop antibodies that provide them with immunity to that particular virus. Therefore, in the case of the H1N1 flu virus, the vaccine will be recommended to everyone, but is not necessary for people who have had a laboratory confirmed H1N1 flu virus infection.

Adjuvanted vaccine

Q1. What is the difference between an adjuvanted and non-adjuvanted vaccine?

An adjuvanted vaccine is a vaccine that includes a substance that boosts an individual's immune system and increases their response to a vaccine. An unadjuvanted vaccine has no "booster" element.

Adjuvanted vaccines are included in common vaccines such as tetanus and hepatitis B. The adjuvant in Canada's H1N1 flu vaccine is made up of natural ingredients such as water, squalene oil and vitamin E.

Q2. When was the last time Canada used an adjuvant in a vaccine?

Adjuvants are not new. They have been used for several decades to boost immune response to vaccines. Many of the commonly used vaccines in Canada contain an adjuvant. However, they have not previously been approved for use with influenza vaccines in Canada.

Q3. Are adjuvanted influenza vaccines safe for use?

The adjuvant used by GSK has been tested in approximately 45,000 people around the world and has been evaluated by Health Canada and other regulatory authorities as part of the review of the H5N1 vaccine in the pre-pandemic period. No significant safety concerns regarding the use of the adjuvanted vaccine were detected.

In June 2009, the WHO held consultations on the safety of adjuvanted influenza vaccines to review and discuss known and theoretical safety concerns and prospective vaccine safety evaluation. The outcome of the WHO consultation was that no significant safety concerns or barriers to evaluating or using adjuvanted vaccines for the current H1N1 virus were raised.

Clinical studies have been designed to study the risks and benefits of using both adjuvanted and unadjuvanted vaccine against the H1N1 flu virus, and Health Canada and the Public Health Agency of Canada are working closely with other national agencies to implement appropriate post-market monitoring.

Q4. Does an adjuvanted vaccine pose a risk to pregnant women?

All evidence suggests that adjuvanted vaccines are just as safe as unadjuvanted vaccines; however there is no safety data for the use of adjuvanted vaccine in pregnant women. The WHO's Strategic Advisory Group of Experts (SAGE) recommended in July that pregnant women should receive non-adjuvanted vaccine where possible, but that an adjuvanted vaccine could be used if necessary.

Q5. Is the Government ordering non-adjuvanted vaccine? Who will it be recommended for and why?

The Government of Canada (GOC) purchased from GlaxoSmithKline (GSK) a small quantity of non-adjuvanted H1N1 flu vaccine (approx. 1.8 million doses) as part of its total order of 50.4 M doses. On October 26, 2009, the GOC announced that it had purchased an additional 200,000 doses of unadjuvanted vaccine from CSL Australia that will be available to Canadians earlier than the order from GSK.

The purchase of non-adjuvanted vaccine is a precautionary measure for pregnant women as no clinical data of the safety of adjuvanted vaccine in this group is available.

The World Health Organization (WHO) has indicated that it has no special concerns about the safety of adjuvanted H1N1 flu vaccines in general. The WHO has also strongly recommended that pregnant women be immunized against the H1N1 flu virus, even if no non-adjuvanted vaccine is available. The reason for using unadjuvanted vaccine is to err on the side of caution.

International Actions

Q1. The World Health Organization (WHO) has raised the pandemic alert level to Phase Six. What are these phases?

 WHO currently identifies six stages of Pandemic Preparedness and Response.

Phase 1: Influenza viruses are circulating in animals, especially birds. No reports of animal viruses infecting humans.

Phase 2: Human infection by an animal influenza virus. Potential pandemic threat.

Phase 3: An animal or animal-human influenza virus has caused limited disease in people. Isolated human to human transmission may occur – but not widespread.

Phase 4: Verified human to human transmission of an animal or human-animal virus causing widespread or "community-level" outbreaks. Risk of pandemic is considered much higher but not a foregone conclusion.

Phase 5: Human to human spread of the virus is confirmed in at least two countries in one WHO region. It is likely that a pandemic is imminent. Time to finalize organization, communication, and implementation of planned mitigation strategies is short.

Phase 6: The Pandemic Phase. Community outbreaks in at least one country from a second WHO region – indicating that a global pandemic is underway. The Director-General of the WHO makes the decision about an elevation of pandemic phases based on reports from countries of the impact of disease.

Q2. The WHO has indicated that the overall level of severity of the pandemic to be moderate. What does this mean?

At this time, the WHO considers the overall severity of the pandemic to be moderate. This assessment is based on the clinical and epidemiological information available to WHO to date, as well as input from its Member States on the pandemic's impact on their health systems and more generally on their social and economic functioning. Essentially, this assessment reflects that:

The overwhelming majority of patients experience mild symptoms and make a rapid and full recovery without the need for hospitalization or medical care.

Overall, national levels of clinically severe or fatal cases of respiratory illness appear similar to levels seen during local seasonal influenza periods-- although in some local areas and institutions, high levels of disease have occurred.

Overall, hospitals and health care systems in most countries generally have been able to cope with the numbers of people seeking care -- although in some localities, some facilities and systems have been stressed.

Q3. What other recommendations is the WHO making related to Phase Six?

The WHO is also recommending:

No border closure. It will not be possible to stop the virus at the border, at ports or at airports. There is no evidence that these measures stop the spread of the disease, and they may be very disruptive for international traffic and trade.

No restriction of travel. People who are infected with the virus and are capable of infecting others, may not show symptoms when travelling, so they cannot be identified from others who are not infected.

Greater emphasis on providing care with a decreased emphasis on stopping the spread of the virus. Now that a pandemic has been declared, all governments will need to focus its resources on caring for those who fall ill.

Q4. Are all pandemics severe?

No. An influenza pandemic may be mild, moderate or severe. An influenza pandemic means the virus is spread easily between humans, and affects a wide geographic area. An influenza pandemic does not necessarily cause more severe illness than seasonal influenza.