2010

Haldimand-Norfolk Health Unit

INFLUENZA PANDEMIC PLAN

HealthUnit
Haldimand-Norfolk

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Executive Summary

The first draft of the *Haldimand-Norfolk Health Unit Influenza Pandemic Plan (2010)* is the first formal pandemic plan developed by the Haldimand-Norfolk Health Unit (HNHU). It was developed in accordance with the *Ontario Health Plan for an Influenza Pandemic* (OHPIP). The OHPIP, which was developed by the Ministry of Health and Long-Term Care (MOHLTC), outlines a provincial pandemic preparedness and response plan that relies on information obtained from surveillance activities for detecting and monitoring influenza and provides information to guide local pandemic groups. Hence, the OHPIP is heavily reference in the *HNHU Influenza Pandemic Plan.*

The *HNHU Influenza Pandemic Plan* (HNHUIPP) was developed in response to the existing threat of a possible influenza pandemic. Its value, however, goes beyond assisting with the community response to a possible pandemic. Many of the aspects of the influenza pandemic plan will also assist in responding to other health-related emergencies relating to biological, chemical, radiological, or nuclear agents or events. As well, the working relationships established among the many stakeholders involved in the development of this plan will facilitate planning and responding to other emergencies and health-related issues. Therefore, the goals of the HNHUIPP are as follows:

1. To minimize serious illness and overall deaths through appropriate management of Haldimand and Norfolk's health-care system.

2. To minimize societal disruption in Haldimand and Norfolk as a result of an influenza pandemic.

The HNHUIPP provides an overview of the Health Unit's pandemic preparedness and various options for implementation. It has been fundamentally understood that changes in policy and approaches for pandemic planning by provincial, federal and international governments, as well as the epidemiology of the pandemic, will require updates to existing chapters as well as new chapters and tools designed to guide and support further planning across Haldimand and Norfolk.

Acronyms

BIOS	Biological Inventory Operating System
CCAC	Community Care Access Centre
CDC	Centers for Disease Control and Prevention (US)
CD	Communicable Disease
CEMC	Community Emergency Management Coordinator
CEPR	Centre for Emergency Preparedness and Response
CIDPC	Centre for Infectious Disease Prevention and Control
CIHR	Canadian Institute of Health Research
ECG	Emergency Control Group
EMO	Emergency Management Ontario
EMS	Emergency Medical Services
EMU	Emergency Management Unit
EOC	Emergency Operations Centre
ERP	Emergency Response Plan
ESW	Essential Service Workers
F/P/T/L	Federal/Provincial/Territorial/Local
FRI	Febrile Respiratory Illness
HBHC	Healthy Babies Healthy Children
HCW	Health Care Worker
HE	Healthy Environment
HEAS	Health Emergency Alerting System
HERT	Health Emergency Response Team
HHR	Human Health Resources
HNHU	Haldimand-Norfolk Health Unit
HNHUIPP	HNHU Influenza Pandemic Plan
HPFB	Health Protection Food Branch
HPPA	Health Protection and Promotion Act
IMS	Incident Management System
ICP	Infection Control Practitioner
ILI	Influenza-Like Illness
IPP	Influenza Pandemic Plan
LTCF	Long-Term Care Facilities
MOH	Medical Officer of Health
MOHLTC	Ministry of Health and Long-Term Care
NACI	National Advisory Committee on Immunization
NESS	National Emergency Stockpile System
NIOSH	National Institute Occupational Health & Safety
NML	National Medical Laboratory
NML4	National Medical Laboratory Level 4
OHPIP	Ontario Health Pandemic Influenza Plan
OH&S	Occupational Health and Safety

PAHO	Pan American Health Organization
PHA	Public Health Act
PHAC	Public Health Agency of Canada
PHD	Public Health Division, MOHLTC
PIC	Pandemic Influenza Committee
POC	Provincial Operations Centre
PPHB	Population and Public Health Branch
PTAC	Provincial Transport Authorization Centre
UIIP	Universal Influenza Immunization Program
VAAE	Vaccine-Associated Adverse Event
VAER	Vaccine Adverse Events Reporting
VON	Victoria Order of Nurses
VPD	Vaccine Preventable Disease
WHO	World Health Organization

Chapter 1: Background—Influenza Pandemic

1.1 Why Plan for an Influenza Pandemic?

Influenza has been with us for centuries. It causes severe illness and death every winter in North America and the rest of the world, attacking the elderly and the debilitated with particular ferocity. A novel strain of the influenza virus, to which the population has no immunity, emerges three or four times a century. The novel virus spreads quickly, causing large-scale outbreaks of influenza over a large geographical area, often worldwide. Outbreaks of this nature are known as pandemics. Pandemic influenza tends to occur in two or three waves, sometimes over a long period, before finally abating. Three influenza pandemics occurred in the 20th century: the Spanish (1918), Asian (1957) and Hong Kong (1968) pandemics. The Spanish pandemic killed an estimated 20 to 40 million people worldwide.

1.2 What is Influenza?

Influenza, or the flu, is a highly contagious and common respiratory illness caused by a virus. There are three known types of influenza virus: A, B and C. Influenza A and B viruses are subtyped according to two proteins on the surface of the virus: hemaglutinin (H) and neuraminidase (N). Sixteen different H subtypes and nine different N subtypes have been identified. Influenza A and B cause seasonal influenza, but only influenza A is associated with pandemics.

The vast majority of influenza is transmitted from person to person by droplet spread or direct contact. Droplet spread refers to spray with relatively large, short-range droplets produced by sneezing, coughing, talking or singing. These droplets may spray up to one metre (about three feet) and can land directly in the eyes or be breathed in through the nose or mouth. Direct contact occurs when there is immediate transfer of the virus through skin-to-skin contact or kissing. For example, this can occur by shaking hands with someone who has infectious mouth or nose secretions on his or her hands.

For most adults, the period of communicability is from 24 hours before and up to three to five days after symptoms develop. Children and some adults may be infectious for seven or more days after the onset of symptoms. The incubation period is one to three days. Humans are the primary source for human infections. However, birds and mammals such as swine can provide sources of new human subtypes of influenza virus.

About half of influenza infections are asymptomatic, while the other half show a spectrum of symptoms from mild to severe. These include the following:

- Sudden onset of fever, headache, chills, muscle aches, physical exhaustion and a dry cough.
- Subsequent onset of sore throat, stuffy or runny nose and worsening cough.
- Children may also feel sick to their stomach, vomit or have diarrhea.
- Elderly and immune-compromised people may not develop a fever.
- Most people recover in seven to 10 days.

These symptoms are non-specific and may be caused by other viruses or bacteria. Diagnosis of influenza cases depends on laboratory testing and epidemiological characteristics. For most people, the "seasonal" flu is not life threatening. The most seriously affected by seasonal flu are young children (less than two years old), people with chronic medical conditions and the elderly. Specifically, they are at increased risk of developing complications, such as pneumonia, which can be fatal. However, a novel virus may not affect the same groups.

The influenza virus is constantly changing and mutating. This usually results in minor changes (antigenic drifts) in the virus protein structure, which cause influenza illness and outbreaks every winter (November to April). A new vaccine is developed every year based on current and emerging viral strains identified through worldwide disease surveillance.

1.3 What is an Influenza Pandemic?

An influenza pandemic occurs when there is an abrupt and major change in the protein structure of the influenza A virus, resulting in a new subtype. This is known as an antigenic shift. This change may occur in two ways. When two viruses infect the same cell, they may share genetic material (re-assortment) and result in a new human virus. Alternatively, a virus may undergo random mutation, resulting in an adaptive form more likely to survive in the host. This second type of change may occur during sequential infection of humans and other mammals and lead to a virus more efficiently transmitted among humans.

The conditions for the development of a pandemic include the following:

- Emergence of a novel influenza A subtype as a result of an antigenic shift.
- Efficient and sustained person-to-person viral transmission.
- A high proportion of susceptible people in the population with little or no immunity.

- Capacity of a new virus to cause serious clinical illness and death.

Since people have little or no immunity to this new strain, it can spread quickly, causing outbreaks in one or more countries or worldwide. This is called a pandemic. The exact nature of the pandemic virus (e.g., virulence, presentation, period of incubation, transmissibility and routes of transmission) and illness will not be known until it emerges.

The following conditions make a pandemic more likely:

- A new influenza virus showing antigenic shift. This shift creates a new strain of influenza virus to which no one would have immunity.
- A susceptible population.
- Evidence that the virus is transmitted from person to person.
- Evidence of the new virus's virulence.

Seasonal Influenza vs. Pandemic Influenza

The following chart summarizes the main differences between seasonal influenza and pandemic influenza:

Seasonal flu	***Pandemic flu***
Occurs every year (October to April).	Occurred three times in the 20th century.
Occurs during the winter.	Occurs at any time of the year.
For most people, it is an unpleasant but not life-threatening infection.	It is typically a more serious infection for everyone.
Most people recover within one or two weeks without medical treatment.	Some people will not recover even with medical treatment. Due to the higher severity of illness, there is greater risk of death.
The very young, the very old and people with chronic illness are most at risk of serious illness.	People of every age may be at risk of serious illness.
Vaccine is available in advance.	Vaccine will not be available in advance.
Annual vaccination is recommended, especially for those at risk of serious illness.	The whole population will be vaccinated when vaccine becomes available.
Antiviral drugs are available to treat those at special risk.	Antiviral drugs are likely to be in limited supply and will be used to best effect according to how the disease develops.

Sources: Department of Health (England) "Pandemic Flu: Frequently Asked Questions" October 19 2005 http://www.dh.gov.uk, Ministry of Health and Long-term Care "Differences between seasonal or 'annual' influenza and the influenza pandemic" Fact Sheet.

Chapter 2: Roles, Responsibilities and Frameworks for Decision-Making

Viruses do not adhere to borders. Planning must occur internationally, nationally, provincially and locally to help restrict the geographical distribution of any pandemic. A coordinated and collaborative approach to combat pandemic influenza enables effective communication between health authorities at all government levels. Past tragedies have taught us that the efficient flow of accurate information is crucial during a time of emergency.

The *Haldimand-Norfolk Health Unit's Influenza Pandemic Plan* (HNHUIPP) operates in reference to and reflects:

- The World Health Organization's (WHO's) pandemic periods and phases.
- The Canadian pandemic planning phases created by the Public Health Agency of Canada (PHAC).
- Collaboration with the Canadian Pandemic Influenza Plan.
- Collaboration with the Ontario Health Plan for an Influenza Pandemic (OHPIP).
- The framework of incident management systems for decision-making.
- An ethical framework to guide decision-making.
- All relevant provincial and municipal legislation.

2.1 Roles of Government

2.1.1 International Activities (World Health Organization)

Overall, the WHO is responsible for declaring a pandemic and coordinating a global response. While coordinating international efforts to assist national and local authorities, the WHO also provides international surveillance and reporting during inter-pandemic periods.

If there is an onset of a pandemic, the WHO will make recommendations for the composition and use of vaccines (i.e., doses and schedules) and provide guidance on the best use of available antiviral drugs.

Being responsible for declaring a pandemic and coordinating a global response, the WHO has created the backbone of pandemic planning: the WHO Classification System. The WHO phases are meant to guide planning efforts and are incorporated into the Canadian, Ontario, and Haldimand and Norfolk plans. The WHO will identify which phase is currently occurring internationally and will declare the beginning of a pandemic.

The following table identifies the WHO Pandemic Phase Model (as of 2008):

World Health Organization Pandemic Phases

Inter-pandemic Period*	**Phase 1** No new influenza virus 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 or disease is considered low.
	Phase 2 No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.
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.
	Phase 4 Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.
	Phase 5 Larger cluster(s), but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).
Pandemic Period	**Phase 6** Increased and sustained transmission in general population.
Post-pandemic Period	Return to inter-pandemic period.

* *The distinction between Phase 1 and Phase 2 is based on the risk of infection or disease from circulating strains in animals.*

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

2.1.2 National Activities (Public Health Agency of Canada)

At the national level, the Government of Canada is responsible for coordinating the nationwide response to an influenza pandemic. This will involve:

- Communicating with international and national agencies to coordinate surveillance, investigation and vaccine activities.
- Obtaining and distributing diagnostic reagents and technical information to laboratories.
- Antiviral and vaccine manufacturing and distribution to provinces and territories.

One must consider that the WHO's phases reflect an international risk level and do not necessarily reflect virus activity on a national scale. To help national planning and response activities, the Public Health Agency of Canada has created a scale in conjunction with the WHO's periods and phases that reflects pandemic influenza activity in Canada. The Canadian activity level number will be used with the WHO phase number to confirm the level of pandemic activity in Canada.

Example of WHO/CAN Pandemic Activity Levels

WHO Phase	CAN Phase	WHO/CAN Phase	Definition
6	**0**	**6.0**	Outside Canada, increased and sustained transmission in the general population has been observed. No cases detected in Canada.
6	**1**	**6.1**	Single human case(s) with the pandemic virus detected in Canada. No cluster(s) indentified in Canada.
6	**2**	**6.2**	Localized or widespread pandemic activity observed in the Canadian population.

Adopted from OHPIP, August 2008.

