



# Pandemic Influenza Preparedness

## Guidelines for Municipal Governments

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## **Forward**

*History dictates that once in a while nature tests humanity with catastrophes causing widespread disease, destruction and death.*

*If we look at history, we will see many such catastrophes like plague, pandemic influenza, etc.*

*Pandemic influenza is one such event that has occurred not once, but many times. Since 1889, pandemic influenza has occurred after every 10-40 years. The last pandemic influenza was in 1968 and experts believe we are overdue for a pandemic. It is a question of when, not if.*

*Keeping in view the seriousness of pandemic influenza, preparedness is ongoing throughout the world.*

*Pandemic influenza is not just a health issue but will have implications for every sector of society. The health sector has its own contingency plan for pandemic influenza but other sectors like municipalities, businesses and crown corporations must prepare their own plans for the continuation of essential community services during a pandemic.*

*Each province and territory has its own legislation which mandates provincial and municipal governments to have emergency plans to deal with emergencies and disasters, including human diseases. It is the legislative responsibility of every municipality to have an emergency plan (Emergency Planning Act 1989-90). Governments in Canada have “Due Diligence” obligations to plan for the protection of their populations. Most of the municipalities have emergency plans however, it is important to understand the difference between an influenza pandemic and other emergencies or disasters.*

*In this document we will try to inform our municipal partners about influenza, the current situation with the bird flu, pandemic influenza and its history, the health sector’s plan and how municipalities can prepare for and manage influenza pandemic.*

*Three documents are attached as appendices: you can use the checklist as a planning tool and can distribute the Q&A and “Preparing Family” plan to your residents.*

***Please remember, “Pandemic is everybody’s problem.”***

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## Understanding Influenza



It is important to highlight basic facts about the influenza virus, its spread, its types, etc.

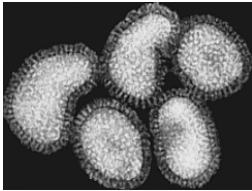
Influenza is a viral infection of the respiratory tract. Viruses are very minute organisms that change rapidly and are not sensitive to anti-bacterial medicine.

To some, influenza (flu) is a nuisance disease, an annual hassle, but every year millions of Canadians are infected by the influenza virus mainly during fall and winter. Thousands are hospitalized and an estimated 3000-5000 die as the result of influenza or its complications.

Seniors age 65 and older, people with chronic diseases of any ages and infants are at higher risk for complications.

Influenza is very contagious and transmits easily from person to person through the secretions of an infected person. When the infected person sneezes or coughs, other people can inhale the virus-containing droplets. It can also be transmitted through hand-to-hand contact or through contaminated objects and surfaces.

## Types of Influenza



There are three types of influenza virus: Type A, B and C.

Type A virus infects both animals and humans. It causes yearly epidemics and pandemics and can infect people of all ages.

Type B causes milder epidemics. It causes diseases only in humans and primarily affects children.

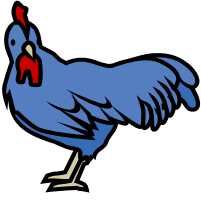
Type C is insignificant as far as causing diseases in human is concerned.

## Changes in Viral Structure

Viruses are named on the basis of two proteins present on their surface: Haemagglutinin (H) and Neuraminidase (N). There are 15 types of H and 9 types of N hence, they are named H1N1, H2N1, etc. Slight changes in one of these proteins will change the whole virus. Changes are of two types: minor changes, called Drift, usually happen on their own i.e. the genes mutate. People exposed to a previous virus usually have immunity to the changed virus.

Another type of change in virus structure is a major one called Shift which can result in a new subtype of virus. People may or may not have immunity to this virus.

Viral shift can occur either through direct mutation or Genetic Reassortment. This happens when a human or an animal is infected simultaneously by animal and human types of virus. These viruses can swap their genetic material and develop into a new type of virus.



## Bird Flu Situation in the World

Outbreaks of bird flu virus in Asia, Europe, the Middle East and Africa have raised concern among public health experts about a potential pandemic outbreak. The virus (H5N1) which has caused outbreaks in the poultry industry has also infected humans who were in close contact with infected poultry, killing about half of the infected people.

The following is the latest situation:

Countries with confirmed H5N1 in humans and birds: China, Thailand, Vietnam, Cambodia, Indonesia, Turkey, Iraq and Azerbaijan.

Countries with confirmed H5N1 in birds only: **Asia:** Hong Kong, Russia, Mongolia, Kazakhstan, India, Malaysia, Georgia, Myanmar; **Mid-East:** Iran, Afghanistan, Israel;

**Europe:** Romania, Croatia, Ukraine, Bulgaria, Italy, Slovenia, Greece, Austria, Germany, France, Hungary, Slovakia, Bosnia-Herzegovina, Switzerland, Poland, Albania,

Sweden, Denmark, Serbia & Montenegro; **Africa:** Nigeria, Egypt, Niger, Cameroon

Additional countries where national authorities report H5N1 in birds: Cyprus, Pakistan, Jordan.

