North Bay Parry Sound District Health Unit

# PANDEMIC INFLUENZA PLAN

## North Bay Parry Sound District

**June 1, 2006**

Presented to the Board of Health: May 24, 2006

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**TABLES**

# ABBREVIATIONS

| | |
|---|---|
| BFHC | Burks Falls Health Center |
| BIOS | Biological Inventory Ordering System |
| CCAC | Community Care Access Center |
| CEMC | Community Emergency Management Coordinator |
| CDC | Communicable Disease Control |
| CHC | Community Health Centre |
| COPD | Chronic Obstructive Pulmonary Disease |
| CPIP | Canadian Pandemic Influenza Plan |
| EMO | Emergency Management Ontario |
| EMS | Emergency Medical Services |
| EMU | Emergency Management Unit |
| FNIHB | First Nations Inuit Health Branch |
| FRI | Febrile Respiratory Illness |
| HIRA | Hazard Identification and Risk Analysis |
| HPPA | Health Protection and Promotion Act |
| ILI | Influenza Like Illness |
| IMS | Incident Management System |
| LTCH | Long Term Care Home |
| MEOC | Ministry Emergency Operations Centre |
| MGH | Mattawa General Hospital |
| MOHLTC | Ministry of Health and Long Term Care |
| NACI | National Advisory Committee on Immunization |
| NBGH | North Bay General Hospital |
| NBPS PIP | North Bay Parry Sound Pandemic Influenza Plan |
| NBPSDHU | North Bay Parry Sound District Health Unit |
| NESS | National Equipment Stockpile System |
| O.P.P. | Ontario Provincial Police |
| OHPIP | Ontario Health Pandemic Influenza Plan |
| OGPMSS | Ontario Government Pharmaceutical Medical Supply Services |
| PEOC | Provincial Emergency Operations Center |
| PHL | Provincial Public Health Laboratory |
| PHAC | Public Health Agency of Canada |
| PHM | Public Health Measures |
| PHN | Public Health Nurse |
| PIC | Canadian Pandemic Influenza Committee |
| PIDAC | Provincial Infectious Disease Advisory Committee |
| PPE | Personal Protective Equipment |

| | |
|---|---|
| PSA | Public Service Announcement |
| RRFSS | Rapid Risk Factor Surveillance System |
| SARS | Severe Acute Respiratory Syndrome |
| VCH | Vancouver Coastal Health |
| WHO | World Health Organization |
| WNGH | West Nipissing General Hospital |
| WPSHC | West Parry Sound Health Center |

# GLOSSARY OF TERMS

**Acute Care –** services provided by physicians, health professionals and employees in hospitals and urgent care centres including emergency, general medial and surgical, psychiatric, obstetric and diagnostic services.

**Aerosolization:** The process of creating very small droplets of moisture that may carry microorganisms. The aerosolized droplets may be light enough to remain suspended in the air for short periods of time, allowing inhalation of the microorganisms.

**Alternate Care Site** – a site (for influenza pandemic planning) that is not a currently established health care site or that is a site that usually offers a different type or level of care. During influenza pandemic, it is expected that alternate care sites will be needed to provide care for influenza patients and will focus on monitoring, care and support of these patients. Also known as a non-traditional care site.

**Autonomy** – respect for the choices of the individual.

**Avian Influenza** – an infection of poultry caused either by any influenza A virus which has an intravenous pathogenicity index (IVPI) in 6-week old chickens greater than 1.2 or by an influenza A virus of H5 or H7 subtype.

**Bed (Institutional Bed)** – in any institution a "bed" includes infrastructure support, including staffing, which is required to care for the patient in that "bed". Therefore the requirements for a "bed" in an intensive care unit, for example, include all the support required for a patient to be cared for at that level.

**Case Finding:** A standard procedure in control of certain contagious diseases whereby diligent efforts are made to identify people who are or may be infected.

**Cluster:** A grouping of cases of a disease within a specific time frame and geographic location suggesting a possible association between the cases with respect to transmission.

**Contact:** Someone with face to face exposure within 1 meter of a case. HCW's who are contacts should follow the direction provided by the occupational health and/or Infection Control Department within their facility.

**Contingency Planning** – the process of identifying mission-critical functions and developing advance arrangements to provide a means for insuring the continuity of those functions in the event of the loss of essential resources.

**Contingency Plan** – the documentation of the above process.

**Critical Incident Stress Management (CISM)** – a comprehensive, organized approach to the reduction and control of harmful aspects of stress.

**Critical Resources** – material, personnel and finances in short supply and needed by more than one incident management team or for high priority assignments.

**Disaster** – an event that results in serious harm to the safety, health or welfare of people or results in widespread damage to property.

**Droplet/Contact Precautions:** Precautions to prevent and control the spread of droplet spread illnesses, including:

- a surgical/procedure mask covering the worker's nose and mouth when providing direct care within one metre of the patient
- protective eye wear when providing direct care within one metre of the patient
- hand hygiene (i.e., using alcohol-based hand sanitizer or washing hands: before seeing the patient; after seeing the patient and before touching the face; and after removing and disposing of personal protective equipment -- see page 12: Recommended Process for Removing Personal Protective Equipment)
- examination procedures that minimize contact with droplets (e.g., sitting next to rather than in front of a coughing patient when taking a history or conducting an examination)
- appropriate gloves when the worker is likely to have contact with body fluids or to touch contaminated surfaces
- gowns during procedures and patient care activities where clothing might be contaminated
- any communal or shared equipment must be cleaned and disinfected after use.

**Droplet Spread Illness:** Illness spread when droplets of respiratory secretions come into direct contact with the mucous membranes of the mouth, nose and possibly eyes of another person. Droplet spread illness can also be transmitted *indirectly* when people touch or have contact with hands, surfaces and objects contaminated with droplets of respiratory secretions, and then touch or have contact with their own or someone else's mucous membranes or eyes.

**Droplet Transmission**: Transmission occurs from large droplets that are equal to or over 5 microns in diameter. Examples of organisms transmitted by droplet transmission include: influenza virus, rubella virus, *Bordetella pertussis*, and respiratory tract viruses (e.g., adenovirus, parainfluenza, rhinovirus, respiratory syncytial virus).

**Emergency Management Ontario (EMO) –** a department within the provincial government that assists with emergency preparedness planning at the municipal level for Ontario

**Emergency Operations Centre (EOC) –** a centralized municipal facility from which emergency operations including communication, public information, personnel and resources can be directed and/or coordinated.

**Emergency Social Services** – provides short-term services (generally 72 hours) to preserve the emotional and physical well being of evacuees and response workers in emergency situations.

**Epidemic** – an outbreak of infection that spreads rapidly and affects many individuals in a given area or population at the same time.

**Epidemiology** – a branch of medical science dealing with the transmission and control of disease, including the study of epidemics and epidemic diseases.

**Equality** – balancing service provision in a fair manner so as to best serve the health needs of individuals and of communities.

**Febrile Respiratory Illness (FRI):** FRI is a term used to describe a wide range of droplet-spread respiratory infections, such as colds, influenza, influenza-like illness (ILI) and pneumonia, which usually present with symptoms of a fever of greater than 38°C **and** new or worsening cough or shortness of breath. Note: elderly people and people who are immunocompromised may not have a febrile response to a respiratory infection.

**Flu** – a common, slang term for influenza infection, although it is often mistakenly used in reference to gastrointestinal and other types of clinical illness.

**Hand Hygiene:** Hand washing with soap and running water or use of alcohol-based hand sanitizers.

**Health Care Setting.** Any location where care is provided, including settings where emergency care is provided, hospitals, long-term care homes, outpatient clinics, community health centres and clinics, physician offices, dental offices and offices of allied health professions.

**Health Care Workers (HCW)** – professionals, including trainees and retirees, non professionals and volunteers involved in direct patient care and/or those working/ volunteering in designated health care facilities or services. During an influenza pandemic, HCWs are those whose functions are essential to the provision of patient care, and who may have the potential for acquiring or transmitting infectious agents during the course of their work. This group would also include public health professionals during a pandemic.

**High Risk Groups** – those groups in which epidemiologic evidence indicates there is an increased risk of contracting a disease.

**High Risk Respiratory Procedure:** Any procedure with the potential to generate respiratory droplets or aerosolization including, but not limited to: nebulized therapy, open suctioning, endotracheal intubation, bag-valve mask ventilation, non-invasive ventilation (i.e., CPAP, BiPAP), and ventilation using high frequency oscillation. These procedures pose a higher risk for transmission to the health care worker and others in the area where they are performed, but they do not necessarily pose high risk to the patients on whom the procedures are done.

**Incident Command System (ICS)** – a standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

**Individual Choice** – refers to the personal rights and freedoms of an individual.

**Infection** – condition in which organisms multiply within the body and cause a response from the host's immune defenses. Infection may or may not lead to clinical disease.

**Infection Prevention and Control:** Evidence-based practices and procedures that, when applied consistently in health care settings, can prevent or reduce the risk of transmission of microorganisms to health care workers, other patients and visitors.

**Influenza** – a highly contagious infection of the respiratory tract (nose, throat, bronchial tubes, lungs) caused by the influenza virus. The illness is characterized by sudden onset, fever, cough, sore throat, malaise and general aches, and also by nausea/vomiting and diarrhea in children. In the very young, fever may not be prominent. In geriatric age groups, persons often experience fever or feverishness with chills, but these symptoms may not be prominent. Influenza viruses cause annual influenza epidemics and occasional worldwide influenza pandemics.

**Influenza Virus** – there are three types of influenza viruses: A, B and C. Subcategories of influenza (subtypes) are based on the configuration of two proteins on the virus surface –hemagglutinin (H) and neuraminidase (N). Subtypes of influenza A virus known to readily infect humans include H1N1, H2N2, H3N2. Avian influenza A viruses (H5N1, H7N7, H7N3, H9N2) have also recently been shown to infect

humans, although they do not do so readily. The threat of pandemic influenza is related to the introduction of a new subtype of influenza A into the human population.

**Influenza Like Illness (ILI)** – acute onset of respiratory illness with fever and cough and one or more of sore throat, arthralgia, myalgia or prostration, which could be due to influenza.

**Inpatient** – an individual who receives health care services while admitted in a health care facility overnight or longer.

**Isolation** – the separation, for the period of communicability of the disease, of an infected person or animal from others in a place and under conditions to prevent the conveyance of the infectious agent to those others.

**Long Term Care (LTC)** – the medical and social care given to patients that have severe chronic impairment for an extended period of time.
**Morbidity** – illness; departure from a state of well being, either physiologic or psychological.