2.1.3 Provincial Activities (Ministry of Health and Long-Term Care)

Working in coordination with the Government of Canada and municipal governments, the Government of Ontario is responsible for planning and managing the response to a pandemic in Ontario. This will involve:

- Communicating with national and municipal agencies to coordinate surveillance, investigation and vaccine activities.
- Coordinating investigations of outbreaks and clusters of febrile respiratory illness (FRI) and influenza-like illness (ILI).
- Supply, vaccine and antiviral purchasing, stockpiling and distribution.
- Providing guidance and direction to local public health authorities and the health-care system.
- Coordinating public education programs.

2.1.4 Local Activities (Haldimand County, Norfolk County, HNHU)

Haldimand County and Norfolk County, in conjunction with the HNHU, are responsible for coordinating the local response to a pandemic. This will involve:

- Developing Pandemic Plans that address a county-wide response for Haldimand County and Norfolk County.
- Developing a Pandemic Continuity of Operations Plan for Haldimand County and Norfolk County.

- Maintaining municipal infrastructure and essential services.
- Assisting the HNHU in obtaining resources.
- Establishing clear communication strategies/systems amongst county departments, essential service providers, partners and stakeholders.
- Communicating to the public information regarding municipal response activities and service provision(s).
- Liaising with local community partners and stakeholders.

2.1.5 Haldimand-Norfolk Health Unit Activities

Mandated by the Ontario Public Health Standards, pandemic planning is a component of the HNHU's Emergency Preparedness Program. As a component of this program, HNHU activities will involve:

- Developing a Pandemic Plan that addresses the HNHU's response.
- Developing a Pandemic Continuity of Operations Plan for the HNHU.
- Increasing public awareness regarding pandemic activities.
- Delivering pandemic preparedness and response education and training for HNHU staff.
- Ensuring that local government officials are briefed on the Board of Health's Pandemic Plan.
- Communicating with national, provincial and municipal agencies to coordinate surveillance, investigation and vaccine activities.
- Establishing clear communication strategies/systems amongst county departments, essential service providers, partners and stakeholders.
- Planning for and delivering mass immunizations and treatment, including vaccines, antivirals and medical supplies.
- Assessing local health-care capacity and helping identify additional or alternative resources.
- Liaising with local community partners and stakeholders.
- Collaborating with the provincial government to deliver public education programs.
- Communicating to the public information regarding personal preventative measures and the management of the local outbreak by the HNHU.

To accomplish the above items, the HNHU Emergency Control Group (ECG) has been created.

2.2 The Incident Management System

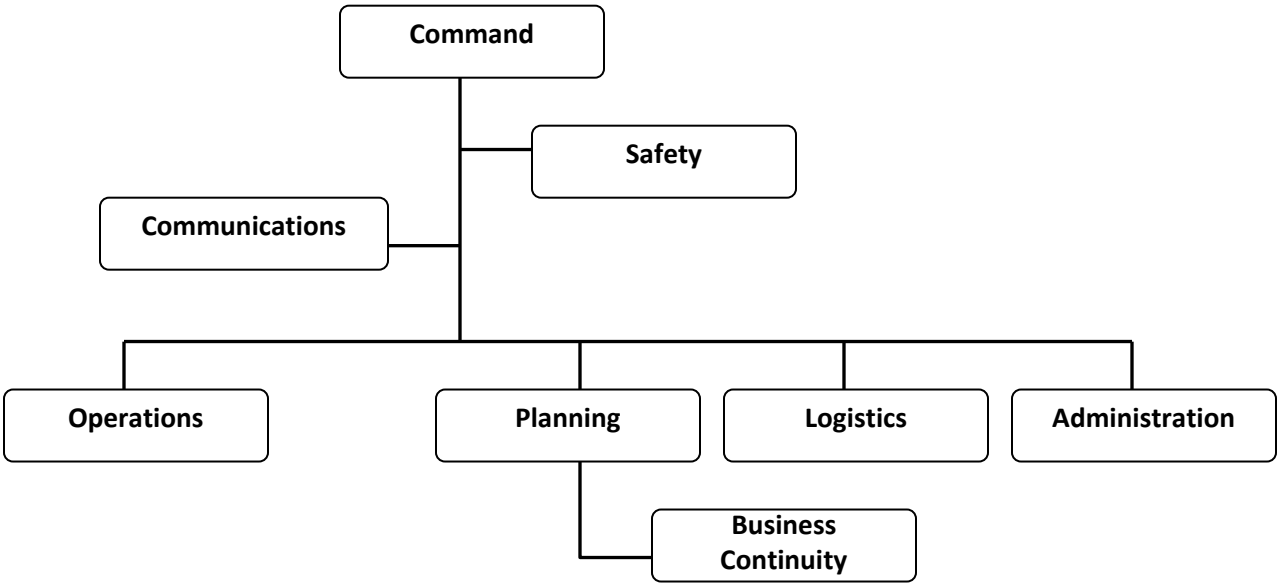
The Government of Ontario has implemented legislation that makes emergency management mandatory for all municipalities. Municipalities must have plans in place to

respond to emergencies effectively. The Incident Management System (IMS) has been adopted for both municipalities by the HNHU and will be used to respond to any emergency situation, including a pandemic influenza outbreak.

The IMS is an international emergency management structure that has been adopted by Emergency Management Ontario (EMO) as the operational framework for emergency management in the province. It provides the basic structure and functions required to respond and manage an emergency effectively.

The IMS has five functions: command, operations, planning, logistics and administration. These functions are the foundation upon which the IMS is based and can be applied to a routine incident, organizing for a major event such as a pandemic or managing a major response to a disaster. Figure 2-1 outlines these functions and structure.

Figure 2-1 – IMS Framework



1. ***Command***. This function determines the flow of decision-making and communications. The person performing this role is given the title of Incident Commander. The Incident Commander exercises overall responsibility for the incident and reports to the Pandemic Emergency Control Group (PECG). In a public health emergency, the Incident Commander will lead the Command function and the overall response effort. As the incident expands, the Incident Commander may activate the Communications, Safety and General Staff units as necessary

2. ***Safety***. This function advises the Incident Commander on all operational matters related to occupational health and safety, including volunteers.

3. ***Communications***. This function is responsible for media relations, communication strategies, rumour control, etc., and releasing information about the incident.

4. ***Operations***. This function is responsible for managing the response to the emergency.

5. ***Planning***. This function is responsible for assessing the situation and creating an Incident Action Plan (IAP) to identify objectives for the emergency response and response activities. This position is also responsible for creating and maintaining a business continuity plan to ensure regular services are continued as necessary.

    5 i. ***Business Continuity***. This function refers to a continuous process that includes advance plans, arrangements and procedures to maintain business functions and minimize interruptions when internal or external influences have an impact on a business's capacity to operate.

6. ***Logistics***. This function is responsible for providing facilities, services, materials and personnel to support the response activities. This section is very important in long-term or extended operations by organizing and confirming the availability of staff.

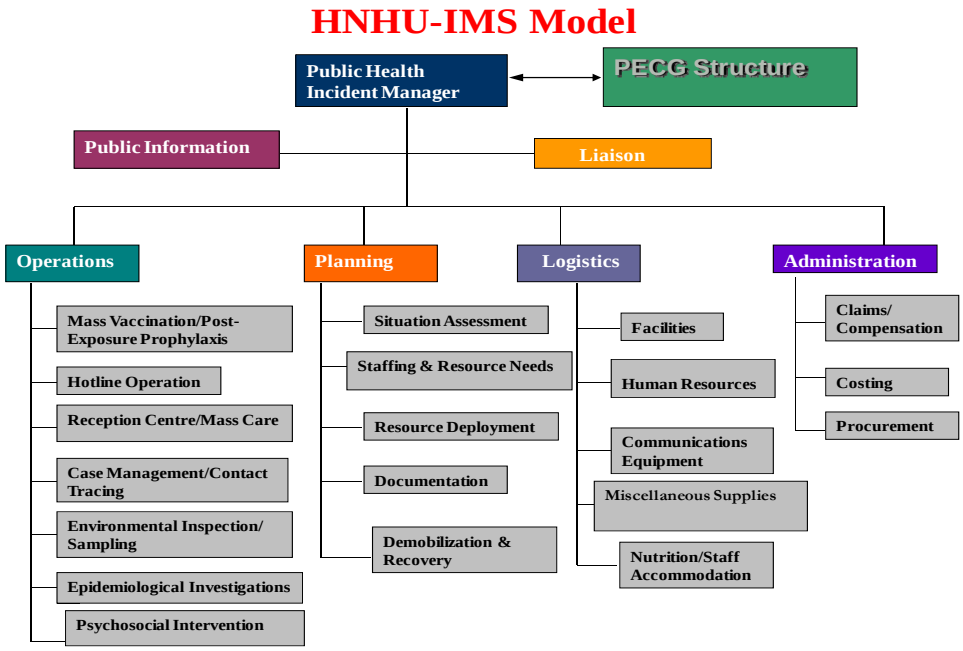
7. ***Administration***. This function is critical for tracking all expenses, expenditures, claims, purchases and contracts initiated during the emergency.

Various subgroups with specific mandates may be organized under the above units in what are known as Emergency Support Functions (ESFs). This will allow the Incident Commander and the other key staff in the Emergency Operations Centre to concentrate on the actual management of events as they unfold by delegating specific staff members to deal with these various support functions.

2.2.1 Responding to an Influenza Pandemic Using IMS

Responding to an influenza pandemic in Haldimand and Norfolk will require a coordinated response from the health sector, public health and each municipality. IMS will be used to coordinate the response between all areas involved. Figure 2-2 indicates how the response will be applied to each jurisdiction.

Figure 2-2- Incident Management System (IMS)



2.2.2 The HNHU's IMS Team

2.2.2A Incident CommandER (IC)

The Incident Commander will be responsible for the overall management of the pandemic response. He/she will be authorized by the Health Protection and Promotion Act and he/she will ensure an appropriate incident management command structure is used.

Reports to: ECG.

Incident Commander Role and Responsibilities:

Works closely with HNHU Command Group and Municipal Response Directors to:

- Ensure safety of all responders.
- Assess the situation.
- Establish a cycle of planning meetings with the Command Group.
- Manage sensitive or political issues arising from the incident.
- Approve the release of health information to the media.

2.2.2B Operations in-charge

Person(s) filling the role of Operations In-Charge is/are responsible for managing the response to the emergency.

Reports to: IC.

Task Responsibilities During a Pandemic:

1- Hotline operation →	Population Health
2- Case management →	CD Manager
3- Epidemiology →	Epidemiologist
4- Mass immunization →	Clinical Service
5- Infection control →	CD and MOH
6- Psychosocial →	Family Health & Healthy Babies Healthy Children (HBHC)
7- Animal care →	Healthy Environment
8- Community-based activities →	MOH

Operations In-Charge Role and Responsibilities:

- Directs and coordinates all health operation response.
- Contributes in determining the pandemic incident objectives and priorities in developing the Incident Action Plan (IAP).
- Implements the IAP during a pandemic.
- Identifies staffing and resources needs.
- Regularly reports to the Incident Commander
- Requests and assigns resources as directed.
- Maintains a personal log of all actions taken.

2.2.2C Planning In-charge

Person(s) filling the role of Planning In-Charge is/are responsible for assessing the situation and creating an IAP to identify objectives for the emergency response and response activities. This position is also responsible for creating and maintaining a business continuity plan to ensure regular services are continued as necessary.

Reports to: IC.

Planning In-Charge Role and Responsibilities:

- Develops alternatives for operation and plans for future development.

- Develops contingency plans to keep regular services going and prepares the IAP.
- Assesses the present situation and projected situation, including possible contingency plans, long-range plans and alternative courses of action.
- Ensures business continuity throughout the health sector.
- Ensures information management systems collect, manage, share and file information and documentation.
- Addresses the short- and long-term consequences on the health-care sector and plans for the immediate provision of services and supplies.
- Provides a timely transition to recovery operations when deemed appropriate.
- Maintains a personal log of all actions taken.
- Regularly reports to the Incident Commander.

Task Responsibilities During a Pandemic:

1- Surveillance activities → Epidemiologist
2- Business continuity → Public Health Manager/Emergency Planner
3- Situation report → Public Health Manager/Emergency Planner
4- Staffing resources → Family Health Coordinator/HBHC Coordinator
5- Document control → Administrative Assistant

2.2.2D Logistics In-Charge

Person(s) filling the role of Logistics In-Charge is/are responsible for providing facilities, services, materials and personnel to support the response activities. This section is very important in long-term or extended operations in organizing and confirming the availability of staff.

Reports to: IC.

Task Responsibilities During a Pandemic:

- Facilities → Healthy Environment Coordinator
- Human resources → Family Health Coordinator/ HBHC Coordinator
- Supplies and equipment → Business Administrator and/or Administrative Assistant
- Staff accommodation → Population Health

Logistics In-Charge Role and Responsibilities:

- Coordinates and directs medical supplies, staff needs (transportation, accommodation, nutrition and training) and facilities.

- Provides all necessary support and volunteers to support the pandemic response.
- Coordinates the set up of additional facilities (e.g., immunization clinics, briefing rooms, etc.).
- Organizes training for new staff and redeployed staff using operations expertise.
- Identifies availability of supplies and support.
- Arranges for temporary services and rental or purchase of resources from private sector or NGOs.
- Monitors the level of supplies and rates of consumption.
- Advises Operation In-Charge of current or anticipated shortage.
- Organizes and confirms 24-hour availability of staff, resources and other facilities.
- Reports regularly to Operation In-Charge.
- Maintains a personal log of all actions taken.

2.2.2E Finance/Administration

Person(s) filling the role of Finance/Administration is/are responsible for tracking all expenses, expenditures, claims purchases and contracts initiated during the emergency.