An Epidemiological Record, published online by WHO [on June 30, 06], sets out results from the first analysis of epidemiological data on all 205 laboratory- confirmed H5N1 cases officially reported to WHO by onset date from December 2003 to 30 April 2006.

Following conclusions were reached by analyzing the data;

- The number of new countries reporting human cases increased from 4 to 9 after October 2005, following the geographical extension of outbreaks among bird populations.
- Half of the cases occurred in people under the age of 20 years; 90% of cases occurred in people under the age of 40 years.
- The overall death rate was 56%; it was high in all age groups but was highest in persons aged 10-to-39 years.
- The death profile by age group differs from that seen in seasonal influenza, where mortality is highest in the elderly.

Experts are concerned that this virus may mutate and gain the ability to transfer easily from person to person, causing the pandemic.

## Understanding Pandemic Influenza

“Pandemic” means worldwide spread or global outbreak of a disease. For influenza pandemic to occur three prerequisites are necessary:

- 1) Presence of a novel virus;
- 2) Almost everyone is susceptible to it;
- 3) The virus spreads efficiently from one person to another like the yearly influenza virus.

### History of Pandemic Influenza



Three pandemics have already occurred during the 20<sup>th</sup> century. The Spanish flu of 1918-19 killed 20-50 million people around the world and at least 50,000 Canadians. In 1957, Asian flu killed about a million people. The last pandemic in 1968 in Honk Kong killed 750,000 people.

There have been some close calls in Honk Kong (1997 and 1999), China (2003) and Netherlands (2003).

History dictates that pandemic influenza has occurred every 10-40 years since 1889. The last pandemic was in 1968, so we are overdue for an influenza pandemic.

No one can predict its periodicity. It may occur in months, years or decades. Looking at the history of the pandemic, it is believed that it may start in spring or summer; it may begin somewhere in Asia or Eastern Europe because of people living in close proximity with poultry and animals. Because of faster transportation means, it may spread throughout the world within a few months. It may come in 2-3 waves. During 1957, the second wave of pandemic began 3 months after the peak of the first wave while in 1968, the second wave began 12 months after the peak of the first wave.

The 1918-19 flu pandemic started in May 1918 during the First World War and was brought to Canada by returning troops in the late spring and early summer.

It reached Saskatchewan on October 01, 1918 killing 3906 residents of the province during the first three months. The epidemic continued until May 1919 and then gradually subsided. By April 1919, a total of 4821 deaths were recorded in Saskatchewan. By 1920, it was known that 5018 people died of pandemic flu in Saskatchewan - 58% were young adults between the ages of 20 and 40.

## Health/Medical Impact of a Pandemic



Pandemic is not just a health issue, it will affect every sector of society. It will infect millions of Canadians; thousands will require hospitalization and thousands may die. Health care services will be overwhelmed. The need for health services will exceed the available resources. Between 15 and 35% of health care workers may not be able to work, and this will further devastate the situation. There may be a shortage of essential resources including medical equipment, supplies, drugs etc.

Keeping in view the worst case scenario, health departments are in the process of developing a contingency plan at every level.

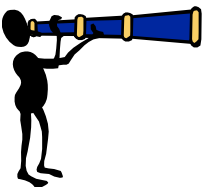
## The Contingency Plan



Health departments at every level (Federal, Provincial and Local) have a contingency plan for pandemic influenza. There are two main goals of the plan:

- 1) To minimize serious illness and overall death; and
- 2) To minimize societal disruption.

Like any contingency plan, there are a few basic components of this plan. These are: *Surveillance of the Disease, Vaccination Programs, Antiviral Program, Health Services, Public Health Measures, Communication, and Emergency Preparedness and Response.*



**Surveillance:** There is already a surveillance system in place locally, provincially, nationally and internationally. Public health agencies are involved in identifying Influenza-like illnesses (ILI). Changes in the influenza virus are closely monitored by the World Health Organization (WHO). The same system will be adopted to identify cases of pandemic influenza and observe any early spread of the disease. The cases will be reported through an international network of organizations which are involved in the surveillance, reporting, prevention and control of the disease.



**Vaccination program:** Vaccine is considered to be the most effective measure in preventing the disease. Many companies around the world are working on a prototype vaccine against the current bird flu virus (H5N1), which many suspect could trigger the next pandemic. The Federal government has contracted a Canadian company to produce a prototype vaccine and field test it. The company has agreed to produce sufficient vaccine for every Canadian during an influenza pandemic.

The process of vaccine production may take 4-6 months. During this period, other means like infection control and antiviral drugs could be used to prevent spread of the disease.

Initially, vaccine may be in short supply. Experts have developed a priority list of the group of people who will get the vaccine first, based on their exposure to the disease. The plan contains details about mass immunization of people, storage, supply, security, etc. of vaccine.



**Antiviral Program:** An antiviral medicine which has been used effectively against the current bird flu virus has been stockpiled by the federal and provincial governments.

This medicine would be used for the treatment of infected people and could also be used initially for prevention of the disease in groups who would be exposed to the disease until the time vaccine is available. The plan will contain all of the details about transportation, storage, distribution of the medicine and a priority list of the people who will get it.