**Morbidity Rate** – the number of cases of an illness (morbidity) in a population divided by the total population at risk for that illness.

**Mortality** –death.

**Mortality Rate** – the number of people who die during a specific time period divided by the total population.

**Mutation** – a permanent, transmissible change in the genetic material of a cell.

**Non-Traditional Care Site** – See Alternate Care Site

**Nosocomial infection:** An infection acquired in a health care setting

**Novel Virus** – a new, unusually virulent strain of virus arising from a mutation, which endows the virus with the capacity to be easily transmitted from one person to another.

**Occupational Health and Safety (OH&S)** – promotes occupational health and safety and protection of workers and other persons present at workplaces from work-related risks to their health, safety, and well being.

**Oseltamivir** – antiviral drug effective against influenza A and B viruses that inhibits the neuraminidase protein, effectively trapping the influenza virus within the host cell and preventing it from infecting new cells. This can help in preventing infection (prophylaxis) or in reducing the duration and severity of illness once infected. It is effective if treatment is started within 48 hours of symptom onset. In Canada and the USA, oseltamivir is sold under the brand name Tamiflu®.

**Outbreak**: An increase in the number of infections above the number normally occurring in that setting over a defined period of time. Also known as an epidemic. The latter term has more serious connotations.

**Outpatient (OP)** – an individual who receives health care services without being admitted to a health care facility.

**Palliative** – treatment, which provides symptomatic relief, but is not a cure.

**Pandemic** – epidemic disease of widespread prevalence around the globe.

**Pediatric** – relating to the medical specialty concerned with the development, care and treatment of children from birth through adolescence.

**Personal Protective Equipment (PPE)** – attire used by health care workers to protect against air borne or droplet exposure and against exposure to blood and body fluids. PPE generally includes masks, eye goggles, face shields, gloves, gowns and foot-covers.

**Preventive Care** – comprehensive type of care emphasizing priorities for prevention, early detection and early treatment of conditions, generally including routine physical examinations, immunization, and well-person care.

**Primary Care Provider:** For purposes of this document, primary care provider is defined as a health care professional who has the skills, training and scope of practice to diagnose a condition such as FRI (e.g., physician, nurse practitioner).

**Prophylaxis** – prevention of or protective treatment for disease.

**Public Health** – discipline of protecting and improving community health by means of preventive medicine, health education, communicable disease control, and the application of social and sanitary measures.

**Public Health Act** – a provincial statute that mandates MOHs and regulates matters of communicable disease control and sanitation for the purpose of protection of the public from health hazards.

**Quarantine** – the limitation of freedom of movement of a susceptible person or domestic animal, suspected of being or known to have been exposed to a communicable disease, for a period of time equal to the longest usual incubation period of that disease from the last date of exposure.

**Record** – paper or electronic document that contains or is designed to contain a set of facts related to some occurrence, transaction, or the like.

**Rimantadine** – antiviral agent indicated in adults for the treatment of illness due to influenza and for prophylaxis following exposure to influenza type A viruses. It has no effect against influenza type B viruses

**Risk Management** – process of making and carrying out decisions that will minimize the adverse effects of injuries, accidental losses and/or liability upon the organization.

**Routine Practices:** The Health Canada/Public Health Agency of Canada term to describe the system of infection prevention and control practices recommended in Canada to prevent and control transmission of microorganisms in health care settings. These practices describe prevention and control strategies to be used with all patients during all patient care, and include:

- Hand hygiene with an alcohol-based hand sanitizer or with soap and water before and after any direct contact with a patient.
- The use of additional barrier precautions to prevent health care worker contact with a patient's blood, body fluids, secretions, excretions, non intact skin or mucous membranes:
- Gloves are to be worn when there is a risk of hand contact with a patient's blood, body fluids, secretions, excretions, non intact skin or mucous membranes; gloves should be used as an additional measure, not as a substitute for hand hygiene.
- Gowns are to be worn if contamination of uniform or clothing is anticipated.

- The wearing of masks and eye protection or face shields where appropriate to protect the mucous membranes of the eyes, nose and mouth during procedures and patient care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.

The full description of Routine Practices to prevent and control transmission of nosocomial pathogens can be found on the Health Canada website (http://www.hc-sc.gc.ca/pphbdgspsp/dpg_e.html#infection).

**Sputum Induction:** Sputum induction is used to obtain respiratory secretions from patients with symptoms of active tuberculosis infection (TB). Because of the risk of exposure to TB during this procedure, health care settings must use appropriate *airborne* precautions. See the Canadian Tuberculosis Standards – 5th ed. (Canadian Lung Association; 2000) and "Guidelines for Preventing the Transmission of Tuberculosis in Canadian Health Care Facilities and Other Institutional Settings" (*Can Commun Dis Rep*. 1996; 22 Suppl 1:i-iv, 1-55).

**Staff**: Anyone conducting activities within a health care setting that will bring him/her into contact with patients including: all health care providers (e.g., emergency service workers, physicians, nurses, allied health professionals, students); support services (e.g., housekeeping); and volunteers.

**Strain** – variation of the influenza virus within a given subtype (i.e., influenza A/Panama/H3N2, influenza A/Fujian/H3N2). New strains appear every few years and are responsible for yearly influenza outbreaks of influenza.

**Sub-acute Care** – comprehensive, cost-effective inpatient level of care for patients who:

a) have had an acute event resulting from injury, illness or exacerbation of a disease process,
b) have a determined course of treatment and,
c) though stable, require diagnostics or invasive procedures but not intensive procedures requiring an acute level of care.

Typically short term, sub-acute care is designed to return patients to the community or transition them to a lower level of care. Sub-acute care is offered in a variety of physical settings. The philosophy of sub-acute care is to ensure that patients are receiving the most appropriate services at the most appropriate phase of their illness while ensuring quality, cost-effective outcomes.

**Surge Capacity** – a health care system's ability to rapidly expand beyond normal services to meet the increased demand for qualified personnel, medical care, and public health in the event of large-scale public health emergencies or disasters.

**Subtype** – classification of the influenza type A viruses based on the surface proteins hemagglutinin (H) and neuraminidase (N) (see Influenza Virus).

**Surveillance:** The systematic ongoing collection, collation, and analysis of data and the timely dissemination of information to those who need to know so that action can be taken.

**Symptoms** – any perceptible, subjective change in the body or its functions that indicates disease or phases of disease, as reported by the patient. The monitoring of behaviour.

**Tamiflu®** – name under which oseltamivir is marketed in Canada and the USA (see Oseltamivir).

**Triage** – the sorting of victims according to severity of illness or injury, and priority for transport to definitive care. During a Mass Casualty Incident (MCI), four (color-coded) triage categories are used in the field by EMS and in health care centres:

*Immediate Care (Red)* – Critical illness or injury requiring immediate care and first priority for transportation to a definitive care facility.
*Delayed Care (Yellow)* – Significant illness or injury which is not immediately life-threatening but will require further field stabilization and definitive care to prevent an adverse outcome.
*Ambulatory (Green)* – Minor (walking wounded), may need treatment at hospital, but transport may be delayed 1 to 2 hours with no detriment to patient outcome.
*Dead or Unsalvageable (Black)* – Dead. Not moved from scene unless rescuer is required to rescue others. May arrive as DOA at health facility.

In addition, health care centres use the following triage category:
*Emotional Support (White)* – Used to identify casualties who require emotional or mental health support. Red casualties, whose injuries will result in imminent death may be designated as "Grey" patients and be admitted to the designated "Grey Area" for palliative, supportive care.
*Palliative Support (Grey)* – Used in hospitals only to identify casualties who are non salvageable but not deceased.

**Utility** – a program or system that provides a service that is useful to the public.

**Vaccination** – act of administering a vaccine.

**Vaccine** – substance that contains antigenic components from an infectious organism. By stimulating an immune response (but not causing disease), it protects against subsequent infection by that organism.

**Virus** – group of infectious agents characterized by their inability to reproduce outside of a living host cell. Viruses may subvert the host cells' normal functions, causing the cell to behave in a manner determined by the virus.

**Volunteers (Pandemic)** – volunteer is a person registered with the Region, who carries out unpaid activities, occasionally or regularly, to help prepare for and respond to a pandemic influenza outbreak. A volunteer is one who offers their service of their own free will, without promise of financial gain, and without economic or political pressure or coercion.

**World Health Organization (WHO)** – specialized agency of the United Nations generally concerned with health and health care.

Preventing Febrile Respiratory Illnesses *Protecting Patients and Staff*, Provincial Infectious Diseases Advisory Committee (PIDAC), Ministry of Health and Long Term Care, September 28, 2005.

# RECORD OF AMENDMENTS

| Amendment | Addition or Change | Page | Date Amended | Inserted by |
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# MESSAGE FROM THE MEDICAL OFFICER OF HEALTH


Dr. Catherine Whiting

Planning for the impact of pandemic influenza in North Bay Parry Sound District is a challenging process.

North Bay Parry Sound District Health Unit is the lead agency for North Bay Parry Sound pandemic influenza planning and response. As the lead agency North Bay Parry Sound District Health Unit has adapted a Key Stakeholder model for the development of the District plan. Engaging and building bridges with the many stakeholders in the health, emergency planning, social, volunteer community, municipal and business sectors has been both essential and rewarding. It will stand us in good stead in the event of a health related emergency response.

As Chair of the North Bay Parry Sound Pandemic Influenza Planning Committee, I would like to express my deep appreciation to everyone who participated on the Planning Committee and its sub-committees.

The Pandemic Influenza Plan for North Bay Parry Sound District is an evolving document. This is one major step in that evolution.

Catherine Whiting

Catherine M. Whiting, M.D., C.C.F.P., MHSc.
Medical Officer of Health/Executive Officer
North Bay Parry Sound District Health Unit

# EXECUTIVE SUMMARY

# Executive Summary

## Introduction

This is the first official pandemic influenza plan for the North Bay Parry Sound District Health Unit area. The North Bay Parry Sound District Health Unit (NBPSDHU) has undertaken the lead role in the Districts' Pandemic Influenza planning. For the development of the pandemic plan the NBPSDHU initiated six (6) working groups and a Pandemic Influenza Planning Committee. The planning committee is comprised of the Medical Health Officer (chairperson), Director of Infectious Disease, Emergency Management Ontario and First Nations, and the co-chairs from each sub-committee. Input was sought from key stakeholders in health, emergency planning, social service, volunteer, community and business sectors. This approach has facilitated the development of working relationships and partnerships which are essential for an emergency response in the district.