Reports to: IC.

Finance/Administration In-Charge Role and Responsibilities:

- Coordinates and directs procurement, cost tracking and human resources.
- Handles all accounting and payroll and ensures required purchases are made.
- Consults and responds as needed on legal, human resource (including union contracts) and insurance issues.
- Monitors expenditure tracking for staff services, health resources, supplies and equipment.
- Sets up and maintains the HNHU emergency operations room, including secretarial support.
- Identifies staffing and resource needs.
- Seeks financial assistance from senior levels of government.
- Maintains a personal log of all actions taken.
- Regularly reports to the Incident Commander.

2.2.2F Liaison and Public Information OFFICER

Person(s) filling the role of Liaison and Public Information Officer is/are responsible for media relations, communication strategies, rumour control, etc., and releasing approved information about the incident.

Reports to: IC.

Liaison and Public Information Officer's Role and Responsibilities:

- Coordinates with outside agencies and personnel to ensure awareness of the pandemic and clarifies roles.
- Establishes formal communications with participating agencies and services.
- Identifies contact persons and contact numbers for participating agencies.
- Identifies current or potential interagency cooperation needs.
- Identifies current and potential interagency problems.

The Liaison and Public Information Officer:

- Will be a point of contact for the media.
- Manages all public information regarding the pandemic.
- Prepares messages and releases significant information approved by IC.
- Monitors the media to ensure that they are accurately reporting information to the public.
- Coordinates media briefings and conferences and prepares and briefs spokespeople.
- Updates website information.
- Investigates and manages rumours related to the emergency.
- Works closely with IC.
- Maintains a personal log of all actions taken.

2.2.2G Safety Officer

Person(s) filling the role of Safety Officer is/are responsible for advising the Incident Commander on all operational matters related to occupational health and safety, including volunteers. The Safety Officer(s) is/are also responsible for monitoring and ensuring all activities regarding the incident follow occupational health and safety standards.

Reports to: IC.

Safety Officer's Role and Responsibilities:

- Advises IC on all operational matters related to occupational health and safety, including volunteers.
- Controls and reduces occupational hazards and exposures.
- Reviews all operations from a safety perspective.
- Creates policies and procedures related to the overall health and safety of staff and volunteers.
- Ensures MOHLTC directives are applied and carried out.
- Alters, suspends or terminates any or all activities that are deemed hazardous.
- Provides direction regarding infection-control measures.
- Maintains a personal log of all actions taken.

2.3 Operation Cycle

For clear communication, situation analysis and strategic planning to occur, the Emergency Response Group must meet regularly throughout the pandemic response. This usually takes the form of an Operation Cycle and is called by and chaired by the Incident Commander. The purpose of the Operation Cycle is to gather the response group members together periodically for information sharing, brainstorming, decision-making and plan development.

The findings are recorded and reviewed against the response objectives and priorities. From the review, operational instructions are issued to address any concerns and requirements. Only the Incident Commander or Response Director may change response objectives and priorities.

2.3.1 Timing of the Operation Cycle

The timing of the operation cycle is the responsibility of the Incident Commander and/or Response Director. Depending on the intensity of the operation and the situation, the cycle may be lengthened or shortened. For example, during the initial stages of an emergency, when information may be imprecise, it may be necessary to conduct the meetings more frequently. In the latter stages of the emergency, the operation cycle may be lengthened.

It is important to set an appropriate time for the operation cycle to run. This will ensure that there is sufficient time for the response groups to meet and discuss the response to the incident and allow time for the emergency support functions to address the priorities and objectives.

2.3.2 Meeting Portion of the Operation Cycle

1. The Incident Commander, Response Director, Chief or Lead chairs the meeting.
2. All necessary members of the Response Group attend to discuss response priorities and objectives.
3. Brainstorming is conducted for possible future scenarios and responses.
4. Identify and record all priorities and objectives.
5. Incident Commander, Response Director, Chief or Lead delegates action tasks to the support staff.
6. Response Group members provide updates on their previous to-do list items if required.
7. Conduct fast round-the-table updates including review of to-do lists from previous meeting.
8. Decisions to be brief and to the point.
9. Set time for next meeting.
10. Adjourn meeting.
11. Chiefs return to respective teams and leads to discuss to-dos for the cycle.

2.3.3 Working Portion of the Operation Cycle

1. Incident Commander meets with respective response teams or leads.
2. Delegate the response priorities and objectives set out in the to-dos from the Response Group meeting to the teams and/or leads.
3. Members of the response teams and/or leads work at meeting the priorities and objectives.
4. Leads/teams provide feedback to Chief regarding progress, questions, problems and other issues that might have come up since the last cycle. The respective Chief then takes these issues to the next Response Group meeting to discuss.

2.4 Ethical Framework for Influenza Pandemic Planning, Response and Recovery[1]

All levels of government will have to make difficult decisions based on an ethical framework. Ethical considerations include honesty and transparency, with clear reasons provided for decisions related to the allocation or prioritization of scarce resources (e.g., access to vaccine and antiviral medications). An ethical framework ensures stakeholder involvement in the decision-making process with accurate communication.

The following outlines how the HNHUIPP has adopted the Ethical Framework for Decision-Making as outlined in the OHPIP.

2.4.1 Decision-Making Principles

Openness and transparency. The process by which decisions are made must be open to scrutiny and be explained.

Community stakeholder participation is an important component throughout the entire planning process. Outreach and consultation with stakeholders is an ongoing process, especially as updated versions of the federal and provincial plans become available.

Value-driven decision-making based on evidence and principle will be made by people who are credible and accountable. The HNHUIPP is closely aligned with the direction provided by the federal and provincial influenza pandemic plans.

Planning decisions made were based on input from the following groups and resources:

- ECG members.
- Work Group members.
- Other sector-specific stakeholders.
- Infectious disease/infection control experts.
- Current literature.
- MOH.

[1] *Adapted from: Gibson, J. et al. Ethics in a Pandemic Influenza Crisis. Framework for Decision Making. Joint Centre for Bioethics. University of Toronto 2005.*

Inclusivity. Decisions should be made explicitly with stakeholder views in mind, and stakeholders should have opportunities to be engaged in the decision-making process. HNHUIPP has adopted a key stakeholder model for the development of a comprehensive approach to planning, response and recovery from an influenza pandemic. Input from stakeholders in the health sector, emergency planners, non-government volunteers, the community and both public and private business sectors was provided and will continue to be gathered.

Responsiveness. Decisions should be revisited and revised as new information emerges, and stakeholders should have opportunities to voice any concerns they have about the decisions (i.e., the dispute and complaint mechanism). HNHUIPP will continue to be developed, enhanced and revised as new information emerges from the federal and provincial plans. Opportunities for input will continue through larger reference groups, focus groups for sector-specific consultations, etc.

Accountability. Mechanisms will be developed to ensure accountability and sustained ethical decision-making throughout the pandemic.

Haldimand and Norfolk's response to an influenza pandemic will be based on the following core ethical values as outlined in the OHPIP.

2.4.2 Core Ethical Values

Individual Liberty. This may be restricted in order to protect the public from serious harm. Restrictions to individual liberty will:

- Be proportional to the risk of public harm.
- Be necessary and relevant to protecting the public good.
- Employ the least restrictive means necessary to achieve public health goals.
- Be applied without discrimination.

Protection of the Public from Harm. Measures may be implemented to protect the public from harm. Protective measures will include the following:

- Assessing the benefits of protecting the public from harm against the loss of liberty of some individuals (e.g., isolation).
- Ensuring that all stakeholders are aware of the medical and moral reasons for the measures, the benefits of compliance and the consequences of failing to comply.

- Establishing mechanisms to review decisions as the situation changes and address stakeholder concerns and complaints.

Proportionality. Restrictions on individual liberty and measures taken should not exceed the minimum required to address the level of risk or community needs. Haldimand and Norfolk will do the following:

- Use the least restrictive or coercive measures possible when limiting or restricting liberties or entitlements.

- Use more coercive measures only in circumstances in which less restrictive means have failed to achieve appropriate public health ends.

Privacy. Individuals have a right to privacy, including the privacy of their health information. Haldimand and Norfolk will:

- Determine whether the good intended is significant enough to justify the potential harm of suspending privacy rights (e.g., the potential stigmatization of individuals and communities).

- Require private information only if there are no less intrusive means to protect health.

- Limit any disclosure to only that information required to achieve legitimate public health goals.

- Take steps to prevent stigmatization (e.g., public education to correct misperceptions about disease transmission).

Equity. All patients have an equal claim to receive the health care they need, and health-care institutions are obligated to ensure a sufficient supply of health services and materials. During a pandemic, tough decisions may have to be made about who will receive antiviral medication and vaccinations and which health services will be temporarily suspended. The HNHU will do the following:

- Strive to preserve as much equity as possible between the needs of influenza patients and patients who need urgent treatment for other diseases.

- Establish fair decision-making processes/criteria.

- Identify diversity and respect, wherever possible, ethno-cultural faith practices.

Duty to Provide Care. Health-care workers have an ethical duty to provide care and respond to suffering. During a pandemic, demands for care may overwhelm health-care workers and their institutions and create challenges related to resources, practice, liability and workplace safety. Health-care workers may have to weigh their duty to provide care against competing obligations (e.g., to their own health, family and friends). When providers cannot provide appropriate care because of constraints caused by the pandemic, they may be faced with moral dilemmas. To support providers in their efforts to discharge their duty to provide care, Ontario and/or Haldimand and Norfolk will:

- Work collaboratively with stakeholders, regulatory colleges and labour associations to establish practice guidelines.
- Work collaboratively with stakeholders, including labour associations, to establish fair dispute-resolution processes.
- Strive to ensure that the appropriate supports are in place (e.g., resources, supplies, equipment).
- Develop a mechanism for provider (HNHU staff) complaints and claims for work exemptions.

Reciprocity. Society has an ethical responsibility to support those who face a disproportionate burden in protecting the public good. During a pandemic, the greatest burden will fall on public health practitioners, other health-care workers, infected patients, and their families. Health-care workers will be asked to take on expanded duties. Decision-makers will take steps to ease the burdens of health-care workers, patients and patients' families. They may be exposed to greater risk in the workplace, suffer physical and emotional stress and be isolated from peers and family. Individuals who are isolated may experience significant social, economic and emotional burdens.

Trust. Trust is an essential part of the relationship between government and citizens, between health-care workers and patients, between organizations and their staff, between the public and health-care workers and among organizations within a health-care system. During a pandemic, some people may perceive measures to protect the public from harm (e.g., limiting access to certain health services) as a betrayal of trust. In order to maintain trust during pandemic, decision-makers will take steps to build trust with stakeholders before the pandemic occurs (e.g., by engaging stakeholders early) and ensure that decision-making processes are ethical and transparent.

Solidarity. An influenza pandemic will require solidarity among the community, health-care institutions, health units and governments. Solidarity requires good communication

and open collaboration within and among these stakeholders to share information and co-ordinate health-care delivery.

Stewardship. In our society, both institutions and individuals will be entrusted with governance over scarce resources, such as vaccines, ventilators, hospital beds and even health-care workers. Those entrusted with governance should be guided by the notion of stewardship, which includes protecting and developing one's resources and being accountable for the public's wellbeing. To ensure good stewardship of scarce resources, decision-makers will consider both the benefit to the public good and equity (i.e., the fair distribution of benefits and burdens).

2.5 Legislation

The Emergency Planning Act is the primary authority enabling municipalities to develop their own emergency plans.
Section 4(1) of the Emergency Plan Act states:

> "The head of council of a municipality may declare that an emergency exists in the municipality or in any part thereof and may take such action and make such orders as he or she considers necessary and are not contrary to law to implement the emergency plan of the municipality and to protect property and the health, safety and welfare of the inhabitants of the emergency area."

Section 12(1) of the Town of Norfolk Act describes the municipal boundaries of both Norfolk County and Haldimand County as a Health Unit under clause 96(5)(a) of the Health Protection and Promotion Act (HPPA), under the name "Haldimand-Norfolk Health Unit."

Under the HPPA, the MOH has the authority to identify, reduce and/or eliminate health hazards and to take the necessary actions to control communicable diseases.

2.5.1 Legal Basis

The MOH determines the actions needing to be taken to protect the population from communicable disease as outlined in the HPPA, revised statutes of Ontario, 1990 Chapter H.7.
In addition, the MOH has the authority to issue an order under Section 22 of the HPPA with respect to a communicable disease if

> "he or she is of the opinion, upon reasonable and probable grounds, that a communicable disease exists or may exist or that there is an immediate risk of an outbreak of a communicable disease in the Health Unit served by the Medical Officer of Health."

Influenza is a reportable disease as defined by the HPPA. Therefore, health professionals must report diagnoses of influenza meeting the case definition to the local MOH.

2.5.2 Legal/Legislative Framework

Actions taken during an emergency response must be guided by the legal/legislative framework. If interventions such as quarantine or isolation or social distancing for disease containment, such as school closures or limiting of large public gatherings, are used during a pandemic emergency, they can pose an unusual burden on members of society. Consideration must also be given to how best to address individuals unwilling or unable to be quarantined or isolated effectively. This would include those in homeless shelters, rooming houses, school residences and correctional facilities. Legal authority must be considered in every component of pandemic planning. It is anticipated that the following statutes will play a role in providing legal authority to respond to an influenza pandemic at the local level:

Health Promotion and Protection Act, R.S.O. 1990 c. H. 7 (HPPA).