**Health Services:** During a pandemic, health services will be overwhelmed by demand for emergency care. There will be a shortage of workforce, medicine and other supplies. Health facilities are planning for staffing and other resource management during a pandemic. The plan contains details like the establishment of triage centers in health facilities, pooling resources, policies for curtailing certain services, reallocation of staff and resources, etc.



**Public Health Measures:** Besides surveillance, antiviral and vaccination planning, other public health measures include tracing contacts, ordering of quarantine and isolation, closure of public places and banning public events and meetings.

*The Public Health Act (1994)* makes Medical Health Officers responsible for public health protection. Under this legislation, Medical Health Officers may advise or direct local governments, school boards, health institutions and other community organizations to undertake certain actions during a health crisis.



**Communication:** Communication is essential to keep the public and all stakeholders informed about the status of disease, what is being done to combat it and to reassure everyone once the crisis is over. A comprehensive communication plan has been worked on at each level of government. The plan will contain different information messages for

different groups of the community targeting the periods before the pandemic (pre-pandemic), during the pandemic (inter-pandemic) and after the pandemic is over (post-pandemic).



**Emergency Preparedness and Response:** Health plans also address health emergency issues like providing medical services to patients with complications, etc.



## **Non-Health/Medical Impact of Pandemic Influenza**

Besides the obvious health impact of a pandemic, there will be secondary consequences of a pandemic for the community which will affect different sectors. The widespread nature of a pandemic will have significant impact on society. Some impacts are discussed below.

### **Absenteeism**



It is estimated that at least 15-35% of the workforce may not be available because of illness or refusal to work due to fear of becoming infected or commitments to family. This will significantly reduce the workforce, negatively impacting the output of different sectors of society.

### **Interruption of Essential Services**



Reduction in workforce would have a devastating effect on services, especially essential services such as fire, police services, water supply, sanitation and waste disposal, maintenance of roadways, removal of snow in winter, etc. These interruptions could compound the already existing bad situation and even make it worse, causing more disease and deaths.

### **Impact on Business and Economy**



Workforce reduction in the economic sector will significantly reduce productivity. During a pandemic, suppliers are likely to experience operational and shipping difficulties. This may result in supply and demand issues.

Other businesses will also suffer the consequences of a pandemic, either directly or indirectly. Transit systems, restaurants, theaters, etc. may be closed to control the spread of disease. The financial loss to many businesses will exceed their capacity to recover and they may fail, adding to the long-term economic impact on the community. This will result in layoffs and unemployment, causing more social problems. The government's tax revenue level will diminish and emergency measures will increase expenditures.

It is estimated that a pandemic may cost between \$1.5 and \$2.5 billion in direct health care costs and between \$10 and \$24 billion in societal costs in Canada and an estimated \$960 billion worldwide, according to World Bank.

### **School Closure etc.**



After considering the situation, the Medical Health Officer may ask the schools to be closed. The schools will likely be closed in the early stages of a pandemic. Similarly, daycare closures may also happen. This will force parents to find alternative care or stay home from



work, thus decreasing the workforce even more.

### **Psycho-Social Effects**



The physical, social, and economical impact of pandemic will have a collective toll on the emotional and mental health of community members.

Many of the survivors will suffer psychological trauma from dealing with illness or death among loved ones, interruption of critical services, loss of employment and financial disruptions.

### **Role of Municipal Governments**



Local governments play a crucial role during an emergency and in recovery following the disaster. It is the legislative responsibility of every municipality to have an emergency plan (*Emergency Planning Act 1989-90*). Governments in Canada have “Due Diligence” obligations to plan for the protection of their populations. Most of the municipalities have emergency plans but it is important to understand the difference between an influenza pandemic and other emergencies or disasters.

The *Emergency Planning Act* provides authority to the municipalities to:

- Establish a local Emergency Measures Organization (EMO)
- Appoint a person as local EM coordinator
- Establish a local emergency planning committee
- Every local emergency planning committee shall establish a municipal emergency plan
- Sign mutual aid agreements with other local authorities and agencies
- Establish an emergency operations centre (EOC)
- Declaration of a state of emergency
- Other special emergency powers

Usually there are plans for natural disasters like floods, fire, severe weather, earthquakes, accidents like train derailments, road accidents, etc., or terrorism-related emergencies. There are also plans for strike situations. Basically, these plans deal with two scenarios:

- 1) There is a localized situation and there is enough workforce to deal with it; or
- 2) There is a localized situation and the workforce is not willing to work (on strike).

If we compare these scenarios with the pandemic, there will be a different situation.

Following is a comparison of influenza pandemic with other emergencies:

	<b>Other disasters ( flood, fire, etc)</b>	<b>Pandemic</b>
<b>Workforce</b>	Available	15-35% may not be available
<b>Occurrence</b>	May occur suddenly  Local, confined to an area	Will develop over time, and may arrive in 2-3 waves  Global, all segments of population may be infected
<b>Economic Effects</b>	Yes, but could be compensated by provincial or federal governments. Short-term	Federal or provincial governments may not have enough money to compensate because of wide-scale disaster Long-term
<b>Resources</b>	Available. If not, can be arranged from neighboring communities(mutual aid agreements)	Scarce resources. May not be available from others as everyone will be on their own
<b>Evacuation</b>	Could be an option	Not an option
<b>Health Impact</b>	Minimum injuries/disease or deaths	Major portion of the population will be infected and many may die.
<b>Recovery</b>	Intense period of response followed by distinct time of recovery	May require blend of concurrent response and recovery efforts throughout an extended pandemic period.