The North Bay Parry Sound Pandemic Influenza Plan (NBPS PIP) is intended to complement both the existing NBPSDHU's Emergency Response Plan as well as existing municipal emergency response plans to form an effective front line response. It sets out a comprehensive district wide approach to health preparedness and response planning, and provides information to guide the NBPSDHU and the Pandemic Influenza Planning Committee into the future.

This plan is a living document. It will be reviewed at least annually and revised to reflect current knowledge and best practices. The NBPSDHU recognizes that this first edition of the plan is simply a starting point and that ongoing input from stakeholder sectors is need.

The planning committee was established to oversee the health planning for an influenza pandemic. This plan reflects the important contributions of the committee members who participated. Refer to Section 10 - Acknowledgements.

This plan includes municipal Emergency Operation Centers focusing on maintaining critical infrastructures and meeting human needs once a pandemic is declared. It is intended that local municipalities, health care facilities, police services, and other organizations and agencies utilize this plan and information on the NBPSDHU's website in preparation of their own contingency plans.

## Background

Influenza has been with us for centuries. It causes severe illness and death every winter in North America, 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. Epidemics 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.

Experts are predicting that another pandemic will occur, although the timing and pattern of the pandemic is unpredictable. When it occurs, the impact may be mild, moderate or severe. This plan is written to assist us in preparing for a pandemic; however, its value goes beyond this. Many of the aspects of the pandemic influenza plan will also assist in dealing with other health-related emergencies such as biologic, 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 response to other emergencies and health-related issues. Pandemic Emergency Preparedness by all stakeholders will be vital in minimizing the impact on the district should an influenza pandemic occur.

This document will require revisions as the international, national and provincial documents on which it is based are modified, and as further scientific information to assist with planning becomes available. As well, this plan will require modification as local sub-committees continue their planning and these plans are incorporated into this document. The following provides an overview of the structure and content of this planning document.

## Section 1 – Influenza

Section 1 provides an overview of information about influenza, pandemics and the current concern re Avian Influenza in other parts of the world. The World Health Organization pandemic phases are reviewed, as well as the scope and impact of illness that is expected to occur in the district.

## Section 2 – The Plan

The overall goals of the North Bay Parry Sound Pandemic Influenza Plan are to minimize illness and death and to reduce societal disruption resulting from an influenza pandemic. This is the first edition of the North Bay Parry Sound Pandemic Influenza Plan. The plan will be continuously revised and updated as new information, direction or recommendations are available.

The NBPSDHU initiated pandemic influenza planning in September 2005. In order to effectively plan for emergency response, NBPSDHU 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 essential for an emergency response in the district. NBPSDHU recognizes this first edition of the plan is simply a starting point and ongoing input from stakeholder sectors is needed.

References to relevant legislative authority and the Ethical Framework for decision-making are also presented in Section 2.

## Section 3 – Roles and Responsibilities

All governments and all sectors have a role to play in preparing for, responding to and recovering from an influenza pandemic. It is critical that roles and responsibilities are clear and that there is appropriate communication and coordination of efforts.

Planning and preparedness efforts are continuing at all levels of government. Current roles and responsibilities from the World Health Organization, Public Health Agency of Canada, Ministry of Health and Long Term Care and the district municipalities are presented in Section 3.

The World Health Organization, Public Health Agency of Canada and the Ontario Ministry of Health and Long Term Care have all released influenza pandemic documents to guide the local planning process and to address prevention, preparedness and operational activities for an effective response and recovery. The overall goal of these plans is to minimize serious illness, death and societal disruption in the event of an influenza pandemic.

## Section 4 – Surveillance

The purpose of surveillance is to monitor and describe the threat of a novel strain of influenza, including but not limited to early identification of its introduction into the district and a description of its epidemiology.

This section outlines the surveillance activities that are currently taking place or are being developed in the district.

## Section 5 – Vaccines and Antivirals

The World Health Organization, the Public Health Agency of Canada and the Ontario Ministry of Health and Long-Term Care all agree that a monovalent influenza vaccine will be a powerful tool for reducing disease, death and societal disruption during an influenza pandemic. Antiviral medications will also play an important role in preventing and treating influenza illness during a pandemic.

It is anticipated, that during a pandemic, the NBPSDHU will serve as the primary coordinator for the distribution and administration of vaccine and distribution of antiviral medications in the district. As it is likely that the supply of both antiviral medications and vaccine will be limited during a pandemic, the distribution of both the antivirals, and the vaccine will be controlled by the MOHLTC.

## Section 6 – Public Health Measures

Public Health Measures are non-medical interventions that may be used to reduce the spread of the influenza virus. Public health measures include public education, case and contact management, community-based disease control strategies (i.e., social distancing, school closures and restriction/cancellation of large public gatherings), travel restrictions and border measures. The type of public health measures used will depend on the epidemiology of the virus (e.g., pathogenicity, modes of transmission, incubation period, attack rate in different age groups, period of communicability, and susceptibility to antivirals).

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 in consultation with other levels of government will be responsible for decisions regarding the implementation of community-based disease control strategies in order to best protect the public.

Public health measures to curtail community transmission should be consistently applied within and across the district. The severity of the pandemic strain and the stage of the pandemic, as it unfolds globally, would be considered when making this determination

## Section 7 – Health Services

The delivery of health care services in the district will be greatly challenged throughout an influenza pandemic. Health care capacity issues are already significant and will be further stressed with potential health care provider absenteeism and the increased volume of patients seeking health care for influenza.

Section 7 addresses the issues that will be faced by the health care system during an influenza pandemic emergency response. The health care facilities involved in the planning have confirmed that there is very little surge capacity available in the system.

Human resource shortages will be a major issue during a pandemic emergency response. Many of the health service issues require provincial planning direction e.g. hospital admission and discharge criteria, licensure issues for health care workers and triage guidelines. Consistency in the delivery of health care services across the district and the province of Ontario is essential.

The NBPSDHU will continue to work with the provincial planning workgroups and key stakeholders to support local planning of Health Services.

## Section 8 – Emergency Response

Emergency measures address coordination and preparation of services needed to maintain public safety and order during a pandemic. These include security for vaccine transportation and clinics, location and acquisition of space for clinics and emergency operations as required, volunteer management and

potential mass fatality issues. Each municipality has a Community Emergency Response plan which may outline response during a health emergencies, the actual lead will be by the NBPSDHU.

The NBPSDHU will continue to support these agencies in the further development and operationalization of these components for the circumstances of pandemic influenza.

## Section 9 – Communication

Effective and timely communication is critical before, during and after an influenza pandemic.

Section 9 provides information about the role of communications and outlines the communication plans and activities NBPSDHU would use to provide timely, accurate and credible information to its staff, the public, provincial and federal governments, hospitals and other responding agencies.

## Section 10 – Acknowledgements and References

This section acknowledges all the committee members and the resources used to develop this plan.

## Section 11 – Appendices

The appendices are identified by each section with the section number and the appendix. For example, appendices under Section 6 - Public Health Measures all begin with “6”. This will assist in quickly identifying the section with the corresponding appendix.

# SECTION 1 - INFLUENZA

Influenza is a common virus that is present in our community primarily on a seasonal basis. A pandemic is a worldwide epidemic, which constitutes a global health emergency. Influenza pandemics have the capacity to cause serious mortality and morbidity as the population has little or no immunity to the circulating strains of influenza. Historically, influenza pandemics have occurred approximately every 35 – 40 years. Although there is no way to predict when the next influenza pandemic will occur, many health experts believe that it is overdue and planning should take place to deal with such an emergency.

## Influenza

Influenza, 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 viruses are sub-typed according to two proteins on the surface of the virus- hemagglutinin (H) and neuraminidase (N). Sixteen different H sub-types and nine different N sub-types have been identified. Influenza A and B cause seasonal influenza. 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 meter (about three feet) and can land directly in 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 their hands.

Certain groups are more at risk for developing complications such as those over 65 years of age and those people with already existing health problems. The influenza virus is highly contagious, spread by people coughing or sneezing into the air, or by touching contaminated environmental surfaces. The virus can survive on unwashed hands for 5 minutes, on tissues or clothing for 8-10 hours and on hard surfaces such as tables or telephones for two days.

For most adults, the period of communicability is from 24 hours before and up to 3-5 days after symptoms develop. Children and some adults may be infectious for 7 or more days after the onset of symptoms. The incubation period is 1 to 3 days.

Humans are the primary source for human infections. However birds and mammals such as swine can provide sources of new human sub-types of influenza virus.

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

- 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 7-10 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, this ‘seasonal’ flu is not life threatening. The most seriously affected are young children (less than 2 years old), people with chronic medical conditions, and the elderly.

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.

# Pandemic Influenza

An influenza pandemic is an outbreak of influenza occurring over a wide geographic area of the world affecting many people in many countries.

It occurs when there is an abrupt and major change in 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 amongst humans.

The conditions for the development of a pandemic include:

- Emergence of a novel Influenza A subtype as a result of an antigenic shift
- Efficient and sustained person to person viral transmission.
- High proportion of susceptible people in the population with little or no immunity
- New virus has capacity 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, periods of incubation, transmissibility and routes of transmission) and illness will not be known until it emerges.

From historical records, we know that a pandemic strain of influenza tends to emerge 3 or 4 times each century.

In the last century, influenza pandemics occurred in 1918 (Spanish flu), 1957 (Asian flu) and 1968 (Hong Kong flu). The pandemic of 1918-1919 caused between 20 and 40 million deaths worldwide, while the pandemics of 1957 and 1968 caused much less mortality and morbidity. It is generally believed that another influenza pandemic will occur but there is no way of predicting when that might be, nor precisely the level of illness that might result.

