

Chatham-Kent Pandemic Influenza Plan 2009

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FORWARD

“In time of peace prepare for war” Falvius Renuus Vegetius, late Roman writer

“It is the common fate of the indolent to see their rights become a prey to the active. The condition upon which God hath given liberty to man is eternal vigilance.” John Philpot Curran, Irish Orator 1790

“Be Prepared.” Motto of the Scouts

The wisdom of these old sayings underscores the necessity of being ready for what we hope will never happen, a pandemic. It is folly to think that pandemics can be predicted, as they are random events. It is also folly to predict doom and gloom, such as disruption of the fabric of our society (I have lived through two pandemics). It would be the worst folly to presume that another pandemic will not happen, or that a global event would not affect those in Chatham-Kent. We owe it to our community and to our society to do our best to mitigate the ill effects of a pandemic. This document, a plan in constant evolution, is our local effort to do just that. It is a good plan. It should be read and kept accessible. I hope and pray that we don't have to use it.



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TABLE OF CONTENTS

BACKGROUND	1
CHAPTER 1 - INFLUENZA AND PANDEMIC INFLUENZA	3
1.1 Introduction to Influenza	3
1.2 When Influenza Becomes a Pandemic.....	4
1.3 Pandemic Phases.....	5
Table 1.3 – World Health Organization Phases of Pandemic Influenza.....	5
1.4 Canadian Activity Levels	6
Table 1.4 – Canadian Health Phases of Pandemic Influenza	6
CHAPTER 2 – PREPARING A PANDEMIC INFLUENZA PLAN	7
2.1 Pandemic Planning Assumptions	7
2.2 Overview of a Pandemic Plan	8
2.3 Role and Mandate of the Chatham-Kent Public Health Unit.....	9
2.4 Pandemic Management in the Province of Ontario	9
2.5 Planning Structure and Frameworks	10
2.6 Planning for Care.....	10
2.7 Contingency Planning.....	11
2.8 Public Health Services.....	12
CHAPTER 3 – SURVEILLANCE	13
3.1 Overview of Community	13
Table 3.1a – Population by Age	13
Table 3.1b – Population by Community	13
3.2 Essential Services in Chatham-Kent	14
3.3 Overview of Surveillance Activities	14
3.4 Surveillance Activity.....	14
3.5 Interpandemic Period Surveillance	15
3.6 Pandemic Alert Period Surveillance	15
3.7 Pandemic Period Surveillance.....	16
3.8 Postpandemic Period Surveillance	17
CHAPTER 4 – PUBLIC HEALTH MEASURES	18
4.1 Public Education.....	18
4.2 Travel Restrictions.....	19
4.3 Case and Contact Management.....	19
4.4 Strategies for School and Daycare Settings	20
4.5 Social Distancing	20
CHAPTER 5 – ANTIVIRAL MEDICATIONS AND VACCINE	22
5.1 Antiviral Management.....	22
5.2 Vaccine Management.....	23

CHAPTER 6 – COMMUNICATION STRATEGY..... 24
6.1 Core Communication Process..... 24
6.2 Overview of Incident Management System 25
6.3 Core Communication Strategy for Internal Operations 25

CHAPTER 7 – CONTINGENCY PLANNING 26
7.1 Influenza Services During Interpandemic and Pandemic Alert Period..... 26
7.2 Services During the Pandemic Period 26

GLOSSARY OF TERMS AND ACRONYMS 28

BACKGROUND

Epidemics of influenza have been known to occur for centuries. Influenza causes severe illness and death each winter in this country, particularly attacking the vulnerable populations. Every winter, outbreaks of influenza put demands on the resources of local health departments attempting to control the spread of influenza and minimize the impact of disease. Long-term care homes, hospitals, and communities in general often feel the strain of the illness created by this disease – and this is mainly during “normal” flu season.

During the 20th century, three influenza pandemics occurred: the Spanish (1918), Asian (1957), and Hong Kong (1968) flu pandemics. The 1918-1919 Spanish flu could arguably be considered the greatest pandemic of all time causing at least 20 million deaths worldwide. It especially affected young adults, and was a rapidly progressive disease that caused global devastation.

The major antigenic shifts in the influenza virus, which are responsible for such pandemics, occur infrequently and cannot be predicted. Such shifts contrast the ongoing antigenic viral drift that is responsible for the annual influenza season thereby necessitating yearly flu vaccination campaigns. It is interesting to note, however, that over the years between pandemics the cumulative mortality from “regular” influenza season is actually greater than the more dramatic deaths resulting from a pandemic. Since pandemics come without warning and cause such devastating global social disruption, it is incumbent on public health agencies to undertake pandemic planning. This needs to be done on international, national, provincial, and local levels.

For pandemic planning purposes, four periods of time need to be considered: the interpandemic period, the pandemic alert period, the pandemic period, and the postpandemic period. In this type of planning, coordination and links with other community partners such as municipalities, hospitals, physicians, health care providers, funeral homes, etc., are extremely important.

This plan is based on the Canadian Pandemic Influenza Plan (CPIP), and the Ontario Health Plan for an Influenza Pandemic (OHPIP), and reflects the Municipality of Chatham-Kent Emergency Response Plan. The plan is approved by the Chatham-Kent Board of Health members, and will be reviewed and updated on an ongoing basis.

In order to be prepared, the Chatham-Kent Public Health Unit (CKPHU) has compiled the Chatham-Kent Pandemic Influenza Plan (CKPIP), which is based on these key assumptions:

- At the time of the pandemic, decisions and actions of international, federal, and provincial levels of government will likely influence the implementation of the plan;
- Pandemic response is a responsibility shared across the health care and community services sector. Therefore, respective stakeholder agencies will develop and maintain complementary pandemic influenza response plans;

- Unlike most other emergency scenarios, a pandemic will not be a localized phenomenon and resources of all regions will be simultaneously strained. Therefore, the Chatham-Kent region must be able to demonstrate a large degree of self-sufficiency; and,
- As any pandemic is predicted to occur in waves, this self-sufficiency will need to be sustained over a prolonged period.

CHAPTER 1 - INFLUENZA AND PANDEMIC INFLUENZA

1.1 Introduction to Influenza

Explaining Influenza

Influenza, commonly known as the flu, is a respiratory illness caused by the influenza virus A or B, affecting 10-25% of Canadians annually. This number can be as high as 50% in vulnerable populations, such as those individuals in Long-Term Care Homes (LTCH) or Daycares, where influenza can quickly spread. In Canada, flu season commonly runs between November and April.

There are three types of Influenza Viruses - A, B, and C, although influenza C virus rarely causes illness in humans. Influenza A causes most of the infections during influenza season, although some Influenza B cases are also seen. The A and B viruses are not stable, and undergo many changes to their genetic make-up. This is referred to as “antigenic drift”. As the influenza season progresses the virus becomes less like its previous version and there is less immunity in the community. The reason that it is important to receive a flu shot every year is because the composition of the vaccine reflects the antigenic drift. It takes months for an influenza vaccine to be produced, and it is a process that involves growing the virus in fertilized eggs.