### Developing a Contingency Plan



Local governments can take action to plan for pandemic influenza. Here are a few suggestions that should be considered in planning:

1. **Form a pandemic planning team:** Identify and involve different stakeholders in planning. E.g. local EMO coordinator; councils; representatives of Regional Health Authorities (RHA); schools; local Chambers of Commerce; representatives of other businesses; non-governmental organizations; local funeral directors; local cultural, religious and ethnic groups; social services; RCMP; representatives of Crown Corporations; etc. The pandemic planning team should be assigned the task to develop a local contingency plan. The team should also encourage all stakeholders to have plans for their respective organizations.



2. **Developing a plan:** The first step is to identify the objectives that need to be achieved through the municipal contingency plan. The following objectives could be considered:

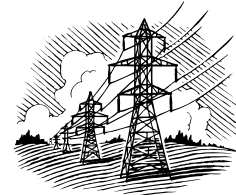


**A) Assessment of Risk:** The planning committee should assess the risk to the community at large and to the employees. It's important for members of the planning committee to comprehend the nature of the disease, how it spreads, who the vulnerable groups are (seniors, the mentally and physically challenged, etc.) The plan should have details about the vulnerable populations and how they would be protected. The plan should outline reasonable measures to reduce employee absenteeism by adopting measures that reduce the risk of influenza exposure.



The plan should also address issues to reduce/minimize the impact of pandemic influenza on employees and the community.

**B) Maintaining Essential Services:** The plan should identify the essential services like water, sewer system, garbage collection, police, fire, etc.; prioritize services; do an inventory of the resources (Man, Money & Material) available and the resources that would be needed during a pandemic, the ways to get those resources and plan as to how to best utilize resources. The plan should also identify essential services provided by others such as gas, power etc., and involve them in planning for the provision of those services.



**C) Communication:** The plan should also contain a detailed communication strategy, both internally (within the organization) and externally (with other organizations). It should outline the key contact personnel from every organization and how they would keep efficient communication during the pre-pandemic, inter-pandemic and post-pandemic periods. Consideration must be given as to how information would be disseminated to employees and the community. Other sources of communication like high frequency radios, as the telephone lines may be overloaded.



**D) Emergency Response:** The local government will not only be required to coordinate its own response to the pandemic but may also be called upon to assist the regional health authority, other agencies and neighboring communities. Local government support may be needed for:



- Providing facilities for the establishment and maintenance of Non-Traditional Sites (NTS). NTS are any sites other than health care sites that could be used for providing emergency shelter, food, care of people who cannot take care of themselves, seniors, mass immunization, and quarantine;
- Assisting the health region in implementing isolation/quarantine and quarantined people by assisting them with the provision of their day-to-day needs;
- Security services for hospitals, immunization and antiviral clinics;
- Transportation of patients;
- Providing information on the affected population and other local needs;
- Providing emergency social support to members of the community;
- Assisting in increased burials and management of the deceased;
- Supporting child and family services with care and shelter for children and families in need of temporary care due to illness and death, or to help volunteers and workers continue with their duties; and
- Provide advice or help to keep key businesses operating.

**E) Financial Issues:** The local government will need to manage the financial costs and economic impact of pandemic influenza. This may include:



- Tracking preparation, response and recovery costs for reimbursement of eligible costs under the Disaster Assistance Program;
- Taking action to protect the local economy; and
- Dealing with potential reduced revenues and increased expenditures

**F) Recovery:** The plan should also contain details about the recovery plans and programs between waves of pandemic and after it is over. The local government needs to help with the recovery efforts of individuals, organizations, businesses, etc. The plan should identify support activities that would help facilitate recovery as quickly as possible.



## **Key Actions to Be Considered For Pandemic Planning**

### **1. Communication:**

- Learn about the pandemic influenza;
- Inform employees and community about influenza, its causes, how it spreads and how it could be prevented;
- Learn about and provide information on the impact of pandemic on your community;
- Advise employees and community members about the need for individual family home preparedness plans that include storage of food, water and medications, and how to care for the sick, elderly and children;
- Describe what your organization is doing to prepare for pandemic influenza;
- Identify a focal person who will communicate with health and other departments during pandemic; and
- Develop effective communication channels with community, employees, unions, businesses, suppliers and other agencies, especially health.

### **2. Prevention and Control:**

- Facilitate routine, annual influenza vaccination for staff;
- Institute good hygiene practices among employees (hand washing, cough etiquettes); and
- Develop an internal surveillance system. If more than the usual numbers (10%) of employees are absent because of influenza-like illness, report it to public health.