## The difference between Seasonal Influenza and Pandemic Influenza

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

***Table 1.1 Seasonal Influenza verses Pandemic Influenza***

| Seasonal Influenza | Pandemic Influenza |
|---|---|
| o Occurs every year (October to April) | o Occurred 3 times in the 20th century |
| o Occurs during the flu season: between November and April | o Occurs at any time of the year |
| o Caused by a known circulating strain of influenza A virus | o Caused by a new strain of influenza A virus that can spread easily from person to person |
| o Peaks for a few months during the winter and then declines | o May strike in two or three waves, several months apart. Each wave may last two to three months |
| o For most people it is an unpleasant but not life threatening infection | o It is typically a more serious infection for everyone |
| o Most people recover within one or two weeks | o Some people will not recover even with |

| | |
|---|---|
| without requiring medical treatment | medical treatment. Due to the higher severity of illness, there is greater risk of death |
| o The very young, the very old and people with chronic illness are most at risk of serious illness | o People of every age may be at risk of serious illness |
| o Infects 10% to 20% of the population yearly | o Could infect between 30% to 50% of the population (the Ontario Health Plan for an Influenza Pandemic is based on a 35% attack rate – over the full course of the pandemic) |
| o A portion of the population will have some immunity either because of previous exposure or immunization with the annual flu vaccine. Most people will not become seriously ill, and fewer will die | o Most people will have little or no immunity to the new virus, so there will be more serious illness and greater number of deaths |
| o Affects mainly the very young and the very old, an people who are immunocompromised; does not usually affect health care systems ability to provide care | o Could affect anyone, including health care providers and their families, severely disrupting the health care system |
| o Does not usually disrupt a community's ability to provide essential services | o Could also affect other essential service workers and their families, and could disrupt those services |
| o Vaccine is available in advance | o Vaccine will not be available in advance |
| o Annual vaccines are available and will provide some protection against circulating strains | o Will take at least 4 to 5 months after pandemic strain is identified to develop a vaccine |
| o Annual vaccination is recommended especially for those at risk of serious illness | o The whole population will be vaccinated when vaccine becomes available |
| o Antiviral drugs are available to treat those at special risk | o Antiviral drugs are likely to be in limited supply and will be used to best effect according to how the disease develops |

Adopted from:
Department of Health (England), "Pandemic Flu: Frequently Asked Questions" October 19, 2005 http://www.dh.gov.uk,
Emergency Management Unit, MOHLTC, "Guide to Influenza Pandemic Preparedness and Response in Long Term Care Homes.
Ministry of Health and Long-term Care "Differences between seasonal or "annual" influenza and the influenza pandemic" Fact Sheet

## Avian Influenza

Avian influenza or "bird flu" is a contagious disease of animals, caused by viruses that normally infect only birds and less commonly pigs. Avian influenza viruses are highly species specific but have on rare occasions crossed the species barrier to infect humans. Infection with avian influenza viruses causes two main forms of disease in domestic poultry, distinguished by low (ruffled feathers, decreased egg production) and high (rapid spread with high mortality) pathogenicity.

The H5N1 subtype that is currently circulating in Asia and parts of Europe is a highly pathogenic form. The subtype has infected humans and resulted in a high mortality rate. Although rare, there have been instances of human-to-human transmission of H5N1 limited to close family clusters with close contact with poultry infected. In addition there is a possibility that if the virus is given enough opportunities it will change to a form that is highly infectious for humans and spread easily from person-to-person. Such a

change could mark the start of a pandemic. Current strains of avian influenza will not necessarily become a pandemic strain. The next influenza pandemic could arise from a different influenza virus.

For current information on human cases of avian influenza please refer to the World Health Organization website at:
http://www.who.int/csr/disease/avian_influenza/country/cases_table_2005_10_20/en/. For Additional information on avian influenza, refer to the Public Health Agency of Canada website at:
http://www.phac-aspc.gc.ca/influenza/avian_e.html

# SECTION 2 – THE PLAN

# North Bay Parry Sound District Pandemic Influenza Plan

## Purpose and Scope

The North Bay Parry Sound Pandemic Influenza Plan (NBPS PIP) is a guide for responding to a pandemic influenza at a local level.

NBPSDHU will be the lead agency for the district pandemic influenza planning preparedness and response. Although local planning must be based on the federal and provincial plans, local contingency plans are required for surveillance, communications, health services, public health measures, emergency response and vaccine/antiviral medication administration and distribution.

The plan's main purpose is:

1. To establish procedures and identify roles and responsibilities for NBPSDHU personnel and other stakeholders in the community for the effective management of an influenza pandemic.
2. To identify and implement communication and response measures with other Federal, Provincial, Regional and Municipal Departments and various local agencies during an influenza pandemic.

The plan will continually be updated and revised as new information, directions or recommendations are made available. There are many gaps and areas for further development by the federal and provincial governments as well as locally. The plan will be placed on the NBPSDHU's web page (www.nbdhu.on.ca/en) in PDF format and will be regularly updated.

An earlier plan for the previous North Bay and District Health Unit was developed in 2000-2001. This plan is the first draft for the new NBPSDHU (2005-2006) since the merger of the North Bay District Health Unit and the Muskoka Parry Sound Health Unit on April 1, 2005. NBPSDHU will continue to develop and improve the plan in collaboration with other governments and local stakeholders.

## Goals

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

1. To reduce the morbidity and mortality associated with detection of a novel and virulent strain of influenza.
2. To minimize societal disruption during pandemic influenza among the citizens of the North Bay and Parry Sound districts.
3. To protect the life, health and safety of the citizens of the North Bay Parry Sound District in the event of an influenza pandemic and to ensure that the plan dovetails with federal and provincial plans.

## Objectives

The following objectives were developed for the local Pandemic Influenza Plan:

1. To coordinate the districts response to a pandemic influenza.
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 districts preparedness for any public health emergency.

6. To work collaboratively with the provincial and federal levels in pandemic influenza planning and to clarify roles, responsibilities and actions.
7. To support provincial and federal planning initiatives by being represented on planning workgroup and steering committees.

## Planning Assumptions

A pandemic will be due to a subtype of influenza A. A new strain is most likely to occur in Southeast Asia. Canada will have little lead-time between when a pandemic is first declared by the WHO and when it spreads to the North Bay Parry Sound District.

The Plan is based on the following key assumptions:

- At the time of the pandemic, decisions and actions of international, federal and provincial levels of government will 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 develop and maintain complementary pandemic influenza response plans.
- Unlike most other emergency scenarios, a pandemic will not be a localized phenomenon and resources of all regions will be simultaneously strained. Therefore, NBPSDHU must be able to demonstrate a large amount of self-sufficiency.
- Ontario will have little lead time between when a pandemic is declared by the World Health Organization and when it spreads to the province.
- It will spread in two or more waves either in the same or successive years
- A second wave may occur within 3 to 9 months of the initial outbreak wave and may cause more serious illnesses and death than the first.
- Because the population will have had limited prior exposure to the virus, most people will be susceptible.
- There may be an attack rate of approximately 35% during the first wave.
- About 45% of people who acquire influenza will not require medical care, but they will need health information and advice; about 53% will require outpatient or primary care (e.g., treatment by a family physician); and approximately 1.5 to 2% will require hospitalization.
- A vaccine will not be available for at least four to five months after the seed strain is identified, which means it will not be available in time for the first wave of illness but may be available in time to mitigate the impact of the second wave.
- Once available, the vaccine will be in short supply and high demand.
- When vaccine becomes available, approximately 2 to 4 million doses will have to be administered per month until Ontario's population is fully immunized.
- Because Ontario may not have a large enough initial supply of either anitivirals or vaccine for the entire population, the province may have to set priorities for who receives limited vaccine and antiviral drugs.
- During a pandemic, the availability of public health and health care workers could be reduced by up to one-third due to illness, concern about disease transmission in the workplace, and care-giving responsibilities.

(Ontario Health Pandemic Influenza Plan, p.14-16)

## Key Stakeholder Approach

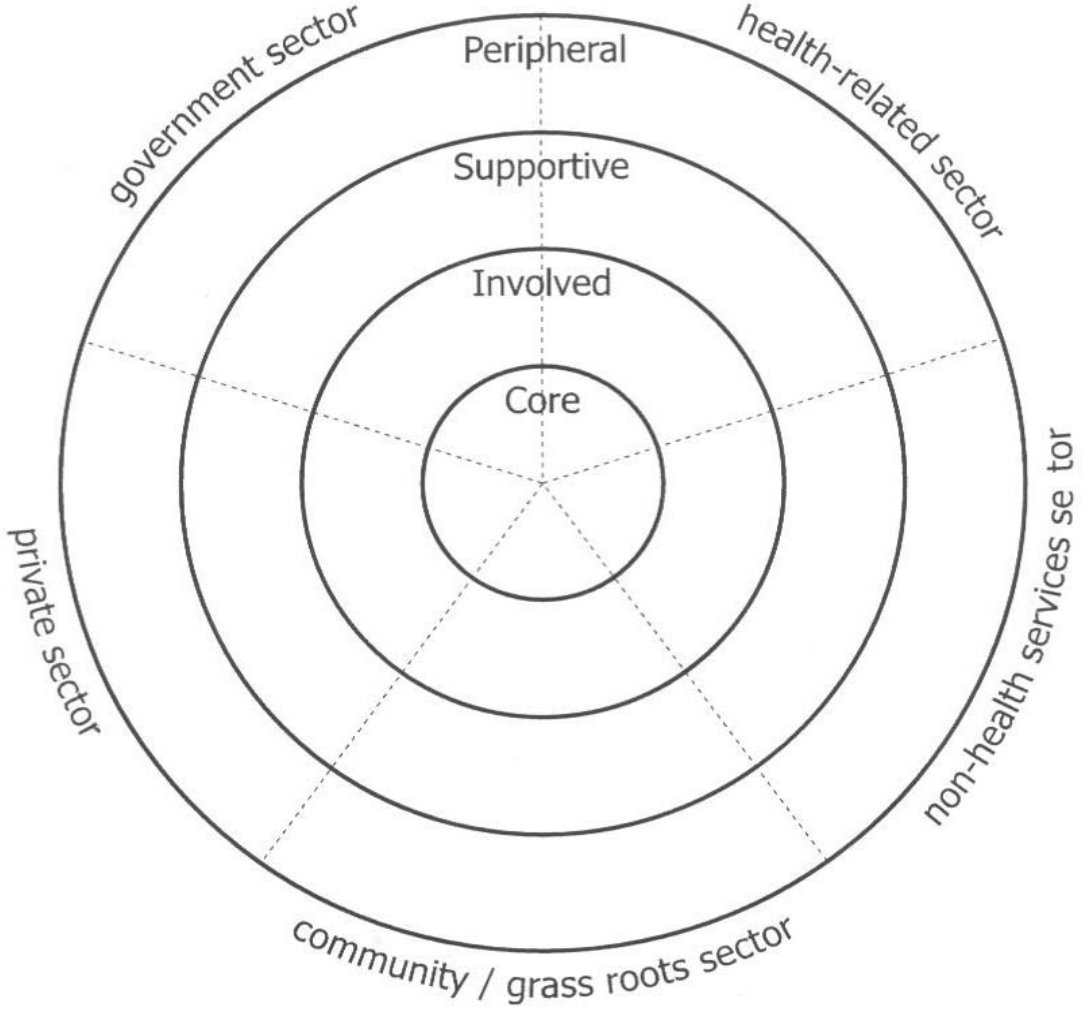
A Key Stakeholder model has been utilized to seek input from stakeholders across the district. Using the key stakeholder approach the plan was created for the district following the template of the OHPIP. This plan has been divided into six sub-sections:

1. Surveillance
2. Vaccine and Antivirals
3. Public Health Measures
4. Health Services
5. Emergency Response
6. Communication

A key stakeholder approach has been utilized to consider appropriate membership in the planning structure. The core planning group has been represented by the Medical Officer of Health, Emergency Management Ontario, First Nations, and the co-chairs from each sub-committee (Surveillance, Vaccine and Antivirals, Public Health Measures, Health Services, Emergency Response and Communications). Each sub-committee met regularly with 'involved' members from the communities within the district of the North Bay Parry Sound. Supportive and peripheral groups have been meeting ad hoc as necessary (e.g. Funeral homes). Figure 2.1 illustrates this approach.