Influenza can spread quickly from infected people who cough or sneeze. The virus can enter the body via nose, mouth, and eyes if an individual is within one meter from an infected person. Once exposed to the virus, a person may develop symptoms in one to three days; some may not develop symptoms, but will still be able to transmit the virus. An adult is infectious one day before onset of symptoms and up to five days after onset. A child is infectious one day before onset of symptoms and up to seven days after. People are most infectious one to two days after onset of symptoms. The virus can also survive on environmental surfaces. For example it can survive on surfaces that are hard and non-porous for up to 48 hours; on cloth, paper, and tissues for eight to twelve hours; and, on a person’s hands for up to five minutes.

People with influenza quickly become ill with a cough, fever, chills, sore throat, headache, muscle aches and tiredness. People of any age can get influenza. Symptoms usually last two to seven days but sometimes longer in the elderly and in people with chronic diseases. Most people who get influenza are ill for only a few days. However, the cough and fatigue can persist for several weeks, making the return to everyday activities difficult. Some people can become very ill, possibly developing complications and requiring hospitalization. The elderly, infants and children, and those with long-term medical conditions, such as heart or lung problems are particularly at risk of complications from influenza infection.

How to protect oneself from influenza

Influenza vaccine is between 70 - 90% effective in preventing influenza infection in healthy adults, and in children it is 77 - 91% effective. In the elderly, the vaccine can prevent pneumonia and subsequent hospitalization approximately 60% of the time, and prevent death about 80% of the time. Influenza vaccine is effective about two

weeks after immunization, and may stay effective for up to one year. People who receive the vaccine can still get influenza, but if they do, it is usually a milder illness. The vaccine, however, will not protect against colds and other respiratory illnesses that may be mistaken for influenza.

Who should get the flu vaccine?

The flu vaccine is especially recommended for those individuals who are at elevated risk of becoming infected with the influenza virus. This vulnerable population includes the elderly, children between the ages of six months and two years of age, and people with underlying medical conditions such as:

- Cardiac or pulmonary disorders;
- Diabetes mellitus and other metabolic diseases;
- Cancer, immunodeficiency, immunosuppression (due to underlying disease and/or therapy);
- Renal disease;
- Anemia or hemoglobinopathy;
- Conditions that compromise the management of respiratory secretions and are associated with an increased risk of aspiration; and,
- Children and adolescents with conditions treated for long periods with acetylsalicylic acid.

Also, it is recommended that those people who have an increased chance of transmitting the virus to the vulnerable population, such as daycare workers, people providing care to children under the age of two, health care workers, caregivers for the elderly, etc., receive the vaccine yearly.

The flu vaccine is provided free to all residents of Ontario during the fall to spring season, and is available at your local Public Health Unit and primary health care practitioner's office. Immunization should be considered for all people over six months of age.

1.2 When Influenza Becomes a Pandemic

Strains of influenza are circulating throughout the population year round. In the past, only Influenza A viruses were associated with a pandemic. According to the Ontario Health Plan for an Influenza Pandemic (2008), a pandemic will occur when:

- a new Influenza A virus emerges;
- the new virus can spread efficiently from human to human;
- the new virus can cause serious illness and death; and,
- the population has little or no immunity to the new virus.

The World Health Organization (WHO) (2005) suggests that a new influenza virus capable of causing a pandemic can happen in two ways:

- ‘Genetic reassortment’ occurring when two different viruses infect the same cell and exchange genetic make-up. The new virus spreads easily from human to human causing serious human illness as the population is largely susceptible; or,
- ‘Adaptive mutation’ occurring when the virus gradually becomes more easily transmitted between humans.

Experts believe that another pandemic will hit within the next 5-10 years, because historically there has been a major pandemic every 25 years, and it has been 30 years since the previous one. It is important that preparation is underway at all government levels, because it is not a question of “if”, but “when” the next pandemic will occur. It is important to remember that there is no way to predict when a pandemic will hit, how quickly it will spread, or how severely people will be affected.

1.3 Pandemic Phases

The World Health Organization has outlined the phases of pandemic activity as listed in Table 1.3.

Table 1.3 – World Health Organization Phases of Pandemic Influenza

Period	Phase	Description
Interpandemic period	Phase 1	No new influenza subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection is considered low.*
Interpandemic period	Phase 2	No new influenza subtypes have been detected in humans, however, a circulation of animal influenza virus subtypes poses a substantial risk of human diseases.
Pandemic alert period**	Phase 3	Human infection(s) with a new subtype, but no human-to-human spread, or, at most, rare instances of spread to a close contact.
Pandemic alert period**	Phase 4	Small cluster(s) with limited human to human spread, but spread is highly localized suggesting that the virus is not well adapted to humans.
Pandemic alert period**	Phase 5	Larger cluster(s) but human to human spread still localized suggesting that the virus is becoming increasingly adapted to humans, but may not yet be fully transmissible.
Pandemic period	Phase 6 ***	Increased and sustained transmission within the general population.
Postpandemic period		Return to Interpandemic period.

* The distinction between phase 1 and phase 2 is based on the risk of human infection or disease from circulation strain in animals.

** The distinction between phase 3, phase 4, phase 5, is based on the risk of a pandemic.

*** Canadian Activity level incorporated into this phase.

Source: World Health Organization, 2005

1.4 Canadian Activity Levels

In addition to the WHO phases of a pandemic influenza, which reflect the international risk and activity level, the Public Health Agency of Canada has developed a numbering system to coincide with international pandemic activity.

Table 1.4 – Canadian Health Phases of Pandemic Influenza

WHO Phase	Canada Phase	WHO/CAN Phase	Definition
6	0	6.0	No cases in Canada. Activity outside Canada is increased and transmission occurring in general population.
6	1	6.1	Low activity and risk in Canada with no cluster(s) identified. Single human case(s) identified in Canada.
6	2	6.2	High activity and risk in Canada. Widespread activity observed in Canadian population.

Source: Ontario Health Plan for an Influenza Pandemic, August, 2008.

CHAPTER 2 – PREPARING A PANDEMIC INFLUENZA PLAN

2.1 Pandemic Planning Assumptions

Based on knowledge gained in previous pandemics, experts have been able to make assumptions on what the next pandemic will be like. The Ontario Health Plan for an Influenza Pandemic (2008) included these assumptions, and that plan is used as the foundation for the Chatham-Kent Pandemic Influenza Plan.