Emergency Management and Civil Protection Act, R.S.O. 1990, c. E. 9.

Personal Health Information Protection Act, R.S.O. 2004, c. 3 Schedule A (PHIPA).

Quarantine Act R.S.C. 1985, c. Q-1.

Coroners Act R.S.O. 1990 c. C.37.

Occupational Health and Safety Act, R.S.O. 1990 c.O.1.

Municipalities of Haldimand and Norfolk Counties Emergency Management Plan 2006 Schedule A to By-Law 33-2004.

The Ambulance Act.

2.5.3 HEALTH PROTECTION AND PROMOTION ACT (HPPA):

In Ontario, the HPPA requires Boards of Health to provide or ensure provision of a minimum level of public health programs and services in specified areas such as the control of infectious and reportable diseases, health promotion, health protection and disease prevention. The Ontario Public Health Standards, published by the MOHLTC, set out minimum standards that must be met by Boards of Health delivering these public health programs and services. Regulations published under the authority to the HPPA assist in controlling the spread of communicable and reportable diseases. Regulation 569, Reports, establishes the parameters within which those who are required to report communicable and reportable diseases to the MOH must operate. The Report regulation specifies the information that must be reported for diseases listed in the regulation, and, under certain conditions, such additional information that the MOH may require. A

MOH is authorized under Section 22 of the HPPA to issue an order under prescribed conditions to control communicable diseases. The content of these orders could include an order requiring an individual or identified group to isolate himself/herself or themselves, to place himself/herself or themselves under the care and treatment of a physician (if the disease is a virulent disease, as defined in the HPPA) or to submit to an examination by a physician. An MOH may also, under certain conditions, seek a court order under Section 35 of the HPPA to isolate an individual in a hospital or other facility for a period of up to four months.

2.5.4 EMERGENCY MANAGEMENT AND CIVIL PROTECTION ACT

On June 20, 2006, Bill 56 received royal assent, becoming the new Emergency Management and Civil Protection Act. The Act amends the definition of emergency to include danger caused by disease or health risk.

The new definition of "emergency" is a situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and is caused by the forces of nature, a disease or other health risk, an accident or an act, whether intentional or otherwise. The Emergency Management Act establishes the requirements for emergency management programs and emergency plans in Ontario. The Act specifies what must be included in emergency management programs and emergency plans. The emergency plan is the legal authority as empowered by Municipalities of Haldimand and Norfolk Counties Bylaw 33-2004.

2.5.5 PERSONAL HEALTH INFORMATION PROTECTION ACT, 2004 (PHIPA)

PHIPA regulates the collection, use and disclosure of personal health information by Health Information Custodians (a defined term in the Act) and includes physicians, hospitals, long-term care facilities, MOHs and the MOHLTC. The Act also establishes rules for individuals and organizations receiving personal information from Health Information Custodians. Consent is generally required to collect, use and disclose personal health information; however, the Act specifies certain circumstances when it is not required. For example, the Act permits disclosure of personal health information to the Chief MOH or the MOH without the consent of the individual to whom the information relates where the disclosure is for a purpose of the HPPA. Disclosure of personal health information without consent is also permitted for the purpose of eliminating or reducing a significant risk of serious bodily harm to a person or group of persons.

2.5.6 QUARANTINE ACT

The purpose of the federal Quarantine Act is to prevent the introduction and spread of communicable diseases in Canada. It is applicable to persons and conveyances arriving

in, or in the process of departing from, Canada. It includes a number of measures to prevent the spread of dangerous, infectious and contagious diseases including the authority to screen, examine and detain arriving and departing individuals, conveyances and their goods and cargo, which may be a public health risk to Canadians and those beyond Canadian borders. Bill C-12, the new Quarantine Act, received royal assent on May 12, 2005. The new Act came into force December 2006. The new legislation updates and expands the existing legislation to include contemporary public health measures including referral to public health authorities, detention, treatment and de-infestation. It also includes measures for collecting and disclosing personal information if it is necessary to prevent the spread of a communicable disease.

2.5.7 CORONERS ACT

When a person dies while a resident in specified facilities, including a home for the aged or a nursing home, a psychiatric facility or an institution under the Mental Hospitals Act, the Coroners Act requires the person in charge of the hospital, facility or institution to give notice of the death to the coroner immediately. Further, if any person believes that a person has died under circumstances that may require investigation, that person must immediately notify a coroner or police officer of the facts and circumstances relating to the death. The coroner must investigate the circumstances of the death and determine whether to hold an inquest.

2.5.8 OCCUPATIONAL HEALTH AND SAFETY ACT

The Occupational Health and Safety Act is enforced by the Ministry of Labour. The Act imposes a general duty on employers to take all reasonable precautions to protect the health and safety of workers. The duties of workers are, generally, to work safely in accordance with the Act and its regulations.

Chapter 3: Planning Approach and Teams

The Haldimand-Norfolk Health Unit (HNHU) recognizes that this first draft of the plan is simply a starting point, and that ongoing input from stakeholder sectors is needed. The plan will be continuously revised and updated as new information becomes available.

The HNHU initiated pandemic influenza planning in 2005. In order to plan effectively for an emergency response, the HNHU sought input from key stakeholders in the health, emergency planning, social service, volunteer, community and business sectors. This approach has facilitated the development of working relationships and partnerships that are essential for an emergency response in Haldimand and Norfolk.

3.1 Development of the HNHU Influenza Pandemic Plan

In anticipation of the next influenza pandemic, the Emergency Control Group (ECG) of the HNHU has compiled the Influenza Pandemic Plan (HNHUIPP).

The HNHUIPP is based on these key assumptions:

- At the time of a pandemic, decisions and actions of international, federal and provincial levels of government may influence the implementation of this plan.
- Pandemic response is a responsibility shared across the health-care and community services sectors. Therefore, respective stakeholder agencies will need to develop and maintain complementary influenza pandemic plans.
- Unlike most other emergency scenarios, a pandemic will not be a localized phenomenon, and resources of all regions may be simultaneously strained. Therefore, Haldimand and Norfolk must be able to demonstrate a large amount of self-sufficiency.

As the pandemic is likely to occur in waves, this self-sufficiency may need to be sustained over a prolonged period. Depending on the characteristics of the novel virus, there are several critical issues that may arise during an influenza pandemic including, but not limited to, the following:

- A large number of people from all age groups may become infected and require treatment.
- Vaccine and antiviral supplies may be limited, and additional supplies may not be readily available during the early stages of a pandemic.
- Antiviral resistance may develop during a pandemic.
- Vaccines may not be available until the second or later waves.
- There may be shortages of medical personnel, equipment and supplies.
- Essential services could be severely disrupted due to absenteeism.
- Media and public scrutiny may be intense and unrelenting.

- There may be no outside assistance available.

This plan has been formulated to assign responsibilities and guide the immediate actions of key personnel in the HNHU after the onset of an influenza pandemic or a widespread health emergency.

For this plan to be effective, it is essential that all concerned be made aware of its provisions, and that every official and department be prepared to carry out their assigned functions and responsibilities in an emergency.

"Although it is not considered feasible to halt the spread of a pandemic virus, it should be possible to minimize the consequences by having prepared for the challenge in advance" (World Health Organization [WHO], April 1999).

3.1.1 Purpose and Scope

The HNHUIPP is to be utilized as a guide for responding to, and recovering from, a pandemic influenza at the local level. The HNHUIPP has been designed for use by both counties and community stakeholders for various planning purposes, including:

- The Board of Health.
- Haldimand and Norfolk health-care systems.
- Community members and physicians.
- Pharmacists.
- The community health sector.
- Laboratories.
- Mortuary professionals.
- Homeless service providers.
- Community service providers.
- The business sector.
- Faith-based organizations and agencies.
- Educational institutions (public, separate and private).
- Day nurseries.
- Non-governmental volunteer and community service providers.
- Public safety and correctional services.

The HNHU is the lead agency for Haldimand and Norfolk's influenza pandemic planning preparedness and response. Although local planning must be based on the federal and provincial plans, local contingency plans are required for surveillance, vaccine and antiviral administration and distribution, health services, public health measures, emergency response and communications.

The HNHUIPP will be updated regularly as new information becomes available. The HNHU will continue to develop and improve the plan in collaboration with other governments and local stakeholders.

3.1.2 Goals of Pandemic Planning

The following goals were based on the Canadian Pandemic Influenza Plan (CPIP) and the Ontario Health Plan for an Influenza Pandemic (OHPIP):

1. To minimize serious illness and overall deaths through appropriate management of the Haldimand and Norfolk health-care system.

2. To minimize societal disruption in Haldimand and Norfolk as a result of an influenza pandemic.

3.1.3 Objectives

The following objectives were developed for the HNHUIPP and its planning approach:

1. To coordinate the counties' responses to pandemic influenza using the Incident Management System (IMS).

2. To define and recommend preparedness activities that should be undertaken before a pandemic occurs that will enhance the effectiveness of a pandemic response.

3. To make recommendations on interventions that should be implemented as components of an effective pandemic influenza response.

4. To develop a plan that can be adapted for other public health emergencies (e.g., smallpox).

5. To develop community linkages and effective working partnerships with key stakeholders that will improve the counties' preparedness for any public health emergency.

6. To work collaboratively with the provincial and federal governments in pandemic influenza planning and clarify roles, responsibilities and actions.

7. To support provincial and federal planning initiatives by being represented on planning work groups and steering committees.

3.1.4 Additional Implications and Assumptions

Although there is alignment with the planning assumptions of the federal and provincial plans, the HNHUIPP has adapted the following general assumptions:

- An influenza pandemic will affect Haldimand and Norfolk, the Province of Ontario and other jurisdictions simultaneously. Therefore, mutual aid may not be feasible.

- An influenza pandemic will be caused by a novel subtype of influenza A virus; therefore, the following is assumed:

    - Haldimand and Norfolk will likely have very little lead time between when the WHO declares pandemic Phase 6 and when the novel influenza pandemic strain is identified in Haldimand and Norfolk.[2]

    - The impact of illness upon the residents of both counties could be significant.

    - There could be a cumulative attack rate of 15% to 35% during the first wave.

    - There could be multiple waves of influenza pandemic activity.

    - More severe illness and mortality than the usual seasonal influenza may be more likely in all population groups.

    - The specific pandemic epidemiology (incidence, distribution and control of disease in the population) will not be known until the pandemic virus emerges.

    - Children and otherwise healthy adults may be at greater risk because elderly adults may have some residual immunity from exposure to a similar virus earlier in their lives if the pandemic is caused by a recycled influenza strain.

    - The psychological impact on the public may be significant.

    - Social gatherings may need to be curtailed or cancelled to prevent further spread of the infection.

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[2] *Pandemic Phase 6 means increased and sustained transmission in the general population.*

- Supply chains of resources from every sector may be disrupted.

3.1.5 The Haldimand-Norfolk Health Unit Emergency Control Group's Responsibilities by Phases

The HNHU ECG will be chaired by the Incident Commander, or designate, who is responsible for ensuring that the pandemic phases are responded to as per the following:

Pandemic Phase	Definition	Response
Phase 1	No new influenza virus 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 to be low.	No response required.
Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	Ensure surveillance activities.
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.	HNHU to monitor status of virus from workplace. ECG to review Emergency Health Plan.
Phase 4	Small clusters with limited human-to-human spread but is highly localized, suggesting that the virus is not well-adapted to humans.	HNHU to continue enhanced monitoring and surveillance. HNHU provides routine updates to partners including primary municipal services and primary non-municipal services. Regular ECG meetings may commence.
Phase 5	Larger clusters, but human-to-human spread is still localized, suggesting the virus is becoming increasingly better-adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	Frequency of ECG meetings increased. HNHU sends out routine updates to partners, primary municipal services, non-municipal services and the public.

Phase 6	Increased and sustained transmission in general population.	Pandemic Plan activated if not already, Emergency Operations Centre (EOC) may become operational. HNHU to advise partners, primary municipal services and non-municipal services to review internal emergency plans. ECG releases information to general public. Immunization protocols implemented when antivirals and vaccines are available.
End of first wave in Canada		ECG monitors bulletins from Centers for Disease Control and Prevention (CDC) regarding virologic potential of second or subsequent waves. ECG debriefs and may report on services including social and psychological services. ECG evaluates communications strategy.
Phase 6	Second or later waves.	ECG remains operational. ECG continues issuing information notices to public.
Post pandemic/recovery		Departments restore community services as they are able. ECG debriefs.

3.2 Influenza Pandemic Plan Maintenance

3.2.1 Testing of the Plan

An annual exercise will be conducted to test the overall effectiveness of this emergency plan and provide training to the ECG, as the members of this group will change periodically.

3.2.2 Maintenance Review and Business Cycle

The HNHUIPP adopts the IMS as a framework that will be maintained and distributed by the HNHU. This plan will be reviewed annually and revised where necessary by a

meeting(s) of the ECG. Frequency of meetings and agenda items will be determined by the head of the ECG.

3.2.3 Duties of Involved Agencies

It is the responsibility of each person, agency, service or department named within the HNHUIPP to notify the HNHU's Emergency Planner forthwith of any of their service changes that may affect the use or coordination of services outlined in this plan.

Each county department and agency involved with the HNHUIPP is expected to prepare functional emergency procedures or guidelines outlining how it will fulfill its responsibilities during a pandemic emergency.