### **3. Human Resource Issues:**

- Estimate the impact of pandemic influenza on your employees (total numbers for each department and the estimated number of employees unavailable during pandemic; make an inventory of retired workers and volunteers who could be called in);
- Plan for maintenance of operations with a loss of between 15 and 35% of staff;
- Develop alternate service delivery methods to limit staff contact with the public;
- Prepare policies that will allow staff to work from home via telecommunication like internet, etc.;
- Develop policies for staff overtime, quarantine, leave during pandemic, policies for temporary staff, and leave for care of family members; and
- Ensure all essential positions have at least one alternate and establish a registry of backup personnel.

#### **4. Essential Services:**

- Identify essential services that are delivered by your organization and by others;
- Assess the impact of the inability to provide these services to the community;
- Identify which services could be curtailed and which services need to be carried on in any case; and
- Identify the community elements most likely to be affected if essential services cannot be delivered.

#### **5. Public Buildings, etc:**

- Establish a list of all public buildings, identifying buildings that are high risk (high public contacts);
- Identify buildings that could be used as non-traditional sites; and
- Identify buildings that may be closed.

#### **6. Economic impact:**

- Identify primary sources of tax revenue. Anticipate increased costs associated with sick leave, reallocation of staff, overtime, and deaths. Talk to unions about human resource issues;
- Assess the economic impact to your organization, local businesses and to the community at large; and
- Set aside a contingency fund or ensure access to credit to manage exceptional expenses amid revenue losses.

#### **7. Critical Supplies:**

- Make an inventory of critical supplies;
- Estimate the current use of critical supplies and their estimated use during a pandemic;
- Stockpile critical supplies;
- Talk to suppliers about the provision of extra supplies, if needed. Ask if they have emergency plans for business continuity; and
- Identify alternate suppliers or products as a backup if your regular supplier is not available.

#### **8. Security and Enforcement:**

- Evaluate the need for security for your facilities and for health care facilities, vaccine, antiviral, etc.
- Evaluate the need for personnel for traffic control, public gatherings, etc.; and
- Look into the possibility of providing assistance to the health region in enforcement of isolation/quarantine. This would require community provision of door-step services including groceries, medication, etc.

**9. Assistance in Mass Burial:**

- Support coroners services, if requested; and
- Assist local funeral homes with burials, cremation and refrigeration.

**10. Recovery Plan:**

- Design procedures for assessing the impact of pandemic such as forming a multi-agency needs assessment team to focus on those affected and least able to cope physically, emotionally and financially;
- Plan for recovery activities like food bank, stress counseling and debriefing sessions for staff and community members; and
- For economic recovery, the local governments will need to work closely with small and medium-sized businesses, which are most likely to be affected. There would be a need to actively promote and support these businesses through advertising and other developmental incentives to restore the local economy.



*Resources:*

*Pandemic Influenza Preparedness Guidelines for Manitoba Local Governments, Nov., 2005.*

*Managing Pandemic Influenza, A Guideline for BC Local Governments, Oct., 2005.*

*The Impact of Spanish Flu on Saskatchewan Farm Families, 1918-1919 by Joan Champ, January 13, 2003.*

*Public Health Act (1994), Saskatchewan*

*The Emergency Planning Act (1989-90), Saskatchewan*

*For more information, consult the following websites:*

- [http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)
- [www.pandemicinfluenza.gc.ca](http://www.pandemicinfluenza.gc.ca)
- <http://www.health.gov.sk.ca>
- [www.psepc.gc.ca](http://www.psepc.gc.ca)

Checklist for Pandemic Preparedness

Item	Completed	In progress	Not started
Do you have a pandemic planning committee that oversees the planning process in cooperation with other agencies?			
Have you identified the key stakeholders responsible for development and implementation of specific components of the plan?			
Have you identified a process of assessing the risk of pandemic influenza?			
Have you put in place a process of keeping yourself informed about the pandemic situation nationally, provincially and locally?			
Have you identified a person who will be responsible for communicating with other departments/agencies?			
Have you identified channels of communication to keep your employees and community informed?			
Have you identified the essential services that need to be carried on during pandemic?			
Do you have resources (human and material) to carry on these services for an extended period of time?			
Have you done an inventory of all the critical supplies?			
Do you have a plan for stockpiling critical supplies?			
Have you compiled a list of suppliers who would be contacted for providing critical supplies?			
Have you identified essential employees and their replacements/backups?			
Do you have a plan to train employees to replace essential employees?			
Do you have a process to recruit and train former workers/volunteers for provision of essential and other services?			
Have you developed policies for flexible worksites and work hours during a pandemic?			
Have you developed policies for exposed, ill employees like immediate mandatory sick leave, etc.?			
Does your plan address Worker's Compensation and Unemployment Compensation issues related to workers missing work due to isolation or quarantine?			
What provisions are in place for workers whose health is negatively affected while working during the outbreak and what provisions are in place for limitation of liability of workers?			
Have you developed infection control policies for prevention of influenza in your organization?			
Do the elected officials, appointed officials, and other agency heads know their respective responsibilities in the event of pandemic?			