Pandemic planning assumptions include:

- A pandemic will be due to a new subtype of Influenza A;
- A new strain will most likely occur in Southeast Asia;
- Ontario will have little lead time;
- The illness will spread in 2-3 waves; the second wave will occur 3-9 months after initial outbreak and will cause more serious illnesses and deaths; each wave will last approximately 8 weeks;
- The pandemic strain will be community spread, and will be transmitted person to person in the community rather than in health care settings;
- Most people will be susceptible to the virus because of limited prior exposure
- If the pandemic is caused by a recycled influenza strain, children and otherwise healthy adults may be at greater risk; and,
- In the first wave, at least one-third of deaths will most likely be in people under age 65 compared to less than 5% of deaths in the same age group that would occur in the interpandemic period.

The unique features of the timing of influenza pandemics that must be considered are:

- There will be a warning time of 1-6 months from the time of the alert to the local outbreak;
- A pandemic will occur in multiple waves;
- The first wave will last 6-8 weeks, with a peak at 3-4 weeks;
- The second wave will occur 3-9 months after the initial onset; and,
- A 6-8 month lead time is required for full vaccine manufacture.

The estimated impact of the next influenza pandemic is difficult to predict as it depends upon several factors: the virulence of the virus, speed of transmission, and the effectiveness of public health prevention. Based on pandemics throughout history, it has been assumed that in Canada alone there could be 9,000 – 51,000 deaths. These numbers are based on a mild to moderate pandemic and do not include factors that may lower the death rate such as the use of antiviral drugs, effective vaccine, and public health measures.

The economic costs of a pandemic influenza are estimated to be between 10 and 24 billion dollars. That includes both indirect and direct costs on the health care system

and on society at large. This estimate does not include the costs associated with trade.

For businesses, it is estimated that 20-60% of the working population may be unable or unwilling to work for 2-4 weeks during the peak of a pandemic. As a result there may be an increased demand for goods and services with a diminished workforce. Therefore, it is vital for businesses to begin planning and preparing for any disruption of service. Businesses in Chatham-Kent can do this by preparing Business Continuity Plans. They can refer to the Municipality of Chatham-Kent Public Health Unit for further information.

Another useful tool for pandemic planning is to estimate the number of people that would be affected by a pandemic. The estimates were calculated using FLU AID 2.0 software developed by the Centre for Disease Control and is available on their website at <http://www2a.cdc.gov/od/fluidaid/>.

In 2006, the province of Ontario had an estimated population of **12,686,952** (based on the 2001 Census). For an attack rate of 35% of Ontario's total population it is projected that:

- **4.4 million** will be ill enough to remain home from work or school for at least ½ day;
- **955,127 to 2.5 million** will be managed through self-care techniques;
- **1.8 to 3.3 million** will require outpatient care;
- **19,381 to 67,387** will be hospitalized; and,
- There will be **6,998 to 20,383** deaths.

In 2006, the Municipality of Chatham-Kent had an estimated population of **110,039** (based on the 2001 Census). For an attack rate of 35% of Chatham-Kent's total population it is estimated that:

- **38,514** will be ill enough to remain home from work or school for at least a half day;
- **8,258 to 22,206** will be managed through self-care techniques;
- **16,054 to 29,469** will require outpatient care;
- **184 to 603** will be hospitalized; and,
- There will be **70 to 184** deaths.

These numbers and attack rates help to guide pandemic planning, and are used for reference throughout the Chatham-Kent Pandemic Influenza Plan.

2.2 Overview of a Pandemic Plan

Aim and Purpose of Plan

Planning and preparation are key components when considering the likelihood of a pandemic. To help the Chatham-Kent Public Health Unit better prepare a response to

a pandemic influenza we have established goals for the development of our plan. The purpose of the Chatham-Kent Pandemic Influenza Plan is:

- To ensure that the preparedness for a potential pandemic will provide the public and businesses within the Municipality a timely, coordinated and efficient response to a pandemic influenza outbreak; and,
- To engage in ongoing collaborative community partnerships, and to incorporate updates and policy developments into later releases of the plan.

Goals and Objectives

The goals of the Chatham-Kent Pandemic Influenza Plan are developed in accordance with the provincial goals outlined in the Ontario Health Plan for an Influenza Pandemic (2008). The goals are:

- To minimize serious illness and death from a pandemic influenza in the Municipality of Chatham-Kent; and,
- To minimize societal disruption in the Municipality of Chatham-Kent as a result of an influenza pandemic.

2.3 Role and Mandate of the Chatham-Kent Public Health Unit

As outlined by the Ontario Health Plan for an Influenza Pandemic (2008), preparedness planning is a responsibility that is shared between the public health unit and local emergency response agencies. Local Medical Officers of Health, or designates, have been given the responsibility of ensuring that pandemic plans are developed, tested, and reviewed regularly in the interpandemic period.

Under the direction of their respective Medical Officer of Health (MOH), or designate, public health units are the lead agencies for investigating any outbreaks. The roles and responsibilities of the Chatham-Kent Public Health Unit are to maintain a local surveillance system for respiratory illness, provide mass immunization, coordinate vaccine and antiviral drug distribution, provide public information/education sessions to local community members, and to support local efforts in responding to and managing an event by liaising with local partners.

Internal Committee

The Chatham-Kent Public Health Unit Emergency Preparedness Committee was established in 2004. It is anticipated that the committee members will assist with the ongoing development and planning of health unit emergency response plans including integration with the Chatham-Kent Pandemic Influenza Plan.

2.4 Pandemic Management in the Province of Ontario

The provincial Health Protection and Promotion Act (HPPA) (1990) states that the local MOH, or designate, has the authority to implement any public health measures within his/her health unit area. This may include actions such as restricting gatherings,

and issuing communicable disease orders. However, due to the magnitude of a pandemic, the Chief Medical Officer of Health will issue such an order after collaboration with local MOHs and others.

2.5 Planning Structure and Frameworks

The Chatham-Kent Pandemic Influenza Plan reflects the Ontario Health Plan for an Influenza Pandemic (2008) and the Canadian Pandemic Influenza Plan (2006). This document is a work in progress as there will be additions and policy developments added into subsequent versions of the plan. Pandemic planning is an ongoing, evolving process with many factors that influence its development.

The ethical framework for decision making for government and public health authorities is outlined in the Ontario Health Plan for an Influenza Pandemic (2008). During a pandemic many difficult decisions will need to be addressed, such as allocation of antiviral medications and vaccine, and reallocation of people and resources. Several principles were kept in mind when formulating this plan: transparency, evidence-based decision making, inclusiveness, responsiveness to new information, and accountability. Several core ethical values were also embodied in the plan, these being: individual liberty, protection of the public from harm, proportionality, privacy, equity, duty to provide care, reciprocity, trust, solidarity, stewardship, family-centred care, and respect for emerging autonomy.

2.6 Planning for Care

Pandemic planning in the Municipality of Chatham-Kent requires a comprehensive understanding of all required health services. In addition to formal health services, there will be a need for alternative methods of health care delivery such as self care and flu centres.