Each county department and agency should ensure that it designates a member of its staff to maintain and revise its own emergency procedures or guidelines.

Chapter 4: Formalizing the Emergency Response Process

4.1 Activating the Haldimand-Norfolk Health Unit Pandemic Response Plan

At different points and during the multiple phases presented in the Canadian Influenza Pandemic Plan and the Ontario Health Plan for an Influenza Pandemic (OHPIP), the Haldimand-Norfolk Health Unit (HNHU) Emergency Control Group (ECG) will meet to discuss how to respond to the crisis. The Public Health Manager or the Medical Officer of Health (MOH) or designate will be the Incident Commander (IC) for the pandemic and will lead the response. The IC will activate the HNHU Influenza Pandemic Plan (HNHUIPP). As required, the ECG will be called together to discuss the appropriate response.

4.2 Coordination of Municipal Response

There will be two municipal Emergency Operation Centres (EOCs) and Emergency Control Groups (ECGs) operating within Haldimand and Norfolk. To ensure an efficient and effective response, the HNHU's ECG will communicate with the municipal ECGs through each party's Liaison and Public Information Officer. Similarly, each party's IC will liaise with the other during the planning process to ensure the effective coordination of a pandemic response.

Chapter 5: Surveillance

Surveillance is an integral part of pandemic planning. Surveillance is the ongoing collection, analysis and interpretation of data and the timely dissemination of health-related data required by stakeholder decision-makers.[1] It serves to help detect novel strains of influenza virus that may trigger widespread morbidity and mortality, to provide estimates of influenza attack rates and to monitor the severity and progression of the disease.[1] The information gathered from these activities will enable stakeholder decision-makers to respond in a timely and appropriate manner.

5.1 Goal of Pandemic Surveillance

The goal of influenza pandemic surveillance is to provide timely and accurate information to facilitate stakeholder decision-making in Haldimand and Norfolk and the province during an influenza pandemic in order to reduce morbidity and mortality.

5.2 Objectives of Pandemic Surveillance (Adopted from OHPIP)

Adopted in its entirety from the Ontario Health Plan for Influenza Pandemic (OHPIP) 2007, the objectives of pandemic surveillance are as follows:

1. To detect the pandemic strain early in Haldimand and Norfolk.

2. To track the occurrence, severity and progression of the pandemic based on the World Health Organization (WHO) pandemic phases.

3. To monitor Influenza-Like Illness (ILI) activity in order to:
   a) Detect unusual events (new strains including epizootic strains, antigenic drift/shift, unusual outcomes/syndromes, unusual severity, unusual distribution).
   b) Compare new strains with vaccine composition and recommendations.
   c) Estimate the impact of ILI in terms of attack rate, outpatient visits, hospitalizations and case fatality rate.
   d) Describe the affected population(s) in order to identify high-risk groups, modes of transmission, risks and protective factors.

4. To share surveillance information with responders to help identify diseases; guide prevention, control and research; and evaluate treatment, prophylaxis and education.[1]

5.3 Elements of a Comprehensive Surveillance System

In the event of a pandemic, Ontario will monitor the epidemiology, spread and impact of influenza. Ontario's comprehensive surveillance for influenza includes:

- Laboratory/virology surveillance.
- Disease/epidemiological surveillance.
- Animal health surveillance.
- Vaccine and antiviral uptake surveillance.
- Data collection systems.
- Effective lines of communication.[1]

The HNHU will monitor ILI activity and rely on other sources such as the WHO, World Organization for Animal Health, Public Health Agency of Canada (PHAC), Canadian Network of Public Health Intelligence (CNPHI), Centers for Disease Control and Prevention (CDC), ProMED, Ministry of Health and Long-Term Care (MOHLTC), Global Public Health Intelligence Network (GPHIN) and the Centre for Infectious Disease Research and Policy (CIDRAP) to gain a better understanding of the outbreak.

5.4 Surveillance Activities

The OHPIP outlines a variety of surveillance activities to be coordinated at the provincial level in the event of a pandemic. Some of these activities are relevant at the local level (see Tables 1 and 2).

The OHPIP outlines a provincial pandemic preparedness and response plan that relies on information obtained from surveillance activities for detecting and monitoring influenza in accordance with the WHO's phases.

The OHPIP provides an overview of pandemic surveillance system planning. However, it does not provide detailed direction to health units with respect to ILI data collection and dissemination.[1] Therefore, it is the responsibility of health units to develop surveillance plans that meet local data needs, as well as to fulfill the requirements of the provincial and federal pandemic plans.

Recognizing the importance of collecting ILI surveillance data, the HNHU will implement up to three ILI surveillance strategies:

- School absenteeism surveillance.
- Hospital emergency department Febrile Respiratory Illness (FRI) surveillance.
- Primary care sentinel site FRI and ILI surveillance.

These strategies are types of syndromic surveillance activities, as they rely on the monitoring of symptom-based reports, rather than laboratory-confirmed diagnoses of illness.

The following provides an overview of the indicator definition, surveillance setting, surveillance population, data elements by pandemic period and implementation for school absenteeism surveillance, hospital emergency department FRI surveillance and primary care sentinel site FRI and ILI surveillance. The following ILI activity indicators were adopted in their entirety from the *Pandemic Surveillance Indicators Working Group Report 2007*.[2]

5.4.1 School Absenteeism

5.4.1A Indicator Definition

School absenteeism surveillance is the daily monitoring of the number and proportion of students absent from school. It acts as an indicator of illness in the community and for early outbreak detection. This surveillance can be used more broadly for other communicable diseases and emerging infections.

5.4.1B Surveillance Setting

Surveillance takes place at sentinel elementary and/or secondary schools in the Health Unit's jurisdiction.

5.4.1C Surveillance Population

Students attending schools (i.e. kindergarten to grade 12) are the population under surveillance.

5.4.1D School Absenteeism ILI Activity Indicator Data Elements by Pandemic Period

See Table 1 for the school absenteeism activity indicator data elements by pandemic period.

Table 1: School Absenteeism ILI Activity Indicator Data Elements by Pandemic Period
Pandemic Period

Inter-pandemic (WHO Phases 1-2)

Surveillance Indicator Data Elements	1. Name of School. 2. Total school population on date of report (denominator).

	3. Report date. 4. Name of person completing form. 5. Number of students absent (numerator) due to: a. All causes. b. Illness only. i. With respiratory symptoms (cough/cold/breathing problems). ii. With gastro-intestinal symptoms (vomiting/ diarrhea). iii. With other symptoms or with symptoms not reported. 6. Other possible demographics (e.g., grade).
Reporting Frequency	Data should be collected daily by schools and submitted to the HNHU either daily or weekly (depending on resources). Note that daily submission will be the most useful for a timely response.
Threshold for Alerts	Absenteeism exceeding a threshold of 10% (maximum) should generate an alert for investigation.
Rationale	To provide a baseline estimate for student absenteeism and to monitor and detect changes in illness-related absenteeism.
Pandemic Alert (WHO Phases 3-5)	
Surveillance Indicator Data Elements	As above.
Reporting Frequency	As above.
Threshold for Alerts	As determined from baseline data
Rationale	To monitor and detect changes in illness-related absenteeism.
Pandemic (WHO Phase 6)	
Surveillance Indicator Data Elements	As above.
Reporting Frequency	As above until late Phase 6, when school absenteeism data collection and reporting will likely be discontinued.
Threshold for Alerts	As determined from baseline data until late Phase 6, when school absenteeism data collection and reporting will be discontinued.
Rationale	After a widespread, sporadic or localized

	pandemic has been declared (Canadian pandemic late Phase 6), school absenteeism data collection and reporting will be discontinued, and surveillance efforts will shift to local Influenza Assessment, Treatment and Referral Centres.

For successful implementation of school absenteeism as a pandemic surveillance indicator, formal partnerships and communication processes with the Grand Erie District School Board and the Brant Haldimand Norfolk Catholic District School Board are necessary. Schools and school boards need to understand the rationale for the program and have the opportunity to give feedback. Parents need to understand why and how the data are being collected so that they are comfortable reporting the reasons for their child's absence from school.

Ongoing resources for implementation and operation will be required for sustainable surveillance. These include human resources and information systems to facilitate the collection and sharing of data between the Grand Erie District School Board, the Brant Haldimand Norfolk Catholic District School Board and the HNHU.

5.4.2 Hospital Emergency Department (ED) FRI Surveillance

5.4.2A Indicator Definitions

FRI with travel: Number of cases of FRI (with travel history) presenting to ED.

ILI: Number of cases presenting with symptoms of ILI as assessed by classification of patient's chief complaint or reason for visit at ED triage.

5.4.2B Surveillance Setting

Upon visiting an ED, patients are sent to triage, where they are asked a series of questions regarding their chief complaint or reason for visit. It is recommended that all patients be screened for FRI and results recorded at this time. During triage, the patient's chief complaint or reason for visit is recorded either electronically or on paper.

5.4.2C Surveillance Population

The surveillance population is all patients visiting the ED. In general, it is expected that patients visiting the ED will be more severely ill than those visiting family physicians or walk-in clinics. In addition, the very young, the elderly and individuals with chronic conditions are more likely to experience complications from illness and potentially seek

care in EDs. The population subset visiting the ED will vary by geography, access to a primary health-care provider, access to walk-in or urgent-care clinics, hours of operation of such clinics, hospital ED hours of operation and other factors.

5.4.2D Hospital Emergency Department FRI/ILI Activity Indicator Data Elements by Pandemic Period

See Table 2 for Hospital ED ILI Activity Indicator Data Elements by Pandemic Period.

Table 2: Hospital ED FRI/ILI Activity Indicator Data Elements by Pandemic Period

Pandemic Period	
Inter-pandemic (WHO Phases 1-2)	
Surveillance Indicator Data Elements	FRI screener results. ILI ED visits.
Reporting Frequency	FRI: Upon detection of positives (total # presenting to ED, weekly total # screens, total # of positives). ILI ED visits: Where electronic, real-time or near real-time (batch file transfer), otherwise daily.
Threshold for Alerts	One case of FRI with a positive travel history may constitute an alert. ILI ED visits: Built-in threshold for significant increase (e.g., two or three standard deviations above).
Rationale	Refer to background and advantages and disadvantages.
Pandemic Alert (WHO Phases 3-5)	
Surveillance Indicator Data Elements	FRI screen results. ILI ED visits.
Reporting Frequency	FRI: Upon detection of FRI (total # presenting to ED, weekly total # screens, total # of positives). ILI ED visits: Where electronic, real-time or near real-time (batch file transfer), otherwise daily.
Threshold for Alerts	One case of FRI with a positive travel history is the threshold for an alert. ILI ED visits: Built-in threshold for significant increase (e.g., two or three standard deviations above), however may increase the sensitivity for this period as necessary.
Rationale	Refer to background and advantages and disadvantages.
Pandemic (WHO Phase 6)	
Surveillance Indicator	FRI screener results.

Data Elements	ILI ED visits. ILI ED admissions.
Reporting Frequency	All daily.
Threshold for Alerts	Thresholds, per se, not used, but aggregate information used to monitor impact of pandemic. ILI ED visits as above.
Rationale	Refer to background and advantages and disadvantages.

It is important to note that a complete evaluation of the ability of hospital ED FRI screening to detect cases of novel influenza (during the pandemic alert periods) or to measure the impact of a pandemic (during the late pandemic phase) is not yet possible as the system has not yet been fully operationalized in all jurisdictions. Similarly, a complete evaluation of the capacity for surveillance for ILI ED visits using electronic systems to detect novel influenza and/or assess the impact of a pandemic is not yet possible as these systems have not yet been fully operationalized in all jurisdictions, including Haldimand and Norfolk.

5.4.2E Case Data Collection Method

The HNHU, in collaboration with local hospitals, will create a web-based portal to access live, real-time data. This will require user agreements, IT development or enhancements at hospitals. Costs are minimal and one-time-only with minimal maintenance costs thereafter. This will provide local hospitals and the HNHU with access to timely, detailed data for informed decision-making. This would also provide data that go beyond pandemic influenza preparedness, including hospital resource planning, monitoring of disease trends and early detection of infectious disease events.

5.4.3 Primary-Care Sentinel Site ILI Surveillance

5.4.3A Indicator Definitions

ILI consultation rate: The number of primary care consultations for ILI divided by the number of patients seen for any reason over the same time period, reported by sentinel physicians in walk-in clinics or family practices.[3] Sentinel physicians refers to physicians that report ILI activity.

FRI (with travel history) cases: Each case of FRI reported immediately upon detection by sentinel physicians in walk-in clinics or family practices.

5.4.3B Surveillance Setting

Primary-care settings staffed by family physicians, nurses or nurse practitioners, including practices where patients receive care from a regular provider as well as walk-in or urgent-care clinics where the care provider is not required to be the patient's family doctor. In Haldimand and Norfolk, a system to acquire surveillance data from primary care settings has yet to be developed.

Primary-care sentinel site: Any primary-care facility, such as a physician's office or walk-in clinic, that acts as a point of collection for ILI surveillance data. Primary-care sites provide basic or general non-emergent care where a patient generally first seeks medical assistance.

Physician's office: An office that provides primary care within the context of an established family practice, where patients are on the practice's roster.