## Figure 2.1 Key Stakeholders Approach

**A** Identify Stakeholders who are core, more involved and peripheral (think of organizations and individuals).




***Core*** on the situational team
***Involved*** frequently consulted or part of process
***Supportive*** providing some form of support
***Peripheral*** need to be kept informed

## Impact of a Pandemic in North Bay Parry Sound District

It is estimated an influenza pandemic could affect between 15 to 35 percent of the population. This would likely cause a range of illnesses, from a serious "influenza" with complete recovery to illness complicated by pneumonia, hospitalization and even death. The following chart outlines the anticipated numbers of pandemic influenza cases in the North Bay Parry Sound district, and the province of Ontario.

***Table 2.1 Pandemic Influenza Impact***

| North Bay Parry Sound District (based on a population of 120,404) | 15% Attack Rate | 35% Attack Rate | Ontario 15 –35% Attack Rate |
|---|---|---|---|
| Ill and but no care needed | 19,910 | 46,457 | 800,000 to 1.9 Million |
| Ill and needing Outpatient Care | 15,047 | 35,110 | 1 to 2.3 Million |
| Hospitalization | 315 | 734 | 22,000 – 52,000 |
| Deaths | 97 | 227 | 5,000 – 12,000 |

***Utilized 2004 Population Estimates based on 2001 Census data**

These numbers are only rough estimates. It is important to realize people who are not hospitalized could still be quite sick for up to three weeks. It is clear such an outbreak will place huge demands on families, community services and the entire health care system. Health care systems could be quickly overburdened, economies strained, and social order disrupted. During a pandemic it will be imperative to keep health care workers as healthy as possible.

## Ethical Framework

The NBPS PIP will follow the ethical framework outlined in the Ontario Plan (OHPIP, June 2005, p. 9-12). Refer to Appendix 1.1.

## Legislation

### Health Promotion and Protection Act

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90h07_e.htm)

In Ontario, the Health Protection and Promotion Act (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. Mandatory Health Programs and Services Guidelines published by the Ministry of Health and Long-Term Care, set out minimum standards that must be met by Boards of Health delivering these public health programs and services.

The Act provides legislative requirements for physicians, laboratories, school principals and others to report certain diseases, including influenza, to the Medical Officer of Health. Included in the reporting requirements is the identification of the individual by name, address and the treatment prescribed, if any.

The Act also provides authority for implementing appropriate actions that may be taken to prevent, eliminate or decrease a health risk including establishing temporary isolation facilities and closure of premises. It also provides authority to a Medical Officer of Health to order persons individually or as classes to take certain actions to reduce the risk of disease transmission.

Regulations published under the authority to the HPPA assist to control the spread of communicable and reportable diseases. Regulation 569, Reports, (http://www.e-laws.gov.on.ca/DBLaws/Regs/English/900569_e.htm) establishes the parameters within which those who are required to report communicable and reportable diseases to the Medical Officer of Health 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 Medical Officer of Health may require.

A Medical Officer of Health 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 to isolate himself or herself, to place himself or herself 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. A Medical Officer of Health 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.

### Emergency Management Act

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90e09_e.htm

The Emergency Management Act establishes the requirements for emergency management programs and emergency plans in the Province of Ontario. The Act specifies what must be included in emergency management programs and emergency plans. Municipal councils are required to adopt emergency plans by by-law.

Emergency Management in Ontario is governed by the *Emergency Management Act*, RSO, 1990, Chapter E.9. Administration of the Act is assigned to the Solicitor General of Ontario under whom the Director of Emergency Management Ontario is responsible to co-ordinate, monitor, and assist in the formulation and implementation of emergency plans.

Under the Act, the Premier of Ontario may declare that an emergency exists throughout Ontario or in any part thereof. The Premier or a designated Minister may take such action as necessary to implement emergency plans and to protect the health, safety, welfare, and property of the inhabitants of the emergency area. The Premier of Ontario may require any municipality to provide such assistance, as is considered necessary, to an emergency area or part thereof that is not within the jurisdiction of the municipality and may direct and control the provision of such assistance. The Premier may at any time declare that an emergency has terminated.

### Personal Health Information Protection Act, 2004 (PHIPA)

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/04p03_e.htm

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, medical officers of health and the Ministry of Health and Long-Term Care. 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 Medical Officer of Health or Medical Officer of Health without the consent of the individual to whom the information relates where the disclosure is for a purpose of the Health Protection and Promotion Act. 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.

### Quarantine Act

http://laws.justice.gc.ca/en/Q-1/index.html

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 will not come into force until quarantine regulations have been drafted, likely by the fall of 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 disinfestation. It also includes measures for collecting and disclosing personal information if it is necessary to prevent the spread of a communicable disease.

### Coroners Act

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90c37_e.htm

Where a person dies while a resident in specified facilities including, a resident in 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 immediately give notice of the death to the Coroner. 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.

### Occupational Health and Safety Act

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90o01_e.htm

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 regulations.

### Ambulance Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90a19_e.htm

The Ambulance Act includes provisions concerning education, protection, prevention of disease transmission, reporting of possible exposures and the sterilization of equipment.
It also addresses issues surrounding immunization of emergency medical attendants.

**Other Legislative References**
Other legislations that provide legal authority to implement pandemic influenza plans include:

*Charitable Institutions Act, 1990.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90c09_e.htm**

*Community Care Access Corporations Act, 2001.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/01c33_e.htm**

*Health Care and Residential Facilities Regulation.*
**http://www.e-laws.gov.on.ca/DBLaws/Regs/English/930067_e.htm**

*Health Facilities Special Orders Act, 1990.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90h05_e.htm**

*Homes for the Aged and Rest Homes Act, 1990.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90h13_e.htm**

*Long-Term Care Act, 1994.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/94l26_e.htm**

*Medicine Act, 1991.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91m30_e.htm**

*Medical Laboratory Technology Act, 1991.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91m28_e.htm**

*Nursing Act, 1991.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91n32_e.htm**

*Nursing Homes Act, 1990.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90n07_e.htm**

*Private Hospitals Act, 1990.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90p24_e.htm**

*Public Hospitals Act, 1990.*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90p40_e.htm**

*Regulated Health Professions Act, 1991 (RHPA).*
**http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91r18_e.htm**

# SECTION 3 - ROLES AND RESPONSIBILITES

# Roles and Responsibilities

The following headings identify the main components of each pertinent level of government. It has been essential to identify main roles and responsibilities so all stakeholders are fully aware of appropriate actions during the relevant pandemic phases.

## International - World Health Organization

The World Health Organization (WHO) is responsible for coordinating a global response to an influenza pandemic. The WHO has conducted influenza surveillance since 1947 to detect prevalent and emerging strains.

The mandate of the WHO with respect to pandemic influenza is to:

- Conduct world-wide surveillance and reporting of disease
- Identify the beginning of a pandemic through the use of the phased response
- Co-ordinate global response to a pandemic
- Provide recommendations on the management of a pandemic

*As of June 1, 2006, the WHO places us globally at Phase 3 in the "Pandemic Alert Phase" (refer to Table 3.1).*

*WHO Pandemic Phases*

***Table 3.1 The WHO Pandemic Periods and Phases***

| Period | Phase | Description |
|---|---|---|
| **Interpandemic 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 is considered to be 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 |
| **Pandemic Period** | Phase 6 | Increased and sustained transmission in general population. |
| **Postpandemic** | | Period Return to interpandemic period |

Source: World Health Organization, 2005.

* The distinction between phase 1 and phase 2 is based on the risk of human 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.

## Public Health Agency of Canada

The Public Health Agency of Canada (PHAC) is responsible for coordinating the nation-wide health response to pandemic influenza. Federal responsibilities include entering into agreements and arrangements with international organizations such as WHO to support surveillance, coordination and investigation activities.

The Canadian Pandemic Influenza Plan (CPIP) was released in February 2004 (next version to be released in December 2005). The plan details the federal government actions and expectations for the provinces and territories.

The mandate of the PHAC with respect to pandemic influenza is to:

- Liaise with the World Health Organization, the US Centers for Disease Control and other national/international organizations to coordinate surveillance, investigation and vaccine activities
- Procure/distribute diagnostic reagents and technical information to provincial/territorial public health laboratories
- Establish domestic influenza vaccine manufacturing capacity
- Acquire influenza vaccine and antiviral drugs and allocate them equitably to provinces and territories.
- Work with provinces and territories to provide vaccine and antiviral drugs to specific populations for which the federal government is responsible (e.g., First Nations, RCMP, military personnel)
- Develop communication strategies, plans and framework

PHAC connects with provinces and territories through the Pandemic Influenza Committee (PIC).

## First Nations

The First Nations roles are to be developed federally. Locally, first nation's people from the district reserves have participated in all of our sub-committee work. Refer to the Canadian Pandemic Influenza Plan, Annex B for further details (still under development).

## Ontario Ministry of Health and Long-Term Care

The Ministry of Health and Long-Term Care (MOHLTC) is responsible for coordinating the province-wide response to an influenza pandemic, including the declaration of a provincial emergency. The Ontario Health Pandemic Influenza Plan (OHPIP) was released on May 31, 2004 and updated in June 2005.

The mandate of the MOHLTC is to:

- Implement national recommendations on influenza surveillance and immunization programs
- Maintain provincial surveillance activities, report diseases caused by influenza and participate in national surveillance activities
- Coordinate investigations of outbreaks and clusters of febrile respiratory illness (FRI)/influenza-like illness (ILI)
- Undertake tasks most effectively done at the provincial level (e.g. bulk purchasing equipment, stockpiling and distributing vaccine and antiviral, distributing medical supplies)
- Provide guidelines and direction to local public health authorities to ensure consistent planning and response across the province
- Support special studies to enhance the province's capacity to manage a pandemic
- Coordinate public education programs
- Provide guidelines and direction to local pandemic planning groups
- Provide guidance to the health field during a pandemic

The OHPIP Steering Committee and Workgroups were established in the fall of 2004 to further develop the plan. Refer to Appendix 3.1 for the OHPIP 2006 Integrated Plan outlining the expected completion dates for each working group.