Self Care

Self care is an important strategy employed to minimize the increased strain on the health care system during a pandemic. As previously indicated, the health unit will be charged with providing ongoing information and education about self-care. Self-care not only addresses how to look after the influenza patient, be it oneself or another, but also deals with how to take measures for the prevention of infection.

Flu Centres

Triage sites will be a main component of health care service delivery in the Municipality of Chatham-Kent. Health care organizations are coming together to plan for these assessment centres. The goal for flu centres in Chatham-Kent will be to assess individuals for influenza, administer vaccine/antiviral drugs, and to refer individuals to the appropriate community-based agency or hospital for follow-up care. The Municipality of Chatham-Kent will require three to six sites depending on the number of individuals affected in the region.

The Chatham-Kent Public Health Unit will continue to meet with health care partners in 2009 to discuss pandemic planning and site planning. The location, staffing, and services provided by flu centres is to be determined, and will be a mandate of this group to develop.

2.7 Contingency Planning

Contingency planning for an event on the horizon is frequently difficult to justify, particularly in these times of limited resources and more urgent problems and priorities. However, an influenza pandemic will be unlike any other public health emergency or community disaster. Unlike most emergencies currently addressed in health care facilities' emergency contingency plans, the effect of an influenza pandemic on individual communities will be relatively prolonged – weeks to months when compared to minutes to hours observed in most disasters.

The Chatham-Kent Public Health Unit will play a key role in planning and includes the coordination of local response throughout all pandemic periods. When developing a pandemic influenza contingency plan, workplaces within the Municipality of Chatham-Kent should consider the Chatham-Kent Public Health Unit as a source of expertise in infection control, vaccinations and other preventative health measures; enhanced social distancing; and workplace closure criteria. Some basic assumptions need to be considered when developing a contingency plan. These include:

- Pandemic influenza will spread via the same route(s) as other influenza (droplet, contact and possibly airborne);
- Projections of numbers of infected and clinically ill residents and residents requiring outpatient care or hospitalization are available (through the CDC FLU AID site or public health authorities). Impact on a particular facility can then be calculated from these estimates;
- Routine precautions will be used to the extent possible during the pandemic;
- Supplies for Personal Protective Equipment (PPE) may be limited;
- Negative pressure isolation rooms will not be available;
- Cohorting of residents and use of non-facility care settings will take place;
- Number of residents requiring hospitalization may exceed the norm, and the receiving hospital may be unable to handle the extra load; and,
- Facilities, faced with ill staff, will be using non-trained or non-specialized workers to assist in resident care activities.

It has been noted that while federal and provincial governments have important roles in planning for and responding to a pandemic, a pandemic will likely affect every community. Every community will need to mount its own response to a pandemic as there will be insufficient central resources.

Non-life threatening health services and public health programs will be significantly altered during a pandemic. They will be re-evaluated during the course of the

pandemic, and could be consolidated or suspended until the pandemic recovery phase. It is prudent that pandemic planners be mindful of the capacity and limitations of existing health-care infrastructure.

These challenges continue to be incorporated into the planning and preparedness activities in our community. For help with development of a contingency plan, refer to the Chatham-Kent Health Care Facility Pandemic Planning Toolkit which is available from Chatham-Kent Public Health.

2.8 Public Health Services

Public health units are designated by the Ministry of Health and Long-Term Care (MOHLTC) to take a lead role in pandemic planning in their respective communities. As there will be intense pressure on health unit resources, the Chatham-Kent Public Health Unit is developing a business continuity plan that will define all levels of public health service that can be delivered at every stage of a pandemic. Work is currently being undertaken by the Chatham-Kent Public Health Unit and community health-care partners to plan and develop a coordinated pandemic response plan.

CHAPTER 3 – SURVEILLANCE

3.1 Overview of Community

The Municipality of Chatham-Kent has a total population of 108,177 (2006) and covers a total of 2,492 square kilometers. Table 3.1a provides a summary of the population by age and Table 3.1b a summary of the population by community. There are 23 communities and 9 regions within the Municipality of Chatham-Kent. For more information on demographics refer to the Chatham-Kent portal at <http://www.chatham-kent.ca> under Economic Profile.

Table 3.1a
Population by Age

Age Group	2006 Population
Age 0 - 4	5,870
Age 5 - 9	6,395
Age 10 -14	7,420
Age 15 -19	7,740
Age 20 - 24	6,995
Age 25 - 29	5,550
Age 30 - 34	5,750
Age 35 - 39	6,550
Age 40 - 44	8,510
Age 45 - 49	9,020
Age 50 - 54	7,990
Age 55 - 59	7,305
Age 60 - 64	5,870
Age 65 - 69	4,795
Age 70 - 74	4,045
Age 75 - 79	3,540
Age 80 - 84	2,755
Age 85 years +	2,085

Source: Statistics Canada – 2006 Census

Table 3.1b
Population by Community

Area	2006 Population
Chatham-Kent	108,177
Chatham	45,282
Wallaceburg	10,903
Harwich Township	6,408
Chatham Township	5,946
Raleigh Township	4,954
Tilbury	4,809
Blenheim	4,649
Dover Township	3,880
Ridgetown	3,254
Dresden	2,496
Howard Township	2,129
Tilbury East	2,120
Camden Township	2,093
Romney Township	1,960
Wheatley	1,943
Orford Township	1,214
Zone Township	1,000
Bothwell	968
Thamesville	930
Highgate	413
Erieau	408
Erie Beach	194

Source: OMAFRA – 2006 Census

3.2 Essential Services in Chatham-Kent

Essential services in Chatham-Kent would include Public Health, hospitals, and critical infrastructure services (i.e. hydro, water). 'First responders' are one of the essential services that will be utilized during a pandemic. They include the Ontario Provincial Police, Chatham-Kent Police Services, Chatham-Kent Fire Services, and Sun Parlour Emergency Medical Services. The role of these services during a pandemic will be to provide support to the community as first responders for influenza-related illness, and maintain continuity for all other medical calls, fire services and policing services.

3.3 Overview of Surveillance Activities

Surveillance is the continuous and systematic process of collecting, analyzing, interpreting and disseminating information to monitor public health, and to ensure timely interventions in order to reduce morbidity and mortality.

The local public health unit has the primary responsibility for the collection, analysis, and dissemination of disease surveillance information in a regular flu season (October-April) and during a pandemic. The Health Protection and Promotion Act reinforces the mandate of the public health system being responsible for protecting, preventing, managing, and controlling the spread of communicable diseases.