Walk-in (urgent-care) clinics: Walk-in or urgent-care clinics are offices providing primary care to patients without an appointment or referral where the physician providing the care is not required to be the patient's family doctor. A walk-in or urgent-care clinic also has extended hours of service. There are two types of walk-in clinics in Canada: the first type is defined as a walk-in clinic that has extended opening hours with little connection to family practices, while the second is an after-hours service with links to a family practice (e.g., Family Health Teams).

5.4.3C Surveillance Population

Patients seeking health care from a general practitioner for non-emergent medical care.

5.4.3D Background History of Indicator Use

Primary care ILI surveillance is reported by sentinel sites directly to the FluWatch program, with local health units being indirect recipients. Although the FluWatch program is recognized as a single sentinel surveillance system, it is also recognized that the collection of FRI data by all primary-care practitioners will help detect new or re-emerging respiratory diseases. The following section provides a detailed overview of ILI surveillance, as well as provides a brief overview of FRI surveillance.

5.4.3E FluWatch

Nationally, ILI consultation rates are reported to the FluWatch program. FluWatch is a program of the Immunization and Respiratory Infections Division, Centre for Infectious Disease Prevention and Control of PHAC, that monitors influenza and ILI in the community.[4] Weekly or biweekly reports are produced by the program to summarize

influenza surveillance activities in Canada. Data used by FluWatch include ILI consultations reported by sentinel clinical practices.

In Ontario, recruitment of sentinel physicians and nurses for FluWatch is the responsibility of the College of Family Physicians of Canada, National Research System (NaReS).[5] Potential sentinels are identified using a variety of databases and then sent a recruitment package that includes information about FluWatch, the responsibilities and benefits of participating as a sentinel and a sample weekly reporting form. The objective is to recruit at least one sentinel from each census division across Canada, or at least one sentinel per 250,000 citizens in more densely populated regions. Sentinels are asked to submit the total number of patients seen for any reason and the total number meeting a standard ILI case definition for one clinic day each week. Information on patient age groups is also collected.

5.4.3F Primary Care Sentinel Site ILI Activity Indicator Data Elements by Pandemic Period

The following table provides a detailed overview of primary-care sentinel site ILI surveillance activity indicator data elements, reporting frequency, thresholds for alerts and rationale for each pandemic phase.

Table 3: Primary-Care Sentinel Site ILI Activity Indicator Data Elements by Pandemic Period

Pandemic Period

Inter-pandemic (WHO Phases 1-2)	
Surveillance Indicator Data Elements	ILI consultation rate (total number of patients meeting ILI case definition; total #patients seen for any reason) AND/OR Number of FRI cases (new or worsening cough, fever AND travel history to a country with a health alert).* Age groups: <5 25-44 5-9 45-64 10-14 65+ 15-24 Geographic indicator: Postal code or Forward Sortation Area (FSA**) of cases.
Reporting Frequency	ILI: One clinic day per week.

	FRI with travel history: Upon detection of a single case.
Threshold for Alerts	ILI: Above baseline levels. FRI: One case warrants investigation or action.
Rationale	To explore the year-round seasonality of influenza and other respiratory viruses. To alert health units and the MOHLTC of seasonal influenza outbreaks, as well as epidemics of other respiratory viruses or bioterrorism agents. To provide annual ILI baseline data. FRI reporting to increase Positive Predictive Value (PPV) for emerging viruses of interest.
Pandemic Alert (WHO Phases 3-5)	
Surveillance Indicator Data Elements	As above.
Reporting Frequency	May want to consider increasing frequency of ILI reporting.
Threshold for Alerts	As above.
Rationale	To report on unusual distribution, events, intensity and clinical progression of ILI.
Pandemic (WHO Phase 6)	
Surveillance Indicator Data Elements	None.
Reporting Frequency	None.
Threshold for Alerts	None.
Rationale	During this pandemic phase, surveillance efforts will shift to local Influenza Assessment, Treatment and Referral Centres.

*Should be done by all primary-care physicians, and data should be submitted directly to the Health Unit.
** Forward Sortation Area (FSA) is a geographical region of Canada represented by the first three characters of a postal code (http://www.canadapost.ca/cpc2/addrm/hh/doc/faq-e.asp#2).

5.4.3G Implementation

There are two options for the implementation of ILI surveillance performed through sentinel clinical practices. The first is to increase local recruitment in the FluWatch program in order to take advantage of existing infrastructure and methodology; health units can attempt to enhance recruitment to FluWatch through additional local efforts. The second is to create a local surveillance system in which sentinel practices report directly to their local health unit.

5.5 Haldimand and Norfolk Surveillance Activities by Pandemic Phases

Phase 1: No new influenza virus subtypes have been detected in humans.

- Maintain directory of current contact information for all local health-care providers.
- FRI surveillance according to MOHLTC guidelines and reporting to Public Health Department (Appendix 5-A).
- Institutional reporting of respiratory outbreaks to HNHU (Appendix 5-B, 5-C and 5-D).
- Reporting of unusual FRI/enteric/pneumonia activity to HNHU.
- Laboratory reporting of confirmed cases of influenza to HNHU.
- Reporting of student absenteeism to HNHU (Appendix 5-E).
- Reporting of influenza activity in physicians' practices to HNHU (Appendix 5-F).
- Monitoring of local influenza activity.
- Sharing of information with local health providers. Report to MOHLTC Public Health Division, e.g. outbreak faxing, FluWatch.
- Use iPHIS for electronic transmission of institutional respiratory infection outbreak reports.

Phase 2: A circulating animal influenza virus subtype poses a substantial risk of human disease.

Continue all Phase 1 activities.

- Disseminate alerts and pertinent information through the HNHUECG.
- Receive notification of any positive results for local domestic and wildlife species.

Phase 3: Human infection(s) with a new subtype, but no human-to-human transmission or spread to a close contact.

Continue with all Phase 1 and 2 activities.

- Ensure that surveillance data are being collected and forwarded to MOHLTC.
- Maintain vigilance in FRI screening and ensure reporting to HNHU.

- Confirm that surveillance tools and protocols required for later phases (e.g., investigating clusters, detecting entry of the pandemic strain) are available and up to date.
- Comply with standards and protocols for collecting, storing and transporting specimens (Appendix 5-G).

Phase 4: Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that virus is not well-adapted to humans.

Continue with all Phase 1, 2 and 3 activities.

- Identify surveillance/information needs based on MOHLTC tools should a pandemic progress into next stage.
- Disseminate alerts and information about the progress of the pandemic to increase awareness.

Phase 5: Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better-adapted to humans, but may not yet be fully transmissible.

Continue with all Phase 1, 2, 3 and 4 activities.

- Increase current surveillance activities.
- Implement any new or updated FRI or SRI surveillance tools from MOHLTC or that are created internally.
- Review and revise surveillance information required for a potential progression to Phase 6 (pandemic).

Phase 6a: Increased and sustained transmission in general population.

Continue with Phase 1, 2, 3, 4 and 5 activities.

- Implement investigation protocol for clusters (Appendix 5-H).
- Utilize active surveillance protocols to detect entry of cases of pandemic strain in Haldimand and Norfolk.
- Evaluate current epidemiology of pandemic to direct priorities to high-risk groups based on MOHLTC criteria for high risk (Appendix 5-I).
- Adopt and implement revised MOHLTC case definitions as necessary (Appendix 5-J).
- Provide timely data and report to the province.
- Participate in special studies and establish dedicated teams to activate the studies in collaboration with other public health authorities.
- Implement laboratory testing protocol (Appendix 5-K).

- Distribute pandemic data collection forms and protocols for electronic transmission of data to appropriate pandemic stakeholders (e.g., hospitals, LTC facilities).
- Continue with heightened surveillance until no longer sustainable/needed to collect information on affected populations or priority groups.
- Disseminate pandemic alerts and information as identified through the HNHU ECG.

Phase 6b: Regional and multi-regional epidemics.

Continue with Phase 1, 2, 3, 4 and 5 activities.

- Distribute and utilize MOHLTC pandemic reporting tools (e.g., mortality, morbidity, ILI activity).
- Modify definitions, activities, processes and tools as required based on direction from the province.
- Disseminate epidemiological summaries to key stakeholders to characterize outbreaks and impacts.
- Continue to provide timely regional data and analysis for regional and provincial analysis.
- Maintain ongoing surveillance to detect second or later waves.
- Monitor vaccine and antiviral efficacy, adverse reactions and coverage once vaccine is available in conjunction with the HNHU ECG.
- Work with MOHLTC to estimate burden of disease during outbreak period and develop epidemiological summaries to describe the impact of pandemic waves in Ontario.
- Scale down enhanced surveillance as appropriate and resume inter-pandemic response.
- Review and adopt case definition, and evaluate the current definition.

Phase 6c: Pandemic.

Continue with Phase 1, 2, 3, 4 and 5 activities.

- Work with MOHLTC to estimate burden of disease during outbreak period and develop epidemiological summaries to describe the impact of pandemic waves in Ontario.
- Scale down enhanced surveillance as appropriate and resume inter-pandemic response.
- Review and adopt case definition, and evaluate the current definition.

Chapter 6: Public Health Measures

Public health measures are being considered as means to minimize the transmission of the novel virus during a pandemic. Public health measures are non-medical interventions that may be used to reduce the spread of the influenza virus. They are categorized at either the individual level or community level.

Individual public health measures: To protect those who have contact with people with influenza, such as the use of personal protective equipment and practices (e.g., annual influenza immunization, respiratory etiquette, hand hygiene, staying home if ill, self-care if ill), case management and contact tracing, self-isolation and individual activity restrictions.

Community public health measures: To protect the larger population from widespread influenza transmission by means such as cancelling public gatherings and closing schools.

Public health measures may include, but are not limited to, the following:

- Public education.
- Issuance of travel restrictions.
- Screening of travellers.
- Conducting case and contact management.
- Community-based disease control strategies (e.g., social distancing, school closures and restriction or cancellation of large public gatherings).

It is important to note that until early epidemiological information is known, it is difficult to predict which public health measures will be most effective and therefore need to be implemented in the community. The type of public health measures used will therefore be heavily dependent on the epidemiology of the virus (e.g., pathogenicity, modes of transmission, incubation period, attack rates in different age groups, period of communicability and susceptibility to antivirals).

The Haldimand-Norfolk Health Unit (HNHU) will attempt to assess and identify when to use these measures, what would trigger initiating a measure and its appropriate duration. Important decisions will be made about community-based disease control strategies aimed at minimizing the transmission of influenza in the community. The Medical Officer of Health (MOH), in consultation with other levels of government, will be responsible for decisions regarding the implementation of community-based disease control strategies in order to protect the public best.

For public health measures to be effective, they must be used aggressively at the beginning of a pandemic. In the Pandemic Alert Period (Phases 4 and 5), the focus will be on identifying ill individuals early, as well as those who had contact with them, to contain the spread of the virus (i.e., case management and contact tracing).

6.1 The Goal of Instituting Public Health Measures

To use non-medical interventions best suited to the epidemiology of the novel virus in order to reduce its transmission.

6.2 Objectives of Instituting Public Health Measures

1) Decrease the number of individuals exposed to the novel virus and potentially slow the progress of the pandemic.

2) Slow disease spread and gain time for implementing medical measures (e.g., distributing vaccine).

3) Reduce the morbidity and mortality caused by the pandemic.

Note: The ability to implement public health measures will be affected by the phase of the pandemic, the human and financial resources available, the associated costs and the public's acceptance of such measures.

6.3 Public Education

As possibly the most important public health measure during a pandemic, public education must provide clear, consistent and accurate information. At minimum, this information should provide recommendations to the public on how to be prepared for a pandemic and how to reduce their risk to health hazards.

Public education should begin as early as possible and continue throughout the pandemic. This information should include:

- Characteristics about the novel influenza virus, including how it spreads.
- Individual infection prevention and control measures.
- Social distancing, including travel restrictions and institutional closures.
- Influenza care, including self-care and access to health care.

The HNHU will attempt to utilize all available methods of communication (e.g., newspaper, radio, website) in order to provide stakeholders, partners, other agencies and the public with all relevant information in a timely manner.

6.4 Travel and Border-Related Measures (as advised by OHPIP)

Please refer to the Canadian Pandemic Influenza Plan. Travel restrictions are the responsibility of the PHAC, and Ontario will comply with federal directions. To date, the provincial plan identifies travel and border-related issues as an area for further consideration.

Certain precautions are recommended for those who MUST travel, though travel may be discouraged during the event of a pandemic. Decisions could be made to suspend travel during the pandemic in an attempt to lessen the spread.

6.5 Case Management

Individuals reported to the HNHU with Febrile-Respiratory Illness (FRI) or Influenza-Like Illness (ILI) will be followed using the Provincial Infectious Disease Advisory Committee's (PIDAC) document "Preventing Febrile Respiratory Illness" (2005) available online at:

http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_fri.html

This document reflects the best expert opinion on the prevention and control of droplet-spread FRI. Components of these best practices include influenza immunization, case-finding and surveillance, preventive practice, reporting and evaluation.

Isolation of cases early in the Pandemic Alert Period or Pandemic Period in Haldimand and Norfolk may prevent secondary cases or slow the spread of the illness within the population. This may also prevent or reduce disruption of the health-care system by flattening the epidemic curve to reduce the demand for health-care services from a short, intensive outbreak to a more manageable level of demand over a longer period. This could also help reduce societal disruption and potentially buy time for vaccine manufacture and distribution, thus mitigating the effects of the pandemic in the community as a whole.

Individual case management early in the pandemic will facilitate the collection of epidemiological data that could be used to characterize how the virus presents in Haldimand and Norfolk. Ongoing evaluation of the epidemiological data from individual cases and comparisons with information from other affected countries may help focus control efforts.