Does your plan address issues like loss of revenue, increased expenses and alternative resources?			
Have you assessed the economic impact of pandemic on your organization, businesses and community?			
Have you set aside a contingency fund to manage exceptional expenses?			
Are there any provisions in place for compensation of persons that are economically impacted?			
Do you have a command system in place (Emergency Operation Center) to govern roles and responsibilities during a multi-agency, multi-jurisdictional event?			
Who will be the controlling authority over modes of public transportation, events and gatherings should these need to be curtailed during a pandemic?			
Do you have MOU in place with other agencies?			
Have you identified the key persons who will assist in maintaining public order and enforcing control measures, if needed, during a pandemic?			
Have you involved unique communities like Aboriginal groups, Hutterite Colonies, etc. in your plan?			
Have you done an inventory of the people in your community with special needs?			
Have you identified facilities for providing care for children and families?			
Have you identified Non-Traditional Sites where persons needing services away from home can be cared for?			
Do you have a plan for providing mental health services to mitigate the impact of a pandemic?			
Do you have a plan for dealing with mass mortality, including transportation and burial of bodies?			
Does your plan address the security needs of your facilities, health facilities and community at large?			
Does your plan address traffic control, public gatherings and the enforcement of isolation/quarantine if requested by the Department of Health?			
Do partners such as health, law enforcement agencies, news media, schools, and colleges know what part they are expected to play during a pandemic and are they prepared to do so?			
Does your plan contain details about recovery activities like stress counseling, food bank and debriefing sessions?			
Have you planned to carry out a community-wide pandemic table-top or field exercise to train for and evaluate your plan?			

### **Influenza - What is it and how is it spread?**

Influenza (flu) is a viral infection of the respiratory system. In North America flu usually affects people during the months of October through March. Influenza is caused by one of three viruses – Influenza A, B or C. These viruses change slightly each year. The flu vaccine also differs from year to year as it changes depending on the virus.

Influenza is highly contagious. It spreads through the respiratory secretions of infected people. People can breathe in the virus from particles in the air when they are around those who have the flu as they are talking, coughing or sneezing. People may also become infected when they touch their own nose, mouth or eyes after touching objects on which viruses have landed. The virus spreads very easily, especially in areas where there are crowds or where people live, work or study in close proximity. People can spread the virus for up to seven (7) days or longer, beginning from the day before they display the first symptoms.

### **What are the symptoms of influenza?**

Symptoms develop within one to three (1 - 3) days after becoming infected and may include:

- Sudden onset of fever and possibly, chills. The fever usually drops in three to five days and people start to feel better.
- Headache and aching muscles (especially in the back and legs)
- Dry cough
- Weak and tired feeling. The tiredness and cough can last for weeks.
- Sore throat
- Runny or stuffy nose
- People feel very sick and want to stay in bed
- Young children and the elderly may experience vomiting and diarrhea

### **What is an influenza (or flu) pandemic?**

A flu pandemic is a world-wide outbreak of disease that occurs when a new influenza A virus appears in the human population, causes serious illness and is able to spread easily from person-to-person.

### **Is a flu pandemic different than the flu that occurs every year?**

Yes. The seasonal outbreaks or ‘epidemics’ of flu that occur each year are caused by subtypes of influenza viruses that are already circulating among people. This means that there is already a level of immunity in the community. Because we know or can predict which viruses are circulating each year, we can also vaccinate people for it. Pandemic flu is caused by an entirely new virus subtype. Because it is a new subtype, no one in the community will have immunity to it. The pandemic can spread very quickly before a vaccine becomes available, affecting a greater number of people and likely causing

greater sickness and death than a seasonal outbreak of flu.

### **What is bird flu and is it going to cause a flu pandemic?**

Bird flu or avian influenza is an infectious disease of birds caused by type A strains of the influenza virus. There have been a number of outbreaks of bird flu recently in Asia, Europe, the Middle East and Africa. There have also been some cases of people catching bird flu as the result of close contact with sick poultry. Because the bird flu virus has infected a small number of people, it is being closely watched in case it undergoes genetic changes making it able to spread easily from person-to-person. If these changes occur, pandemic will result. So far, this has not occurred. Organizations such as the World Health Organization and public health experts are concerned that this may happen in the future.

### **Is 'bird flu' or 'pandemic flu' in Canada?**

No. There are no current reports of bird flu in animals or humans in Canada. A truly pandemic virus has not emerged yet, so is not present anywhere in the world.

### **What is the current level of threat of a pandemic in the world?**

A close watch is being kept on the bird flu outbreaks. According to the World Health Organization-identified six levels of threat, the current threat level is 3. This means there are some human bird flu cases but the infection is limited and doesn't appear to be readily passing from human to human. A pandemic would be declared if we reach level 6 - that is, when there is increased and sustained transmission of human bird flu in the general population.

### **When the virus is considered a pandemic (world wide influenza)?**

The influenza virus becomes an Influenza Pandemic when:

- The virus that normally changes slightly each year becomes a totally new virus;
- The human population has no immunity against the new virus;
- The virus would be easily transmitted from human to human. This would result in several outbreaks occurring worldwide with a large number of deaths and illness.