3.4 Surveillance Activity

Elements of comprehensive surveillance activities, according to the Ontario Health Plan for Influenza Pandemic (2008), need to consist of the following:

- **Laboratory/virology surveillance** – monitor all suspected respiratory cases and the antigenic drift and shift of circulating influenza viruses;
- **Disease/epidemiologic surveillance** – determine extent and severity of influenza pandemic in relation to baseline levels of influenza-like illnesses (ILI) and to guide prevention and management strategies. Enhanced surveillance in walk-in clinics, family health team clinics, family physician and specialist offices, and nurse practitioners' offices for ILI;
- **Animal health surveillance** – detect respiratory outbreaks in domestic and wild animals;
- **Vaccine and antiviral uptake surveillance** – monitor, evaluate, and reallocate vaccine or antiviral stocks;
- **Adverse event surveillance** – detect unusual adverse events related to vaccine or antiviral use;
- **Data collection systems** – provides a way to collect information (i.e. the Integrated Public Health Information System –iPHIS); and,
- **Effective lines of communication** – between local, provincial, federal, and global levels.

The current surveillance in place at the Chatham-Kent Public Health Unit involves a comprehensive approach that is called “passive reporting system.” Information generated from this approach allows for detection and monitoring of the regular yearly flu season.

Current surveillance for the regular influenza season is completed at the Chatham-Kent Public Health Unit by the Environmental Health Services Team. This involves monitoring the influenza activity in the community through reports from long-term care homes, labs, family physicians, walk-in clinics, daycares and schools.

Once a pandemic influenza has been established in Chatham-Kent, surveillance activities will focus on an “active reporting system” to help determine the health impact of the pandemic on the population. This will include monitoring emergency department visits, hospital admissions, admissions to intensive care units, ventilator use, and influenza-related deaths. Numbers of visits to the influenza assessment treatment and referral centres, when in place, will be monitored. The distribution of any antiviral medication and/or vaccine will also be monitored.

3.5 Interpandemic Period Surveillance

In the interpandemic period (refer to Table 1.3), the aim is to detect novel strains of influenza as soon as possible. Current surveillance systems are in place year round and provide a comprehensive representation of global influenza activity. The routine influenza surveillance activities will continue during all phases of a pandemic, however, additional activities will be implemented.

The College of Family Physicians of Canada (CFPC) recruits sentinel physicians by census divisions throughout the country. Sentinel physicians collect specimens from symptomatic patients and submit the specimens for testing, as well as report the number of cases of influenza-like illness they see.

3.6 Pandemic Alert Period Surveillance

In the pandemic alert period (refer to Table 1.3) the Ministry of Health and Long-Term Care will obtain information about any new influenza strain that shows antigenic shift, including its ability to cause human disease, and about the responses of the countries involved. When pandemic influenza has been identified outside of North America, interpandemic surveillance strategies will remain in place and be intensified in the following ways:

- The MOH and Director of Public Health, or respective designates, will meet with the management team and the Emergency Preparedness Committee to review the major elements of the Chatham-Kent Pandemic Influenza Plan and Business Continuity Plan;

- Bulletins on national surveillance from the Centre for Disease Control (CDC), WHO and Public Health Agency of Canada (PHAC) regarding the virologic, epidemiologic and clinical findings associated with the new virus will be monitored on a daily basis and disseminated where appropriate, by newsletters, faxes, or bulletins by the MOH, or designate;
- MOH, or designate, collects and disseminates all information to stakeholders about the influenza activity and severity, epidemiological and laboratory findings, and disease control efforts;
- Case definitions of Influenza-Like Illnesses (ILI) as per Health Canada and the MOHLTC will be reinforced with health care providers in the community by the MOH, or designate;
- Long-term care homes and hospitals will closely monitor all individuals with respiratory tract infections and carry out specimen collections on persons meeting the case definition; and,
- Health care providers will obtain laboratory specimens from all persons, their family members and close contacts, who have travelled from geographic areas in which the novel strain has been isolated and who are presenting with clinically compatible signs and symptoms.

3.7 Pandemic Period Surveillance

The activities that take place in the pandemic period (refer to Table 1.3) are directly related to the World Health Organization's Phases of Pandemic Influenza. Once the pandemic strain of influenza reaches North America it will be essential to track the spread of the disease. The surveillance activities outlined above in the interpandemic and pandemic alert periods will continue but will be intensified in the following ways:

- The MOH and Director of Public Health, or designates, will meet daily to review the influenza activity across Canada and in the Municipality of Chatham-Kent. Influenza activity will be classified as one of the following categories 0 through 2:
 - (0) No activity;
 - (1) Low activity and risk in Canada: Single human cases identified;
 - (2) High Activity and risk in Canada: Widespread Activity;
- The MOH, or designate, will meet with the Chatham-Kent Public Health Emergency Preparedness Committee to review major elements of enhanced surveillance activities and modify the plan as needed;
- Emergency departments and primary health practitioners will obtain viral specimens from patients presenting with ILI;
- All specimens from patients with ILI will be processed as a priority by Public Health Laboratories;
- Surveillance for outbreaks in institutions will be enhanced. All LTCHs and hospitals will be advised to obtain appropriate specimens for viral culture and report any cases of ILI/Febrile Respiratory Illness (FRI) to the MOH, or designate, immediately;

- Notices will be sent to all schools, day nurseries, and large businesses requesting that reports of absenteeism rates greater than 10% be forwarded to the MOH, or designate;
- Monitoring of mortality rates;
- Monitoring of antiviral medication and vaccine resistance; and,
- Continuous monitoring of pandemic plan processes including functionality, timeliness, and completeness of reporting, data entry and dissemination of information.

3.8 Postpandemic Period Surveillance

The postpandemic, or recovery period (refer to Table 1.3) will be identified when influenza activity has returned to normal interpandemic levels, and immunity to the new virus is widespread throughout the general population. The World Health Organization will report when the pandemic has officially ended which is likely to be when 2-3 years have passed.

Surveillance and Analysis Strategies

- Evaluate efficacy of the plan, and make adaptations as necessary in preparation for a "second wave";
- Continue monitoring and reporting spread and impact of the virus; and,
- Evaluate surveillance strategies by reviewing report findings in iPHIS in collaboration with the MOHLTC.

CHAPTER 4 – PUBLIC HEALTH MEASURES

Public Health Measures are non-medical interventions used to slow the spread of influenza during a pandemic. These measures will help to ensure public confidence and compliance, and reduce confusion for the public. There are six key public health measures:

- Public education;
- Travel restrictions;
- Case management;
- Contact management;
- School and daycare closures; and,
- Social distancing.

The effect of each public health measure depends on the epidemiology of the strain, the pandemic phase, the timing of the measure and public compliance, the amount of social disruption, and the capacity required to implement the measures. The MOH, or designate, has the authority to implement the measures within the Municipality of Chatham-Kent.

The Chatham-Kent Public Health Unit will use a severity-based approach to public health measures during an influenza pandemic. The types and extent of public health measures used will depend on the severity of the pandemic and will be determined on the death rates associated with the pandemic (as based on the OHPIP, 2008), and is based on the assumption that by the time the pandemic arrives in Ontario more information will be known about the severity of the strain.