6.6 Active Surveillance

Active surveillance is used for healthy individuals who have had contact with someone who is ill with a fever and respiratory symptoms.

Once transmission occurs in the community, active surveillance will no longer be effective in slowing or containing transmission. The HNHU will then provide guidance on how to self-monitor for symptoms of ILI and provide instructions on the need to self-isolate or when to seek medical attention. An appendix on self-care is under development.

6.7 Quarantine

Quarantine of healthy individuals who have been exposed to a confirmed case of influenza is a community-based disease control measure that may be considered in order to slow transmission in the community. If used, it will be most effective in the very early stages of detection of the influenza pandemic strain in Haldimand and Norfolk. Individuals identified as contacts may be asked to isolate themselves at home for the incubation period of influenza. During this time, they may be contacted by telephone by HNHU staff.

Once transmission occurs in the community, this measure will no longer be effective in slowing or containing transmission. At that time, the HNHU will use community-wide communication strategies to inform the general public of what to do if exposed to influenza, how to provide self-care and how or when to seek health-care services. Information will also be posted on the HNHU influenza pandemic webpage.

Quarantining of contacts will require extensive public health resources as its success as a containment/control strategy is contingent on thoroughness of contact tracing, rapid implementation and ongoing monitoring. This effort will not be sustainable beyond the Pandemic Alert Period, and, depending on the size of the outbreaks, may need to be discontinued prior to pandemic activity in Canada (i.e., Phase 6).

6.8 Community-Based Disease Containment Strategies

Important decisions will be made about community-based disease control strategies aimed at minimizing the transmission of influenza in the community. The HNHU's MOH, together with other levels of government, will be responsible for decisions regarding the implementation of community-based disease control strategies in order to protect the public best. However, it is recognized that directions may also be forthcoming from the federal and provincial governments to ensure consistency of a

broad-based approach. Public education will be available on how individuals can do their share on preventing the spread of disease.

6.8.1 Social Distancing

Once an influenza pandemic has arrived in the community, people may want to consider using social distancing as a way to reduce the risk of being exposed to the influenza virus. The risk of coming in contact with an individual ill with influenza is increased based on exposure to other individuals. Social distancing refers to reducing or avoiding contact with other people as much as possible. Some possible strategies for social distancing include the following:

- Minimize visitors to your home.
- Cancel or postpone family gatherings, outings or trips.
- Avoid shaking hands, hugging or kissing people as greetings.
- Avoid peak shopping times and consider stores that are open 24 hours to stagger shopping times.
- Order groceries online or over the telephone for delivery if such services are available.
- Arrange to pay bills at ATMs, online or over the telephone.

6.8.2 Large Gathering Restrictions/Cancellations

The MOH should develop a predetermined strategy for closing public/large gatherings. If public gatherings are restricted, they should be restricted early enough to affect transmission. The strategy should include, but not be limited to, the following:

- The definition of what constitutes a public gathering.
- Specifying the time period within the pandemic phases to implement the strategy.
- Applicability and consistency across jurisdictions.
- Availability of a priority use of vaccine and antivirals as outlined for priority groups.
- Considerations to whether school-aged children are to be considered a high priority for immunization or antivirals in the early phase of the pandemic.

6.8.3 School and Day Nursery Closures

Closure of schools and day nurseries will need to be considered, as children are known to be efficient transmitters of influenza. Closing schools and large day nurseries may reduce transmission or delay the spread of the disease (both in this age group and in younger siblings, parents and close contacts of students and childcare attendees). These control measures will undoubtedly cause increased hardship to parents and caregivers and

will have profound effects on the business sector, as parents and caregivers may need to take time off work to provide child care. The costs and benefits will need to be weighed before making the decision to implement this control measure.

Note: The HNHU awaits the provincial Public Health Measures Work Group to develop further criteria and triggers for the implementation of this measure. This will help ensure a consistent response across the province. Discussions will need to be had with local school officials.

Chapter 7: Antivirals and Vaccines

The World Health Organization (WHO), the Public Health Agency of Canada (PHAC) and the Ontario Ministry of Health and Long-Term Care (MOHLTC) agree that monovalent influenza vaccine will useful for the reducing disease and societal disruption during a an influenza pandemic. It is not known how effective the vaccine will be against the pandemic strain; however, seasonal influenza vaccines are usually effective in preventing illness in 70% to 90% of healthy adults. Antiviral medications will also play an important role in treating influenza illness during a pandemic. The availability of antiviral drugs will normally precede the availability of influenza vaccine.

As it is likely that the supply of both antiviral medications and vaccine will be limited during a pandemic, the MOHLTC will control the distribution of both. Ontario has committed to maintaining a stockpile of antiviral medications large enough to treat up to 25% of the population. Currently, there is no evidence that putting large groups of otherwise healthy Canadians on antiviral drugs in order to prevent influenza (i.e., prophylaxis) will stop or slow the spread of a pandemic.

The Haldimand-Norfolk Health Unit (HNHU) will serve as the primary coordinator for the distribution and administration of vaccine in Haldimand and Norfolk. A vaccine will not be available for at least four to six months after the pandemic strain is identified and likely will not be available for the first wave. In the event of a pandemic, the Pandemic Influenza Committee, which includes representation from the National Advisory Committee on Immunization, will make recommendations to federal, provincial and territorial governments on priority groups based on the epidemiology of the pandemic strain. However, Ontario's goal is to obtain enough vaccine for the entire population.

7.1 The Goal of Vaccine Use

To ensure the availability of influenza vaccine to our population as designated by the Emergency Control Group (ECG) as per the Ontario Health Plan for an Influenza Pandemic, 2008(OHPIP).

7.2 Objectives of and Vaccine Use

- To develop policies and procedures for the delivery and subsequent administration of the initial supply of vaccine according to priority groups per the national Pandemic Influenza Committee and the OHPIP.

- To record all dispensing of vaccine and any adverse reactions through the integrated Public Health Information System (iPHIS).

- To ensure the availability of trained staff to administer vaccines (including volunteers, retired RNs, etc.).
- To ensure the security of vaccines.
- To liaise with the Communication Subcommittee to disseminate information regarding vaccine status.

7.3 Haldimand and Norfolk Antiviral and Vaccine Activities by Pandemic Phases

Table 1: Haldimand and Norfolk Antiviral and Vaccine Activities by Pandemic Phases

Pandemic Phase	Antiviral and Vaccine Activities
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 to be low.	▪ Continue to promote annual universal influenza immunization actively. ▪ Promote Pneumococcal vaccination as per the recommendations of the National Advisory Committee on Immunization (NACI) for those aged 65 years and older and high-risk groups. ▪ Increase annual influenza vaccine coverage among health-care workers (HCW) and emergency service workers. ▪ Maintain updated plans to acquire, store and distribute vaccine. ▪ Work with stakeholders to develop plans to redeploy staff to administer vaccine and to provide training. ▪ Maintain antiviral treatment and prophylaxis recommended in A Guide to the Control of Respiratory Infection Outbreaks in LTC Homes (MOHLTC, 2004, or as current).
Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	▪ Continue with Phase 1 activities.
Phase 3:	▪ Confirm that security issues with storing and distributing vaccine have been addressed.

Human infection(s) with a new subtype, but no human-to-human transmission, or only rare instances of transmission to close contacts.	
Phase 4: Small cluster(s) with limited human-to-human transmission, but spread is highly localized, suggesting that the virus is not well-adapted to humans.	▪ Ensure list of currently qualified and potential vaccinators is up to date. ▪ Review mass vaccination program and address problematic issues. ▪ Review and update educational materials for administering vaccines. ▪ Confirm plans for distributing vaccines.
Phase 5: Larger cluster(s) but human-to-human transmission still localized, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	▪ Review plans for storing, distributing and administering vaccine. ▪ Ensure that training of staff and infrastructure are in place to: o Record a two-dose immunization program. ▪ Work with health organizations to train non-traditional vaccinators.

7.4 Antiviral Medications

There are three drugs available to prevent and treat influenza: amantadine, oseltamivir (Tamiflu®) and zanamivir (Relenza™). Oseltamivir and zanamivir belong to a class of antiviral drugs called neuraminidase inhibitors. Neuraminidase inhibitors can be used to treat or prevent influenza. When used to treat influenza, these medications must be started within two days of the onset of symptoms (ideally 12 to 24 hours). These drugs do not kill the influenza virus, but rather decrease the virus's ability to continue to grow in the body. By doing this, the neuraminidase inhibitors are effective in reducing complications.

7.4.1 Treatment

For influenza treatment purposes, antivirals must be started within 48 hours of the onset of symptoms to be effective. Because of amantadine's side effect profile, dosing requirements and risk of resistance, oseltamivir is the drug of choice for most people during a pandemic. Zanamivir is the recommended treatment for pregnant and lactating women.

7.4.2 Prophylactic Use

Ontario will develop a provincial policy on the use of antivirals for prophylaxis in accordance with the national policy. As of 2009, the Canadian Pandemic Influenza Plan indicates the national stockpile of antiviral medications are to be used for treatment only. Ongoing dialogue with citizen and stakeholder groups continues at the national level in order to inform future policy decisions as to whether stockpiled antiviral medications should be used for prophylaxis during a pandemic and for whom.

7.4.3 Monitoring Adverse Reactions

Physicians, pharmacists and consumers will be able to report severe and unusual adverse events related to antiviral medication to Health Canada through MedEffects (http://www.hc-sc.gc.ca/dhp-mps/medeff/index-eng.php).

7.4.4 Distribution

During a pandemic, the Ministry of Emergency Operations Centre (MEOC) will be responsible for the distribution of antivirals.

Should a pandemic be severe enough that more than 25% of the population will require treatment, antiviral drugs will be distributed according to the available scientific evidence (e.g., priority may be given to those likely to develop complications).

7.5 Vaccines

To immunize the entire province, Ontario would require 12 million doses, based on one dose per person, over approximately four months. The HNHU is developing a mass immunization plan to in order to implement this goal locally.

7.6 Next Steps

The following are topics currently being developed:

- Mass immunization clinic plan (storage of supplies, transportation of supplies, etc.), including medical directives, documentation protocols, policies and procedures.

- Database for inventory of vaccine clinic supplies.
- Security of supplies, vaccines at storage sites and immunization clinic sites.
- Secure transportation of supplies and vaccines.
- List of qualified injectors.
- Stakeholder plans to redeploy qualified staff to immunize or dispense antiviral medications.
- Training materials for vaccine and antiviral administration.

Chapter 8: Communications

Effective communications are essential to the management of a pandemic. Information communicated must be accurate, timely and consistent. The Haldimand-Norfolk Health Unit (HNHU), in concert with the Ministry of Health and Long-Term Care (MOHLTC) and key stakeholders, will lead public health communications during a pandemic for Haldimand and Norfolk. In order to support this leadership role, communication goals, objectives, principles and accountabilities have been clearly outlined in the event of a pandemic. Multiple communication methods will be employed to ensure that information conveyed is transparent, accessible, accurate and timely, in order to assist residents, businesses, the health-care sector and other community stakeholders with their pandemic responses.

8.1 The Goal of the HNHU's Pandemic Communications

To provide accurate and consistent information regarding the pandemic in a timely manner.

8.2 The Objectives of the HNHU's Pandemic Communications

1. The HNHU will link to, and liaise with, the MOHLTC, Health Canada and established regional networks.

2. The HNHU will ensure open, transparent and supportive communications with the health sector in Haldimand and Norfolk.

3. The HNHU will ensure that agencies employing health-care workers and essential services workers have access to timely information to assist with pandemic response.

4. The HNHU will be the lead organization for public and stakeholder communications within Haldimand and Norfolk pertaining to health-related communications.

5. HNHU communications will be supported by provincial, national and international sources, complemented by information from local hospitals, partners and municipal leaders.

6. The HNHU will distribute clear, concise and timely information to the public via multiple communication vehicles.

7. The HNHU will establish and identify local community groups/organizations and develop networks and partnerships for the purposes of informing the public.

8.3 Local Communications Activities by Pandemic Phase

The following communications activities utilize the World Health Organization's (WHO's) Pandemic Phase Model.

Phase 1

1. Work with professional organizations and labour associations to promote universal Influenza immunization to the public and health-care workers (HCWs).

2. Ensure that all educational materials for the public and HCWs on influenza are accurate, up to date and accessible (with respect to languages, literacy level, etc.).

3. Continue to reinforce the importance of prevention and mitigation activities.

4. Continue to work with MOHLTC to improve communication and information infrastructure.

5. Participate in annual pandemic simulation exercises and use the results to refine the HNHU Communications Plan.

6. Work with MOHLTC to establish procedures to ensure that all information is accurate at the time at which it is released.

7. Circulate copies of the HNHU *Influenza Pandemic Plan* (HNHUIPP) and associated contingency plans to key stakeholders.

8. Post the HNHUIPP on the Health Unit's website for public use.

9. Develop and maintain a stakeholder database including stakeholders' preferred method of communication.

10. Raise awareness among key partners of pandemic preparedness through the following:

    a. Reports to Health and Social Services Advisory Committee.

    b. Presentations at the three local hospitals.

    c. Strengthening relationships with local media outlets to support the communication network for ongoing dissemination of public information.