Other sections of the MOHLTC that are involved in emergency planning/management include the Public Health Division, Emergency Management Unit and the Provincial Infectious Disease Advisory Committee. Refer to Figure 3.1 showing the roles and responsibilities.

## Public Health Division of the MOHLTC

The Public Health Division oversees activities relating to Ontario's public health system and is led by the Chief Medical Officer of Health and Assistant Deputy Minister. The Infectious Diseases Branch provides leadership and support to Ontario's public health system including 36 boards of health. The Infectious Diseases Branch provides public health, epidemiological, expert consultation and technical support to local boards of health and other health agencies with respect to the programs of the Mandatory Health Programs and Services Guidelines (MHPSG). The Infectious Diseases Branch is also responsible for disease-related databases, communications and support for health units during outbreaks.

## Emergency Management Unit

The Emergency Management Unit (EMU) was created in December 2003 to support emergency management activities within the MOHLTC and the health care system. EMU is a branch of the Public Health Division and is focused on enhancing an integrated approach to the challenges faced during emergencies. Their mission is to collaborate with stakeholders to develop, implement and maintain a comprehensive strategy to prepare for, respond to and recover from health emergencies of known and unknown origins.
The EMU’s mandate is to:

- Identify and develop the infrastructure required to ensure emergency readiness sustainability
- Identify and coordinate the business continuity plan for the Ministry
- Develop Ministry emergency readiness plan(s) and emergency response protocols that are consistent with Emergency Management Ontario's expectations and Ministry/health care system needs
- Ensure Ministry emergency plans are transparent with clear accountabilities within the health care system and with Ontarians

The EMU initiated the OHPIP Steering Committee to oversee the development of the health influenza pandemic plan. The EMU has provided administrative support to OHPIP’s Communications Sub-Committee. The EMU is also working collaboratively with Emergency Management Ontario (EMO) to ensure a coordinated response to an influenza pandemic.

During an influenza pandemic, the role of the EMU will be to coordinate the Ministry Emergency Operations Centre (MEOC), which will provide direction and operational management of the health care sector. The MEOC reports to the Emergency Executive Management Committee, which reports to the province’s Chief Medical Officer of Health. The MEOC will be linked with the Provincial Emergency Operations Centre as part of a provincial effort to coordinate the emergency response in non-health related sectors. The Provincial Emergency is coordinated at Emergency Management Ontario (EMO). Refer to Figure 3.1.

## Provincial Infectious Disease Advisory Committee

The Ministry of Health and Long-Term Care established the Provincial Infectious Diseases Advisory Committee (PIDAC) in response to a recommendation by the Expert Panel on SARS and Infectious

Disease Control (the Walker Panel) in order to provide a single standing source of expert advice on infectious diseases for Ontario.

PIDAC advises the Chief Medical Officer of Health (CMOH) on prevention, surveillance and control measures necessary to protect the people of Ontario from infectious diseases. PIDAC provides the CMOH with advice on issues such as standards and guidelines for infection control, emergency preparedness for an infectious disease outbreak, protocols to prevent and control infectious diseases and immunization programs.

The role of PIDAC during an influenza pandemic will be to provide advice on prevention, surveillance and control measures to the province's CMOH.

## Role of the Coroner

The Office of the Chief Coroner has taken the following position with respect to excess deaths arising from an influenza pandemic:

1. A coroner may not investigate a death without proper jurisdiction as per S.10 of the Coroners Act. Thus only,
2. Coroners investigate some natural deaths, particularly those that are sudden and unexpected, as well as other deaths requiring investigation. Not all deaths due to pandemic influenza would necessarily be sudden and unexpected, and therefore the coroner would not have jurisdiction to involve himself in these deaths. It is recognized that during the early stages of an infectious disease outbreak there would be more cases referred to the coroner that the latter stages, by which time presumably the nature of the outbreak would have been elucidated.
3. It is recognized that the coroner would necessarily become involved in some deaths that he/she would not normally investigate because there is no-one else to assume responsibility for certain requisite tasks related to these deaths (such as death certification and approval of cremation certificates).
4. During a pandemic, the coroner will be expected to investigate all other deaths requiring investigation as per S.10 of the Coroners Act.
5. Coroners are usually family physicians who will be under the increased burden likely to be experienced by other primary care physician, and to become ill themselves in some cases. Thus, the coroners are not a surplus or extra medical source.
6. Medical Officers of Health, in collaboration with appropriate community stakeholder, should ensure that there are local plans for efficiently dealing with removal and disposition of those who have died due to pandemic influenza.
7. The Office of the Chief Coroner has developed a screening questionnaire that can assist in distinguishing those deaths which must be referred to the coroner from those which can be assumed to be due to influenza. (Refer to Appendix 3.2)
8. The Regional Supervising Coroner and/or local investigating coroners will attempt to expedite or facilitate any requisite death documentation where no other qualified person is available to do so. This is consistent with normal procedure.
9. Due to limited capacity for storage, the Office of the Chief Coroner does not anticipate having a major role in storage of victims of the influenza pandemic. Storage of human remains should be discussed between the Medical Officer of Health, local funeral service providers, cemeteries and crematoria (please see point 11).

10. It would be prudent for municipalities to review and, where necessary, enhance their capability to address requests for death registration in a timely fashion, as is permitted under S.38 of the Vital Statistics Act.
11. Notwithstanding any of the foregoing, the Office of the Chief Coroner, through the Regional Supervising Coroner, will be available prior to and throughout any pandemic to participate in planning for respect to removal and disposition of deceased individuals.

| Contact Information | Address | Telephone Numbers |
|---|---|---|
| Regional Supervising Coroner<br>North East Region | 453 Lansdowne Street East, 2nd Floor<br>Peterborough, ON K9J 6X4 | Tel: (705) 745-9887<br>Fax: (705) 748-5055 |
| Mailing Address | P.O. Box 10009, RR#3<br>North Monaghan Postal Station<br>Peterborough, ON K9J 6X4 | |

## Role of the Municipalities and the Public Health Unit

The Emergency Management Act requires municipal authorities to plan for emergencies and disasters. Emergency Management Ontario has developed a handout/checklist for municipal use to ensure readiness.

Municipal governments and local public health units are responsible for coordinating the local response to an influenza pandemic. The NBPSDHU will take the lead in:

- Maintaining a local surveillance system, reporting clusters of Febrile Respiratory Illness/Influenza-like Illness and investigating outbreaks
- Developing plans to provide and deliver mass immunization programs and distribute vaccines, antiviral drugs and medical supplies
- Liaising with local partners (e.g., emergency responders, hospitals, community services, mortuary services, schools, workplaces)
- Assessing the capacity of local health services, including health human resources, and helping health services identify additional/alternative resources
- Defining clear responsibilities for communication at the local and facility level during a pandemic
- Collaborating with the provincial government to deliver public information/education programs

Municipalities are specifically responsible for:

- Activating their local Emergency Operation Centre at their discretion, or as directed
- Utilizing and distributing consistent messages to the public as per the Health Unit
- Supporting their own personnel plan, including the use of volunteers
- Developing and activating their business continuity plans

Local pandemic planning groups, led by public health, are responsible for planning the local response to an influenza pandemic, based on the provincial and federal plans.

Refer to Figure 3.2 to identify roles and major decisions by relevant sectors.

**West Parry Sound Municipal Agreement**
Seven municipalities (McDougall, Seguin, Parry Sound, Carling, Whitestone, McKeller and Archipelago) in the West Parry Sound area are working on a mutual assistance agreement in order to ensure availability of essential services. NBPSDHU supports the development of this agreement.

## Public Health

The NBPSDHU is responsible for developing a local pandemic influenza response plan for the district. Although local planning is critical, many decisions are within federal/provincial jurisdiction and directions must be followed locally e.g. vaccine priority groups. Federal and provincial plans provide the framework for local planning. (Refer to Figure 3.3). Each municipality, under the guidance of Emergency Management Ontario, is responsible for establishing a plan related to health emergencies.

Planning within the NBPSDHU for internal local response to pandemic influenza is critical during the interpandemic phase. Lessons learned from the Severe Acute Respiratory Syndrome (SARS) emergency response in 2003, demonstrated the need to be as proactive as possible. Internal planning began in January 2006 to establish clearly defined response plans for all programs in the NBPSDHU.

During an influenza pandemic, the NBPSDHU will activate their Emergency Operation Center to facilitate a coordinated response. Daily teleconferences at a set time (to be determined) will be held with involved municipalities to keep stakeholders updated with relevant information.

## Pandemic Influenza Implementation Group

The Pandemic Influenza Implementation Group will be responsible for the overall management of the pandemic emergency, including:

- Obtaining and analyzing international, national and local surveillance data to inform local impact and response activities
- Implementing the pandemic influenza communication plan to ensure the timely dissemination of the best possible information to health care providers, the media and the general public
- Providing access to influenza vaccine and antiviral agents, when available, to individuals on a priority basis as determined by the MOHLTC
- Convening stakeholder groups as necessary
- Reviewing the control and co-ordination of essential services, emergency response services, and public order and safety in conjunction with local authorities during the pandemic influenza emergency
- Advising and collaborating with the 31 municipality Emergency Operations Centers
- Recommending deployment of health unit personnel based on assessment of need
- Documenting decisions and actions associated with managing the pandemic emergency

The Pandemic Influenza Implementation Group will consist of the following members:

- Medical Officer of Health, Chair
- Public Health Directors/Assistant Director(s)
- Management Administrative Assistant
- Other members as deemed necessary on an Ad Hoc basis

In the event of a declared influenza pandemic, the NBPSDHU main office will serve as the primary emergency operation location, as per the NBPSDHU Emergency Management Plan.

| | |
|---|---|
| Primary Emergency Operations Center (EOC) | 681 Commercial Street, North Bay |

The following rooms at the NBPSDHU main office have been assigned for the use of health unit pandemic staff, external partners and media. The meeting rooms listed below are equipped with network and telephone connections:

| Emergency Operations Groups | Location |
|---|---|
| Pandemic Influenza Implementation Group | EOC at the NBPSDHU |
| Media Center | 681 Commercial Street, North Bay Boardroom |

Additional staff resources will be required as the pandemic escalates. Activation of the following activities in whole or in part will be determined by the Pandemic Influenza Planning Group:
Surveillance (see Section 4)
Vaccine/Antiviral (see Section 5)
Public Health Measures (see Section 6)
Health Services (see Section 7)
Emergency Response (see Section 8)
Communication (see Section 9)
Municipal plans will be activated as per guidance from the province and individual municipalities.