4.1 Public Education

The goal of public education is to provide clear, consistent, and accurate information to the public to help them prepare for a pandemic and reduce the risk of spreading the virus. The public education messages will include information about influenza and how it spreads. Public education by public health officials will begin as soon as the first lab-confirmed case occurs in North America and will continue until the end of a pandemic.

During a pandemic the Chatham-Kent Public Health Unit will offer services to the residents of the Municipality of Chatham-Kent that will help answer any questions they might have with regard to the public education strategies listed below. Key messages will include information such as hand hygiene, respiratory/cough etiquette, and disinfection, etc.

The Chatham-Kent Public Health Unit has staffed telephone services that are available between 8:30 am. and 4:30 pm. and hours will be extended during phase 6

of a pandemic (refer to Table 1.3), but the number of hours will depend on the severity of the pandemic. Residents can also access information through www.chatham-kent.ca/publichealth and Telehealth Ontario. A dedicated health unit phone line will be activated to provide current information.

4.2 Travel Restrictions

Depending on the severity of the pandemic influenza, restrictions on foreign travel could begin very early in the pandemic alert period in an effort to keep the virus outside Canada. This would continue throughout the duration of the pandemic into the post-pandemic period and recovery phases. The order for restrictions on travel would come from the Public Health Agency of Canada. Cross-border travel could be restricted for those individuals with influenza-like illness, and there could be a request for individuals to defer unnecessary travel. The number of persons allowed on city transit could be restricted by public health officials, depending on the severity of the pandemic.

4.3 Case and Contact Management

Case Management

The goal of case management is to follow up with individuals ill with influenza and to provide information and strategies to reduce transmission to other people. Case management will involve public health nurses, public health inspectors, or public health support staff depending on the availability of employees during a pandemic. For example, a call could be made for voluntary isolation for those affected by the influenza virus. Public health officials will issue media messages about self-care, antiviral medications, and ongoing education about influenza-related topics. Individuals with ILI will be provided with information about how to care for someone with influenza at home, and when and where to seek medical attention.

Contact Management

The goal of contact management is to follow up with infected individuals to determine contacts. Contacts will then be notified and advised to take steps to protect their health and the health of others. Contact management will involve public health nurses, public health inspectors, or public health support staff depending upon the availability of employees during a pandemic.

Voluntary and Modified Quarantine

Depending upon the severity of the pandemic, two types of quarantine may be put into effect:

- Voluntary – close contacts of cases may be asked to quarantine themselves at home or avoid contact with others until the incubation period for influenza is over (may be 3 days, but will be determined based on the pandemic strain); or,

- Modified – people who are symptom-free will be able to leave the home for the essentials (such as grocery shopping), but will be asked not to go to work or engage in other social gatherings.

Case and contact management is highly labour-intensive due to the individual follow-up process. The Chatham-Kent Public Health Unit will be able to provide individual case and contact management in the pandemic alert period and early in the pandemic period. In these periods there will be a small percentage of cases and therefore an opportunity to contain the spread of the virus. Individual case and contact management will begin once there are cases of influenza in or near Ontario and will continue until the pandemic strain is confirmed. Once the cases and contacts become more numerous public health resources will become exhausted and the Chatham-Kent Public Health Unit will rely on group public health follow-up until the end of a pandemic.

4.4 Strategies for School and Daycare Settings

Children are at a higher risk of infection because they do not have extensive pre-existing immunity to influenza viruses, and tend to be contagious for a longer period. The goal of school and daycare closures is to minimize the number of contacts for children thereby reducing their risk of infection. These strategies could be implemented early in the pandemic and maintained throughout the pandemic. Clusters of influenza within our Municipality and/or surrounding areas would prompt these measures to be implemented.

All schools and daycare settings are encouraged to adopt infection prevention and control measures. Chatham-Kent Public Health can request changes be made in the school environment that will reduce the degree of contact between children, such as spacing students at least one metre apart, suspending interschool and non-essential sports/recreational activities (i.e. school dances, track and field, etc.), and reducing large gatherings among students (i.e. assemblies, closing lunchrooms, staggering recess times).

Orders may be issued to temporarily close daycares and all schools. This decision would be in collaboration with the affected school board or governing body.

4.5 Social Distancing

The goal of social distancing in the community is to reduce both the spread of the pandemic influenza, as well as the number of close contacts that adults have in the community. This includes workplaces and the post-secondary education system.

Social distancing messages from Chatham-Kent Public Health officials will include ensuring the availability of hand-sanitizers, encouraging employees to wash their hands frequently and practice respiratory hygiene and cough etiquette, cleaning and

disinfecting environmental surfaces, increasing fresh air in the building, and asking employees to stay home from work and social engagements if they are ill.

Chatham-Kent Public Health officials will encourage workplaces and post-secondary institutions to make changes to their environment and practices that reduce contacts between adults. For example, an average distance of 3 metres between desks at workplaces will be recommended as best practice. Orders may be issued restricting or discouraging large gatherings, especially when they are held indoors. These could include sporting events, dances or social activities, and faith-based ceremonies.

CHAPTER 5 – ANTIVIRAL MEDICATIONS AND VACCINE

During a pandemic the Chatham-Kent Public Health Unit has the responsibility for coordinating the distribution and administration of vaccine and antiviral medications within the Municipality of Chatham-Kent. Based on the guidelines in the Ontario Health Plan for an Influenza Pandemic (2008), the Chatham-Kent Public Health Unit is reviewing its mass immunization plan. The Ministry Emergency Operations Centre (MEOC) is responsible for coordinating the distribution of antiviral medications across the province. A local distribution plan is being developed with community partners.

5.1 Antiviral Management

Antiviral medications (anti-influenza drugs) are effective for both influenza treatment and prophylaxis, and may provide an adjunctive management strategy during a pandemic, particularly when a vaccine may not be available for the first wave of illness. Antiviral medications will likely be the only virus-specific intervention for the initial response of a pandemic. The protection provided by antiviral medications is virtually immediate and does not interfere with an individual's response to influenza vaccines. It is not yet known how effective antiviral drugs will be against the pandemic strain, however when antiviral medications are used during seasonal influenza they have been shown to reduce the length of time people are ill, have symptoms, or are hospitalized.

Based on consultation with the Chief Medical Officers of Health, the Public Health Agency of Canada is now working with the provinces to establish a national antiviral stockpile large enough to treat those needing care. The Government of Ontario has committed to maintain a stockpile of antiviral medications large enough to treat up to 25% of the population.

The Ontario provincial government is endorsing the Pan-Canadian Public Health Network's 2007 report and policy recommendations on the use of antiviral medications for prophylaxis during an influenza pandemic. The report states that widespread use of antiviral medications for prophylaxis during a pandemic is not justifiable at this time for several reasons, these being:

- The limited availability of data on the efficacy of antiviral medications when used for prophylaxis;
- The unknown health and safety risks of administering a drug with known side effects to a large number of healthy people for a prolonged period;
- The difficulties of ensuring compliance if widespread use was to be initiated; and,
- The risk of resistant strains of the virus developing.