### **How does pandemic flu spread?**

Pandemics of flu are spread from person to person by respiratory secretions in three ways: 1) through spread of droplets from one person to another (e.g. coughing, sneezing); 2) By touching things that are contaminated by respiratory secretions and then touching your mouth, eyes or nose; and 3) Through the spread of particles in the air in crowded populations within enclosed spaces.

### **When will there be another Pandemic Influenza?**

Nobody knows about its periodicity. Experts believe that since 1889, every 10 to 40 years the influenza virus totally changes resulting in influenza pandemic. The last pandemic was the "Hong Kong Flu" which occurred in 1968-1969. If history repeats itself another pandemic may be a possibility.

**NOTE:** Unlike the influenza virus that typically occurs in Canada in the winter months, influenza pandemic can occur anytime during the year.

### **What impact could a Pandemic have?**

Depending on its severity, it is estimated that between 11,000 and 58,000 Canadians would die in a pandemic. This may mean that 30-40% of the population could be sick with 50-75% off work or school. Schools and workplaces may be shut down. It is predicted that the effects of influenza pandemic on individual communities will last from six to eight weeks with subsequent waves occurring three to nine months after the initial wave. Besides the direct impact on health, pandemic will have a devastating impact on the economy and society at large. *A Pandemic will have major impact on the whole community.*

### **How will I know if a pandemic has reached Canada?**

The Public Health Agency of Canada is closely monitoring the situation overseas. Canada is part of a robust international surveillance system. There are strong measures in place at the international level to give maximal warning of the spread of pandemic and it reaching Canada. If a pandemic occurs, it will be announced by the Minister for Health and Chief Public Health Officer. The communication strategy for informing the public about the level of threat and the action that needs to be taken (including action by individuals) will be stepped up.

### **What are the symptoms of pandemic flu?**

The symptoms of pandemic flu are the same as the seasonal flu virus. For example, sudden onset of high temperature, muscle aches and pains, tiredness, cough, sore throat and stuffy or runny nose.

### **How long do the symptoms take to develop and how long do they last?**

It may take between 2 to 7 days for symptoms to show when you catch the flu and the symptoms may last for up to a week.

### **Who is at risk from pandemic flu?**

A pandemic flu virus that emerges will be a new one that the entire population has no immunity to. Therefore, potentially all age groups will be at risk, but it is difficult to predict in advance who will be the most severely affected. Previous pandemics have affected different age groups and have had varying death rates.

### **Can pandemic flu kill people?**

Yes. However, there are treatments available and ways to prevent infection from occurring in the first place. All levels of health authorities have strategies in place to reduce the spread and impact of the pandemic in the population.

### **How is pandemic flu treated?**

The mainstays of treatment include rest, ensuring adequate fluid intake and nutrition and taking medications to help with fever and pain such as aspirin (but not in children) and Tylenol. Complications, such as bacterial pneumonia, can develop in some people and can be treated with antibiotics. Those who are severely affected may need hospitalization, supplemental oxygen therapy and respiratory support through artificial ventilation.

### **What about antiviral medications?**

The Federal and Provincial Governments have developed a significant stockpile of the antiviral medicine which will be used for treatment of infected people and could also be used as prophylaxis, with the aim of minimizing the overall sickness and death in the population. The stockpiled antiviral medicine is effective against the current bird flu virus (H5N1) but its effectiveness in the treatment of pandemic influenza is unclear because nobody knows which virus will cause a pandemic.

### **How can I protect myself and others from pandemic flu?**

There are many measures that individuals can take to protect themselves and others from all respiratory diseases, including pandemic flu.

For example:

- general hygiene measures such as regular hand washing;
- cough hygiene (turning away from other people and covering the mouth with tissues when coughing or sneezing, disposing of the tissues afterwards and washing hands after disposal of the tissues);
- when unwell, avoid public places and contact with children or people with underlying illnesses;
- when attending a medical clinic or the outpatient department in a hospital, alert the receptionist to your symptoms so you can be seated away from others and possibly be given a surgical mask; and
- Maintain good general health and stay up-to-date with the recommended vaccinations, such as the seasonal flu vaccine

### **Will there be a vaccine available?**

Initially, the vaccine will not be available. It may take 6 -12 months to produce enough vaccine to protect all Canadians. However, Canada is the first country worldwide to plan for a secure vaccine supply through the contracting of a domestic supplier.

### **Who will receive the vaccine?**

Health Care Workers and Essential Service providers are seen as priority groups by the National Pandemic Influenza Committee. These groups are the people who will be most exposed to the virus and therefore, need to stay well to care for others. Other priority groups for receiving the vaccine will be determined when an Influenza Pandemic strikes and there is more information about which group of people may be most vulnerable to the new virus.

### **Doesn't the yearly flu shot protect me against Pandemic Influenza?**

Although the yearly influenza vaccine will have no protection against a Pandemic Influenza virus, as it would be a new virus, the yearly flu shot can help people by providing immunity against the existing influenza virus and therefore, reducing the chance of being infected simultaneously by a human and a bird flu virus.



**Is pandemic flu a quarantinable disease?**

Yes, like any other highly communicable disease, pandemic flu is a quarantinable disease.