Phase 2

11. Continue Phase 1 activities.

Phase 3

12. Review and, if necessary, refine local communication plans.

13. Confirm when and what to communicate to the public, HCWs, workplaces and other audiences, focusing on existing influenza prevention methods and WHO and PHAC updates.

14. Review and, if necessary, update pandemic contact list.

Phase 4

15. Continue Phase 3 activities.

16. Confirm local spokespeople and back-up personnel for a pandemic.

17. Provide crisis communication training.

18. Confirm that local health facilities have updated pandemic and internal business continuity plans.

19. Verify list of stakeholder and media contacts.

20. Confirm translation requirements.

Phase 5

21. Work with MOHLTC to develop public education messages, and define the role of spokespeople.

22. Implement plans to communicate with all relevant audiences, including the media, key opinion leaders, stakeholders and employees.

Phase 6

23. Activate the crisis communication plan.

24. Distribute fact sheets.

25. Continue regular communication with communication partners.

26. Provide timely information to HCWs, media and the public regarding Ontario's level of readiness, possible decreases in service and alternative care sites.

27. Provide regular updates to Joint Health and Safety Committees and vice versa.

28. Update annual multimedia campaign promoting Universal Influenza Immunization Plan (UIIP), adding information about current influenza activity.

29. Continue to work with MOHLTC to provide consistent messages.

30. Continue to provide information and updates to HCWs, the media and the public.

31. Gather information from the field and use that to inform and refine the communications plan.

32. Monitor the effectiveness of local communication strategies and modify as required.

End of First Pandemic Wave, Pandemic Subsiding

33. Identify lessons learned.

34. Evaluate local communication response.

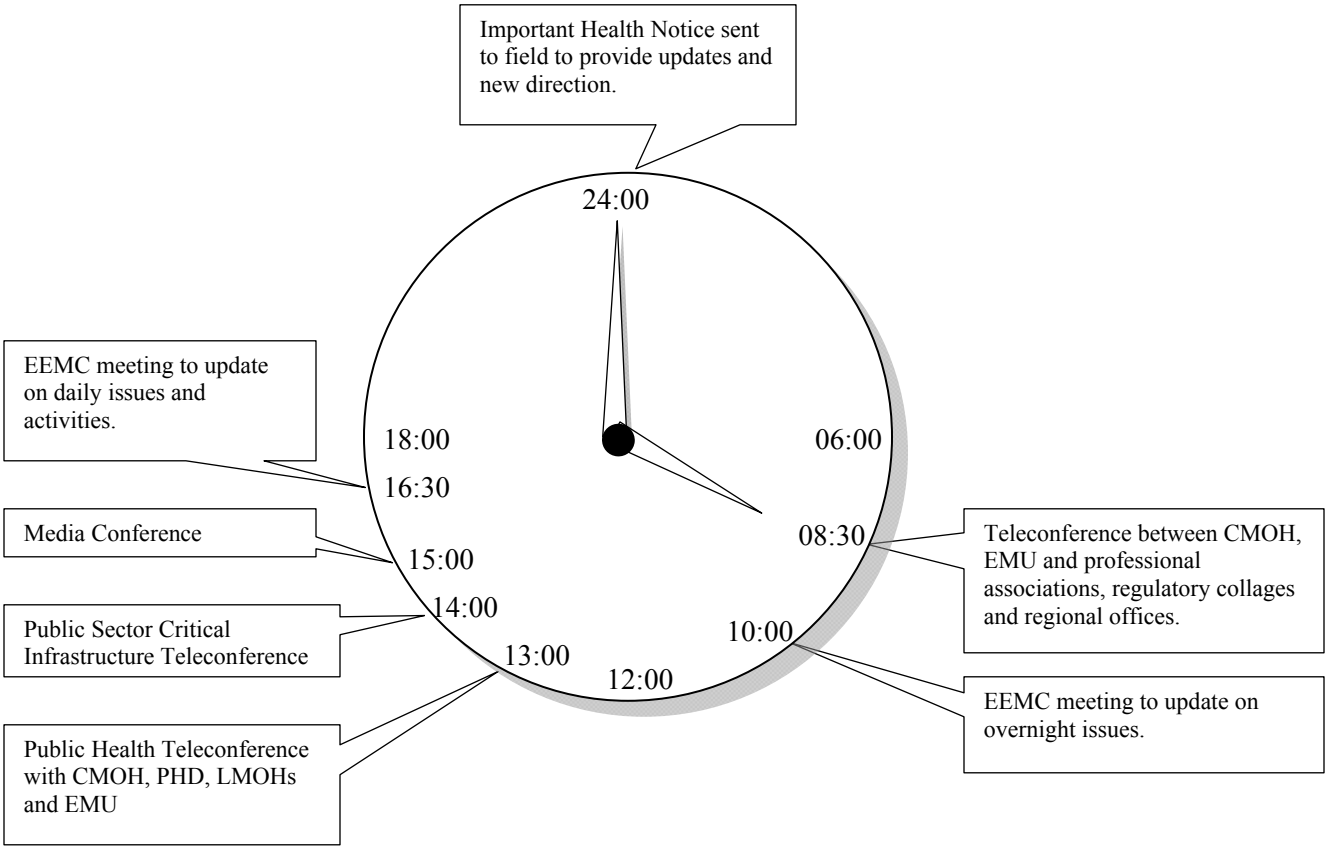
Post-Pandemic Period

35. Revise pandemic communications plan based on experience.

36. Return to Phase 1 activities.

8.4 Communications Methods and the Information Cycle Clock

A number of communication methods will be used to inform the public and stakeholders during a pandemic. The MOHLTC has developed the 24-hour clock below to coordinate daily communication activities. The Ministry will hold a news conference every day at 3 p.m. during a pandemic. The HNHU will take information from this news conference and other meetings held during the day and, if the pandemic situation has changed significantly, will assemble local material and statistics that may be relevant to the Ministry's daily news and issue a local news release to local media the following morning.



The following charts identify the appropriate use of these methods for the intended audiences: one external (i.e., general public and community stakeholders) and one internal (i.e., Health Unit staff).

8.4.1 External Stakeholders (General Public/Community)

Health-care providers and emergency responders will need access to all the information conveyed to the general public, including business continuity planning, infection control practices, personal precautions and general preparedness. External stakeholders include the following:

- Municipalities of Haldimand and Norfolk.
- Norfolk General Hospital.
- West Haldimand General Hospital.
- Haldimand War Memorial Hospital.
- Homes for the aged.
- Emergency responders (police, fire, ambulance).

- Health professionals and health-care facility staff.
- Essential services (e.g., hydro, etc.).
- Family physicians.
- Members of provincial and federal parliament.
- Local media.
- Medical laboratories.
- Pharmacies.
- Funeral directors.
- Key non-governmental associations and organizations.
- Industry representatives.
- Tourism industry.
- Long Point Region Conservation Authority.
- Grand River Conservation Authority.
- Chambers of Commerce.
- Local Business Improvement Associations.
- Faith communities.
- Area employers.
- School boards.
- Private educational institutions.
- Post-secondary institutions (i.e., Fanshawe College).

External communications include the following:

Communication vehicle, activity or product	Audiences	Medium	Pandemic Period
Teleconferences.	Local, provincial and federal contacts (e.g., municipalities, hospitals).	Telephone line.	Phases 1-6.
Telephone hotline (includes pre-recorded message).	General public.	Dedicated telephone number.	Phases 1-6.
HNHU website pandemic page.	General public.	Internet.	Phases 1-6.
News releases.	General public.	Local newspapers, radio stations, cable TV outlets.	Phases 2-6.
Media briefings.	Local media.	Meetings (group and/or individual).	Phases 2-6.
Paid ads.	General public.	Local newspapers,	Phases 2-6.

		radio stations, cable TV outlets.	
Public Service Announcements.	General public.	Local newspapers, radio stations, cable TV outlets.	Phases 2-6.
Fact sheets and newsletters.	General public and targeted audiences, e.g., through bulletins and bulletin boards at child-care centres, schools, churches, hospital homes for the aged, utilities (bills), etc.	In-house production. Electronic distribution, mail, fax.	Phases 1-6.
Specialty flyers as needed (breaking issues, e.g., vaccination clinics).	General public.	Direct mail.	Phases 2-6.
Vaccination clinic poster.	General public.	Community bulletin boards.	Phases 2-4.
Presentations.	Health-care community, physicians, target agencies.	Meetings.	Phases 1-6.
Mass faxes.	Outbreak emergency management database members.	Fax through epidemiology.	Phases 2-6 as needed.
Articles for counties' newsletters and Intranets.	Haldimand and Norfolk employees.	Submissions to newsletter and Intranet editors.	Phases 1-6.
Dark site, accessible only to selected persons.	Haldimand and Norfolk health system and public health employees.	Internet and Intranet, password access.	Phases 2-6.

8.4.2 Internal Stakeholders (Health Unit)

It is recognized that the following audiences will need varying levels of information to perform their work. Communication activities will ensure that the key messages and information meet the needs of the respective audiences. Internal stakeholders include the following:

- Board of Health.
- *Health and Social Services Advisory Board.*
- HNHU Executive Committee.
- HNHU employees.

Internal communications include the following:

Communication Deliverables	Audiences	Medium	Pandemic Period
Teleconferences.	Staff involved in communication, service delivery and/or business continuity planning.	Telephone line.	Phases 1-6.
Internal briefings and updates.	HNHU ECG and HNHU employees.	Meetings, teleconferences, briefings and email.	Phases 1-6.
Presentations.	Health and Social Services Advisory Board, HNHU employees.	Meetings.	Phases 1-6.
E-bulletins.	HNHU staff.	E-mail.	Phases 1-6.
HNHU website.	HNHU staff.	Internet.	Phases 1-6.
HNHU Intranet.	HNHU staff.	Intranet managed by Communications Services Team.	Phases 1-6.
Internal e-mail account for two-way communication.	HNHU staff.	E-mail account.	Phases 1-6.

Appendix 1 - Pandemic Plan Distribution List

One copy to each of the following:

1. Mayor of Norfolk.
2. Mayor of Haldimand.
3. County Manager of Norfolk.
4. CAO of Haldimand.
5. Medical Officer of Health.
6. General Manager of Health and Social Services.
7. Manager of Public Health.
8. Manager of Ontario Works and Social Services.
9. Communicable Diseases Program Coordinator.
10. Epidemiologist.
11. General Manager of Corporate Services, Norfolk County.
12. General Manager of Corporate Services, Haldimand County.
13. General Manager of Public Works, Norfolk County.
14. General Manager of Physical Services, Haldimand County.
15. General Manager of Community Services, Norfolk County.
16. General Manager of Community Services, Haldimand County.
17. Fire Chief, Norfolk County.
18. Deputy Fire Chief, Haldimand County.
19. Manager of Ambulance Services, Norfolk County.
20. Manager of Emergency Services, Haldimand County.
21. Chief Inspector for Norfolk County OPP.
22. Chief Inspector for Haldimand County OPP.
23. Canadian Red Cross Society – Haldimand-Norfolk.
24. St. John Ambulance, Haldimand-Norfolk.
25. The Salvation Army, Haldimand County.
26. The Salvation Army, Norfolk County.
27. Grand Erie District School Board.

28. Brant Haldimand Norfolk Catholic District School Board.
29. Community Care Access Centre, Haldimand-Norfolk.
30. Norview Lodge, Norfolk County.
31. Grandview Lodge, Haldimand County.
32. Norfolk General Hospital, Simcoe.
33. Haldimand War Memorial Hospital, Dunnville.
34. West Haldimand General Hospital, Hagersville.
35. Emergency Measures Ontario.
36. Ministry of Health and Long-Term Care.
37. Spares – four copies.

Appendix 2- Definitions and Relevant Terms

Outbreak
Disease that can be passed from person-to-person in a limited environment (such as a nursing home) over a specific period of time.

Epidemic
An outbreak of disease spreading rapidly through a community or population simultaneously and is common to that area (e.g., Typhoid in the tropics).

Pandemic
A worldwide epidemic causing high rates of illness and death.

Virus
A contagious or infectious agent that multiplies within cells of living hosts.

Influenza
A highly contagious respiratory disease with sudden onset of high fever.

Antibody
Bodies of specialized protein produced by certain lymphocytes in response to the presence of an antigen. These bodies neutralize the antigen, thus creating an immunity to the specific antigen.

Antigen
A protein, toxin or other substance of high molecular weight to which the body reacts by producing antibodies.

Antigenic Drift
During inter-pandemic periods, influenza viruses circulate that are related to those from the preceding epidemic. The viruses spread among people with varying levels of immunity from infections earlier in life. Such circulation, over a period of usually two to three years, promotes the selection of new strains that have changed enough to cause an epidemic among the general population.

Antigenic Shift
At unpredictable intervals, a novel influenza virus emerges with a key surface antigen of a completely different subtype from strains circulating the year prior.

Enhanced Surveillance
Implementation of screening tool as well as ensuring close observation of population for Influenza-Like Illness (ILI) symptoms.

Health-Care Workers
Those professionals, trainees, retirees, non-professionals and volunteers whose functions are essential to the provision of patient care, and who may have the potential for acquiring and/or transmitting infectious agents during their work. This would also include public health professionals during the pandemic.

High-Risk Groups
Those groups in which epidemiologic evidence indicates there is an increased risk of contracting a disease.

Non-Traditional Site
A site offering care for influenza patients that is not normally an established health-care site, or are established sites offering a different type or level of care.

Outpatient
An individual who receives health-care services without being admitted to a health-care facility.