5.2 Vaccine Management

The annual Universal Influenza Immunization Program (UIIP) reduces the morbidity, mortality, and demands on the health care system. Since the year 2000, the Chatham-Kent Public Health Unit has provided free influenza immunization programs for all citizens within the Municipality.

The federal government is responsible for the development and supply of all vaccine. It is the province of Ontario's goal to procure enough vaccine for the population of Ontario (approximately 25 million doses). The vaccine will be distributed to public health units across Ontario for local distribution.

During a pandemic, the Chatham-Kent Public Health Unit will use a "pull" clinic for community clinics. A "pull" clinic is one where Public Health officials set up one or more mass immunization clinics for the public. According to the Ontario Health Plan for an Influenza Pandemic, 2008, this will be the most effective use of public health resources.

CHAPTER 6 – COMMUNICATION STRATEGY

Communication during a pandemic will be vital for both internal and external operations. The public and community stakeholders in the Municipality of Chatham-Kent will require information about the pandemic, where to go for assistance, and how to manage operations throughout the entire duration.

The goal of the CKPIP communication strategy is to provide clear consistent and coordinated messages. Messages will include updates about developments of the pandemic influenza as they occur, and will identify communication activities that will occur during each phase of a pandemic as set out in the influenza pandemic plan. The MOHLTC has developed an information cycle for use during a health emergency. The information cycle will ensure regular, timely reports for provider groups and the public/media. Information will be issued and briefings held at the same time each day according to the Ministry's predetermined schedule.

The communication messages will address how to prevent influenza spread, symptom treatment, and protection strategies for those at increased risk of infection including health care workers and essential service workers. Information may also include locations of distribution centres for antiviral medications, and mass vaccination clinics.

6.1 Core Communication Process

Any information that will be issued to community members from the Chatham-Kent Public Health Unit will be approved by the MOH, or designate. However, communication content development is the responsibility of the MOH, Director of Public Health, and Program Managers, or their respective designates.

Methods of communication will include internet, intranet, radio, television, fact sheets, public service announcements, and articles in the local papers.

Media Role

During all phases of a pandemic the media's role is vital to effectively and accurately disseminate information to all community members. Radio stations and local papers will play a vital role in the dissemination of key messages.

The Chatham-Kent Public Health Unit will provide the media with a direct "hotline" telephone number for pandemic related calls, access to timely and accurate information from a credible spokesperson, details of public health measures (specifically the public health programs to be continued throughout the pandemic), and information of provincial, federal, and local events related to the pandemic. A dedicated room for media personnel will be available for regular updates.

Emergency Operations Centre

The Chatham-Kent Public Health Unit is developing an on-site Emergency Operations Centre. This room will be located at the Centre for Community Services building at 435 Grand Avenue W., Chatham, Ontario.

Key public health unit staff as identified in the Incident Management System (IMS) model will gather at regular intervals to provide information to each other on problems encountered and actions taken. These meetings will take place in the Emergency Operations Centre. The incident commander will establish the frequency and duration of the meetings. Meetings will be kept as brief as possible in order to allow for time for completion of duties in response to the pandemic plan.

6.2 Overview of Incident Management System

The Chatham-Kent Public Health Unit uses the Incident Management System to organize an internal response for an influenza pandemic. Using the IMS model in accordance with all essential services and agencies throughout the Municipality of Chatham-Kent will help to enhance our ability to communicate, co-operate and respond collectively. The IMS is designed to allow individual agencies to co-ordinate their efforts as well as integrate the activities with other services at a local, provincial, and federal level. Ensuring a community-wide response will maximize the ability of the community to access clear and accurate information for the duration of the pandemic period.

6.3 Core Communication Strategy for Internal Operations

During a pandemic there are two main messages from the health unit that will be conveyed in each phase and period of the pandemic: what the public health unit is doing to reduce illness and death and minimize social disruption, and what the public can do to reduce illness.

Each phase or period of a pandemic has its own communication needs depending on the level of activity within the community. For example, during the interpandemic period, the focus will be on education.

CHAPTER 7 – CONTINGENCY PLANNING

Public health units play an important role in all pandemic periods and also provide a range of non-pandemic related essential services. Several of these services are ones that the Chatham-Kent Public Health Unit will continue in the event of a pandemic. This chapter reflects the business continuity of the Chatham-Kent Public Health Unit in the event of a pandemic.

7.1 Influenza Services During Interpandemic and Pandemic Alert Period

Interpandemic Period

During an interpandemic period public health services include:

- promoting and managing the seasonal influenza immunization program;
- year-round surveillance of influenza-like illness, institutional respiratory outbreaks, laboratory reports and iPHIS data, influenza vaccine coverage rates for hospital staff and long-term care home residents and staff;
- providing education to the public and health care workers;
- working with the provincial and federal governments to develop policies on influenza management, outbreak management; and,
- preparing for public health emergencies.

Pandemic Alert Period

In the pandemic alert period, the interpandemic period activities will be continued and later intensified when influenza cases are in Ontario but not yet within Chatham-Kent or surrounding areas. The Chatham-Kent Public Health Unit will use aggressive measures outlined in the Ontario Health Plan for an Influenza Pandemic, 2008, to slow the spread of the virus. These include case and contact follow-up, education and communication to key stakeholders and members of the public, and reinforcing risk reduction strategies.

7.2 Services During the Pandemic Period

During this period, the Chatham-Kent Public Health Unit will take the lead in coordinating the pandemic response within the Municipality of Chatham-Kent. This role may strain public health resources due to the fact that CKPHU will also be providing other essential public health programs and services.

Influenza-Related Activities

The Chatham-Kent Public Health Unit will focus on surveillance activities, communication related to public education, community-based public health measures, institutional outbreak management and surveillance, and pre-pandemic related activities.

Other Public Health Programs and Services

The Chatham-Kent Public Health Unit will implement a scale-back approach to programs and services in order to meet the additional demands of the influenza related activities. The CKPHU is currently in the process of developing policies on resource reallocation and redeployment plans. These policies will include:

- identifying additional services required during a pandemic as well as programs that are essential to continue throughout the pandemic;
- programs that can be reduced until the second wave of a pandemic or until the postpandemic period;
- volunteer staff/retired workers who could be recruited/redeployed for key service and program delivery; and
- priority work requirements for all teams within the health unit.

Plans will also need to be in place for the implementation of a rebuilding process as the CKPHU enters the postpandemic period.