**If I get pandemic flu will I be put in quarantine?**

Depending upon the severity of disease, people who have symptoms of pandemic flu will be advised to stay at home or will be cared for in hospital (in isolation from other patients without pandemic flu.) Depending on the timing and severity of the pandemic outbreaks, quarantining of contacts (i.e. family or friends) of pandemic influenza patients may occur, usually in the home. Quarantine or isolation measures may be used to help stop pandemic flu from coming into the community, as well as keeping it contained in the event the pandemic has already arrived.

**How long would people be quarantined for?**

Based on the current bird flu strains, individuals may be quarantined for 7 - 10 days. This will need to be reviewed according to the characteristics of the pandemic virus itself.

**What is being done in preparation for a Pandemic?**

Pandemic planning efforts are going on around the world. Kelsey Trail Health Region has established a regional Pandemic Committee which has been preparing for Pandemic Influenza since September 2001. There are Local Control Committees in communities in Kelsey Trail Health Region that have hospital facilities. These Local Control Committees are working on community plans that will provide direction to individuals in the event of Influenza Pandemic.

In the event of an Influenza Pandemic, it is important to stay tuned to your local radio station(s) and local news media for updated information. In the event of a pandemic there will also be Provincial 1-800 lines to call.

**How well prepared is Canada for pandemic influenza?**

Canada is comparatively well prepared to respond to a flu pandemic. PHAC is in constant contact with WHO and other nations about the bird flu situation and changes in virus structure. CFIA has a wild bird surveillance program throughout the country. It is maintaining a high level of alert for birds and bird products from bird flu affected countries. The Federal Government has extensively stockpiled drugs and equipment needed in a pandemic, such as antiviral agents, personal protective equipment, ventilators, etc. The Government has also contracted a Canadian vaccine producer to ensure sufficient pandemic vaccine will be available for all Canadians.



### Getting ready for pandemic influenza – A family plan

Make a family plan. The plan should include things you think you would need if you got the flu. **Remember, to prevent the spread of the flu, you will be encouraged to care for yourself at home unless you experience complications of influenza and require immediate medical attention.** It may be necessary to protect yourself and others from getting the virus by remaining in your home for several days.

#### **List of items to keep in your home**

Many of these items are things every home should have on hand for any emergency. These particular items are especially important if you cannot leave your home and people cannot enter it.

**Food and water:** Have a supply of canned and dried food and fresh water on hand – enough for several days. Although basic utilities like electricity and water should remain on, there may be disruptions in some services. Grocery stores may not have enough staff to remain open. One (1) gallon/person/day for at least 1-2 weeks is recommended. Store water in sealed, unbreakable containers. If bottling your own water, note storage date and replace every 6 months, following the expiration date on the bottle. Store non-perishable foods, maintain caloric intake, minimize the use of food that requires preparation, have a manual can opener and maintain sanitation by using fresh water for cooking

**Items for personal use and hygiene:** You may want to have extra items on hand to make your time at home more comfortable such as soap, shampoo, toothpaste, toilet paper, cleaners and activities for children. Bathroom tissue, deodorant, feminine products, hand-washing materials, sunscreen, etc. are also recommended.

**Clothing and Shelter:** You should also have extra cloths, comfortable shoes, socks, raincoats, hats, pillows, blankets, candles, waterproof matches, etc. on hand.

**Cash/Credit cards:** Make sure to have some cash on hand. If necessary, you may be able to have items delivered to your door. Keep your credit cards and other personal identification documents handy.

**Medications:** If you must take medications on a regular basis, be sure to have enough of a supply to last for several days. Have Tylenol and a thermometer available. Learn how to read your thermometer.

**Basic supplies:** Battery-powered flashlights, spare batteries, pans for cooking, communication/battery-powered radio, a First Aid kit, map, knife and utensils, and large trash bags as garbage service may be disrupted or postponed for many days. Have bags on hand to store garbage safely. Keep extra set of car keys, extra eyeglasses, contact lenses, scissors and duct-tape.

**Pets:** Don't forget your pets. Make sure you have enough food and water for them and other necessities like extra litter.

### **Family Communication Plan**

Your family may not be together at home at one time> Communication systems may be damaged or overwhelmed following a mass casualty event. Consider the following points when making a family communication plan:

- Make sure everyone knows contact numbers and how to get in touch
- Keep a list of emergency numbers near the phone at all times
- Identify an out-of-city contact to call in case of an emergency
- Identify a local point of contact who is not involved in emergency response
- Be personally reachable during emergencies
- Reduce burden on the communications system
- Increase efficiency of communication with family/friends in a crisis
- If there are disruptions to power, you will need a standard "wired" phone — one that does not run on power from an electrical outlet. Cordless phones will not operate when the power is out however, cellular phones will.

### **Be Prepare & Plan Ahead**

Talk to your friends and family about emergency plans. Make sure you have a plan to check in with elderly parents and friends, that children know who to contact in an emergency and that you know your family's medical histories. Identify someone you could call upon for help if you became very ill with the flu. Discuss the possibility with him or her. Identify someone you could call upon to care for your children if their school or daycare was closed because of the pandemic, and you were required to work. Discuss the possibility with them.