Refer to Figure 3.3 which represents activation of the Pandemic Influenza Plan from the Public Health Agency of Canada to the local level.

## Incident Management System

The Incident Management System (IMS) is a model for emergency response that provides a way of co-coordinating the efforts of agencies and resources by using a common organizational structure that can expand or contract based on the scope of response. The more complex the situation becomes, the more critical it is for every agency involved to co-ordinate their own efforts as well as integrate their activities with those of other responding agencies. IMS design makes that possible, as it utilizes standardized terminology and communication systems, consolidated action plans, pre-designated facilities, and an all-hazards approach appropriate for all types of emergencies.

IMS is used by government agencies across Canada, including NBPSDHU to manage an emergency. In a district-wide response, such as Pandemic Influenza, utilization of the IMS response model will maximize the capacity of agencies involved, and will ensure that resources and skills are utilized in the most appropriate and the most efficient way. Municipalities are not mandated to use the IMS structure, although it is recommended.

The IMS structure is built around **five functions: command, operations, planning, logistics and finance/administration**. In a small scale emergency response, one person can, and often will perform all functions. In a complex, large scale emergency response the system can quickly expand from this one person to several people supporting each function and that is likely going to happen early on in the response to Pandemic Influenza.

**Command** function determines the flow of decision-making and communications. In a public health emergency such as Pandemic Influenza, the Public Health Incident Manager will lead the command function and the overall response effort. As an incident expands, the Public Health Incident Manager will assign other people to fill the positions of Public Information and Liaison. Although these responsibilities are delegated to others, they remain under the authority of the command function.

**Liaison** function co-ordinates with relevant agencies while maintaining communications with the Incident Manager. This function establishes formal communication with agencies and services involved in

Pandemic Influenza response and with community groups as needed. Some of the internal and external stakeholders include the Municipalities, LTCH's, hospitals, physicians, etc.

**Public Information** is responsible for media relations, communication strategy and releasing information about the Pandemic Influenza and NBPSDHU response strategies to staff, other organizations and media. (internal and external communication)

**Planning** responsibilities include assessing the situation and creating an action plan. The plan identifies public health objectives for the emergency response and the response activities.

**Operations** function is responsible for managing the NBPSDHU response operations, such as a call centre and case management. Additional operation sections may be added if necessary.

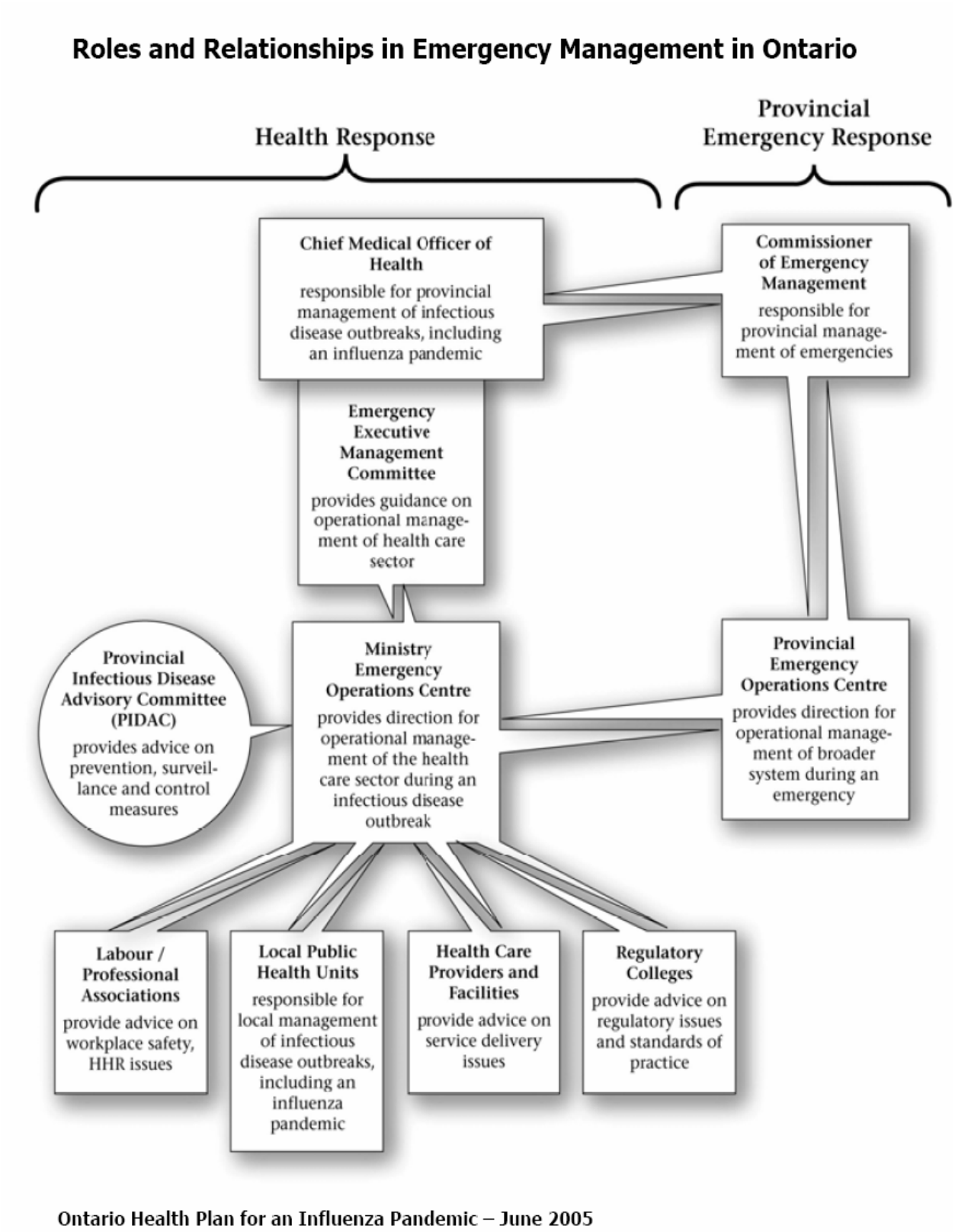
**Logistics** function is responsible for providing facilities, services, technical support, materials and personnel to operate the emergency response. This section takes on great significance in long-term or extended operations by organizing and confirming availability of staff and obtaining and organizing relief staff.

**Finance/Administration** function is critical for tracking all expenses, expenditures, claims, purchases and contracts initiated during the emergency. Administration monitors all expenses and identifies NBPSDHU resources used during the emergency response.

In addition to creating specific plans regarding the application of the IMS model in the circumstances of Pandemic Influenza response, NBPSDHU is developing a **Service Continuity Plan** for the heath unit outlining service areas that must continue, as well as service areas from which resources can temporarily be pulled to assist with the emergency response.

Refer to Figure 3.4 which structurally identifies the NBPSDHU's Pandemic Influenza Incident Management System.