GLOSSARY OF TERMS AND ACRONYMS

A	
Acetylsalicylic acid	Aspirin
Adaptive mutation	The mutation of an organism to fit into a new environment, making it more easily transmitted between humans
Anemia	Low red blood cell count
Antigenic drift	A gradual change of the proteins on the surface of a particular strain of influenza virus occurring in response to host antibodies in humans who have been exposed to it. It occurs on an on-going basis in both type A and type B influenza strains and necessitates on-going changes in influenza vaccines.
Antigenic shift	The movement of a type A influenza virus strain from other species into humans. The novel strain emerges by reassortment with circulating human influenza strains or by infecting humans directly. Because they flourish in the face of global susceptibility, viruses that have undergone antigenic shift usually create pandemics.
Antiviral medications	Prescribed medications that are used to combat a virus, such as those that cause a pandemic influenza.
Aspiration	A drawing of something in, out, up or through, by or as if by suction.
B	
Business continuity plans	Plans that define all levels of a business' service that can be delivered at every stage of an emergency, such as a pandemic
C	
Cardiac disorders	Any condition related to the cardiovascular system
CDC	Centre for Disease Control and Prevention
CDC FLU AID	A Centre for Disease Control software program that provides estimates of the potential impact of an influenza pandemic (deaths, hospitalizations, and outpatient visits) specific to a locality.
CFPC	College of Family Physicians of Canada
CKPIP	Chatham-Kent Pandemic Influenza Plan
CKPHU	Chatham-Kent Public Health Unit
CPIP	Canadian Pandemic Influenza Plan
D	
Daycare	A program, facility, or organization offering day care to children
Droplet	A tiny drop

Droplet spread	Large droplets (particles >5mcm) generated when an infected person coughs or sneezes. This is the predominant mechanism of influenza virus transmission.
E	
EOC	Emergency Operations Centre
Epidemic	Simultaneously affecting an unusually large number of people within a population, community, or region
Epidemiology	A branch of medical science that deals with the incidence, distribution, and control of a disease within a population
F	
Flu	Another name for influenza infection, although it is often mistakenly used in reference to gastrointestinal and other types of clinical illness.
G	
Genetic reassortment	When two different viruses infect the same cell and exchange genetic make-up
H	
Health care partners	Health care agencies within a community that will work together in times of need
Health care workers	Individuals who work within the health care setting
Hemoglobinopathy	A blood disorder caused by a genetically determined change in the molecular structure of red blood cells
High-risk groups	Those groups in which epidemiologic evidence indicates there is an increased risk of contracting a disease
HPPA	Health Protection and Promotion Act
I	
ILI	Influenza-like illness
Immunity	A condition of being able to resist a particular disease
Immunization	The act of administering a vaccine
Immunodeficiency	Inability to produce a normal amount of antibodies
Immunosuppression	Suppression of a natural immune response
IMS	Incident Management System
Infectious	Capable of causing infection
Influenza	A highly contagious, febrile, acute respiratory infection of the nose, throat, bronchial tubes, and lungs caused by the influenza virus. It is responsible for severe and potentially fatal clinical illness of epidemic and pandemic proportions.
Influenza subtype	A sub-classification of the influenza virus

Influenza type A	A category of influenza virus characterized by specific internal proteins and further subgrouped according to variations in their two surface proteins. It infects animals as well as humans and has caused the pandemic influenza infections occurring in this century.
Influenza type B	A category of influenza virus characterized by specific internal proteins. It infects only humans, causes less severe clinical illness than type A, and spreads in regional rather than pandemic outbreaks.
Influenza type C	A category of influenza virus characterized by specific internal proteins. It does not cause significant clinical illness.
Interpandemic period	No new influenza subtypes have been detected in humans. However a subtype is circulating in animals which may pose a risk to humans.
iPHIS	Integrated Public Health Information System
Isolation	Segregation of a person or group of people in order to prevent the spread of a contagious disease
L	
Localized	Fixed in, or confined to a definite place
LTCH	Long-term care home
M	
MEOC	Ministry Emergency Operations Centre
MOH	Medical Officer of Health
MOHLTC	Ministry of Health and Long-Term Care
N	
Negative pressure isolation	A room that keeps contaminants and pathogens from reaching external areas by using a negative air pressure flow
O	
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
OHPIP	Ontario Health Plan for an Influenza Pandemic
P	
Pandemic	Occurring over a wide geographic area and affecting an exceptionally high proportion of the population
Pandemic alert	Clusters of influenza with human to human spread, but it is still localized and not fully transmissible
Pandemic period	Increased and sustained transmission of influenza within the general population
PHAC	Public Health Agency of Canada
Pneumonia	A disease of the lungs caused mainly by infection with symptoms of fever, chills, cough, and difficulty breathing

Postpandemic period	The postpandemic or recovery period is identified when influenza activity has returned to normal interpandemic levels, and immunity to the new virus is widespread throughout the general population
PPE	Personal Protective Equipment
Public health	The art and science dealing with the protection and improvement of community health by organized community effort and including preventive medicine, and sanitary and social science
Public health inspector	Health unit employees certified in public health inspection who promote and maintain a high standard of public health, environmental conditions and environmental control standards through enforcement and education about applicable regulations and by-laws
Public health measures	Non-medical interventions that may be used to reduce the spread of the influenza virus. Examples include public education, case and contact management, community-based disease control strategies (i.e. social distancing, school closures and restriction/cancellation of large public gatherings), travel restrictions and border measures.
Pulmonary disorders	Any medical condition related to the respiratory system
Q	
Quarantine	A restraint upon the activities of persons that is designed to prevent the spread of contagious illness
R	
Recycled influenza strain	A strain or part of a strain of influenza that existed in the past
Renal disease	Any disease related to the kidneys
Respiratory etiquette	Measure to contain respiratory secretions from being transferred to people and objects in order to prevent the spread of illness
S	
Secretions	A substance expelled by a cell or organ
Self-care	Looking after oneself when ill
Social distancing	Activities aimed at reducing the spread of influenza thereby lessening the impact on society. Strategies are based on the scientific knowledge of how the influenza virus spreads and are applied to the activities of life to reduce the risk of exposure (i.e. avoiding all people who may be potentially infected).
Strain	A group of organisms within a species or type that share a common quality

Symptoms	Any perceptible, subjective change in the body or its functions that indicates disease or phases of disease, as reported by the patient
T	
Transmission	The spread of disease from one person to another
Triage	A system whereby a group of patients is sorted according to the seriousness of their illness, so that treatment priorities can be allocated between them
U	
UIIP	Universal Influenza Immunization Program
V	
Vaccine	A substance that contains antigenic components from an infectious organism. By stimulating an immune response (but not disease), it protects against subsequent infections by that organism.
Virus	A group of infectious agents characterized by their inability to reproduce outside of a living host cell. Viruses may subvert the host cells' normal functions, causing the cell to behave in a manner determined by the virus.
Vulnerable population	A group of individuals particularly susceptible to an outside influence such as the flu.
W	
WHO	World Health Organization