**Figure 3.1: Provincial vs Health Response**




**Ontario Health Plan for an Influenza Pandemic – June 2005**

**Figure 3.2: Decision Centers for Coordinating Local Response to a Pandemic Influenza**

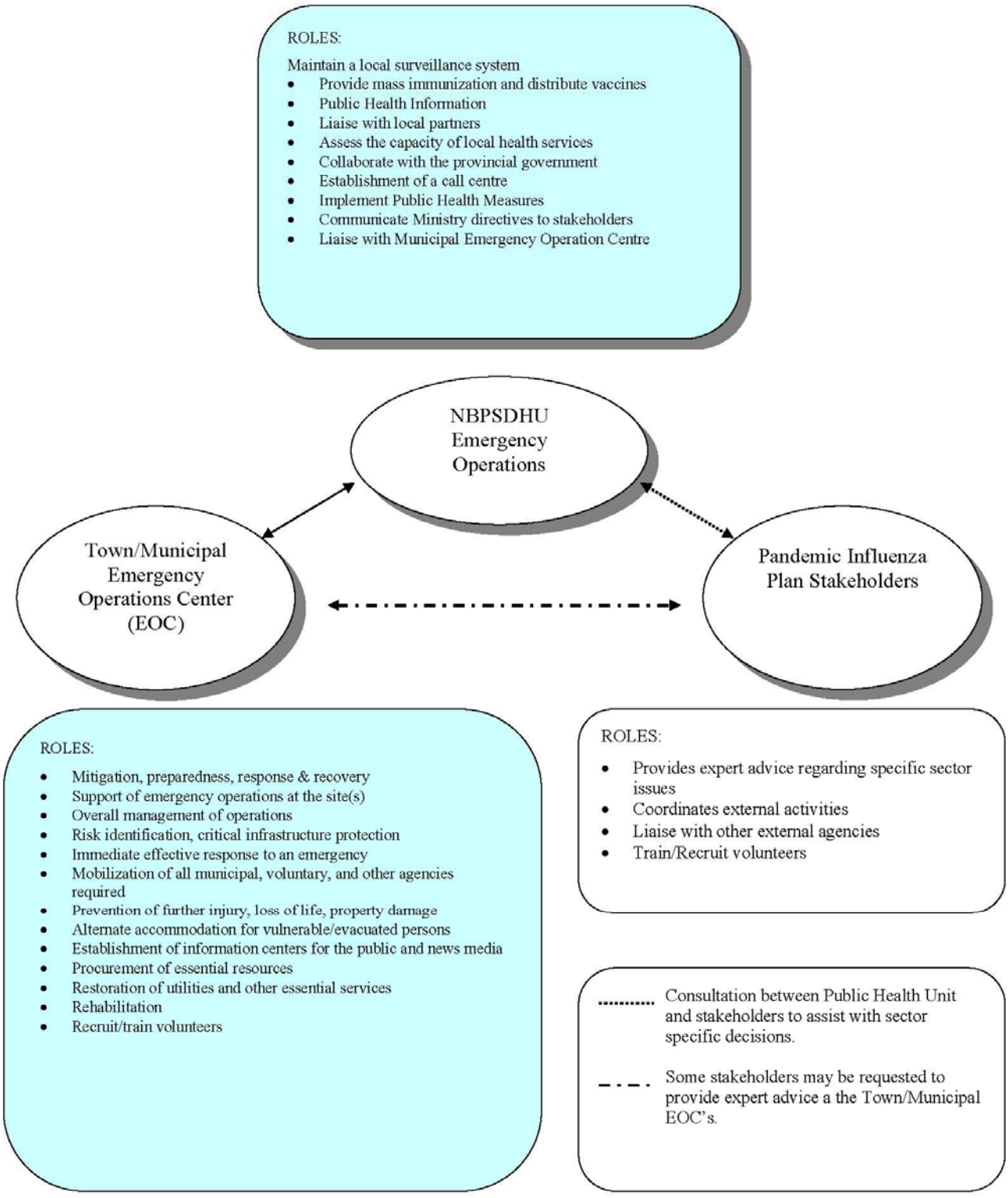


**Figure 3.3: Activation of the Pandemic Influenza Plan**

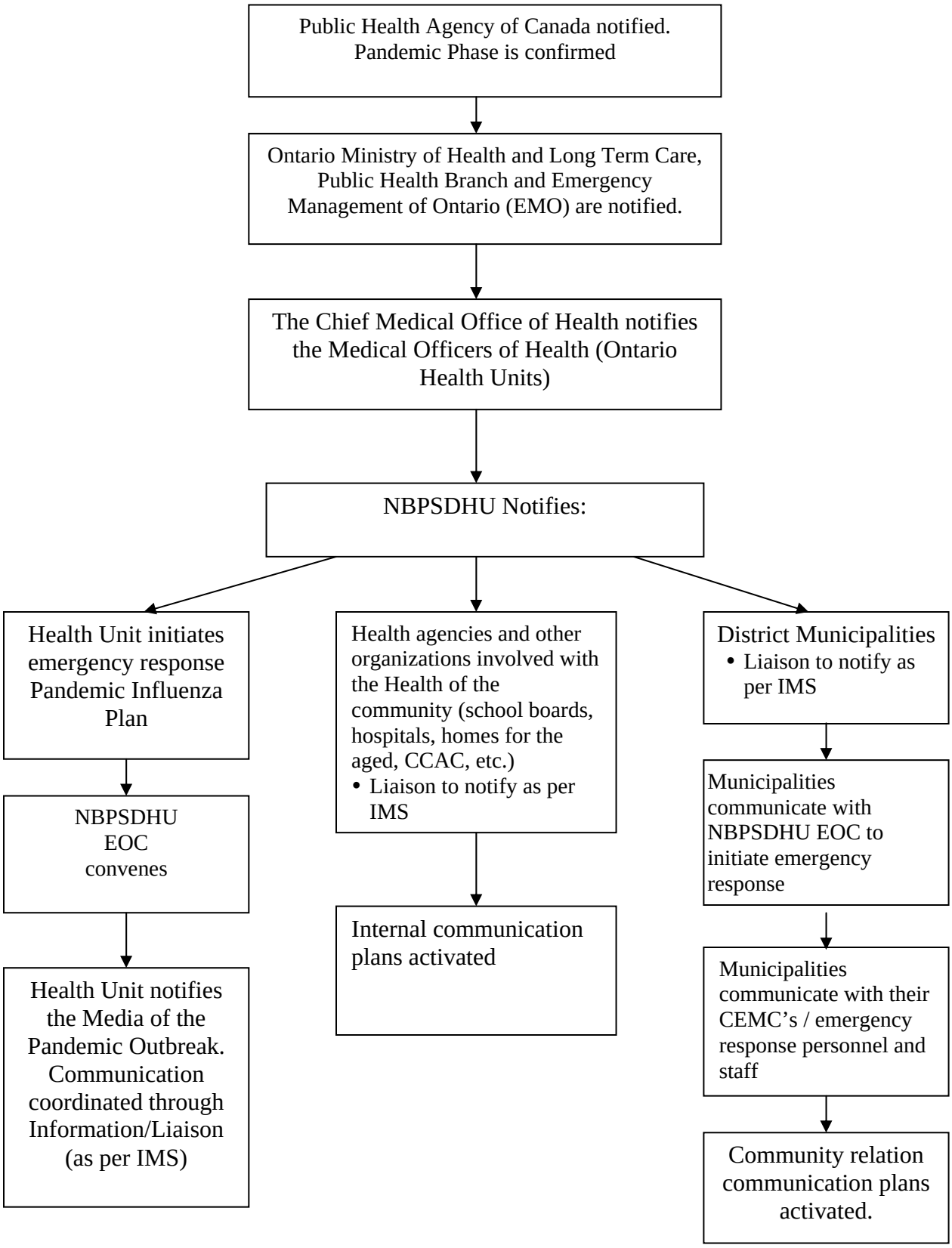
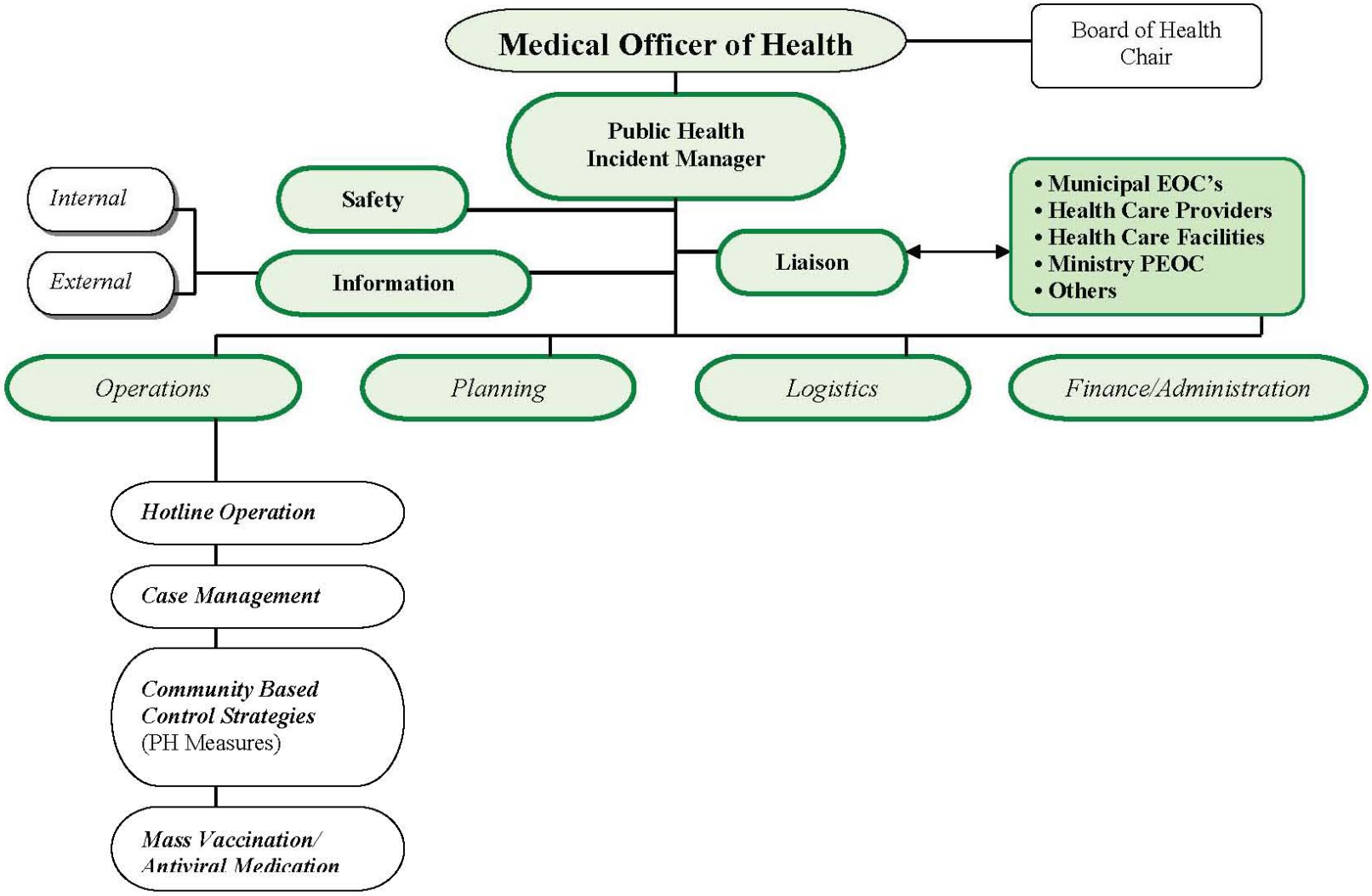


**Figure 3.4: NBPSDHU Pandemic Influenza Incident Management System (IMS)**



# SECTION 4 – SURVEILLANCE

# Surveillance

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

Information that is timely, ongoing, and shared among international, national, regional and local health care authorities is needed to understand the trends of disease transmission so that morbidity and mortality may be reduced. Monitoring influenza activity in the North Bay Parry Sound District is already an ongoing function that can be enhanced by collecting and analyzing complementary data for early detection and the potential application of targeted interventions.

Surveillance detects the pandemic influenza strain, aids in containing the disease and preventing transmission. Surveillance is vital to determine when a pandemic begins, to track the course of the pandemic, to determine protective measures, to guide antiviral use, to prepare vaccines, to manage the outbreak, and to evaluate the collaborative efforts.

The Surveillance section of the plan describes steps the NBPSDHU will use for collection, analysis, and dissemination of disease-related information before and during the pandemic.

## Objectives:

- To guide and support surveillance activities
- To monitor influenza-like illness (ILI) to detect unusual events, track the course, guide antiviral use, prepare vaccines, and evaluate
- To track and document the occurrence, severity, and progression of the pandemic, based on WHO pandemic phases
- To share surveillance information in an efficient and timely manner to aid community partners to respond

Surveillance data can serve various purposes throughout the phases of a pandemic. Early identification of the arrival of a pandemic strain and tracking how it moves through our population during the early alert periods is one of the most important reasons to collect and analyze these data. The components of the NBPSDHU's current communicable disease surveillance system are used for the ongoing monitoring of disease trends and apply to the inter-pandemic and early pandemic alert phases. The Ontario Ministry of Health and Long-Term Care is taking the lead with identifying additional data needs during and after a pandemic strain appears. These enhancements and changes to routine surveillance data will reflect information needed to make decisions and understand the extent of the outbreak throughout the response period.

Currently the Provincial Public Health Laboratory (PHL) performs rapid testing, culture confirmation, and strain identification of influenza throughout the year. The confirmation that a pandemic strain has arrived in the North Bay Parry Sound District will be the role of the PHL. During each influenza season, the PHL is responsible for tracking any changes in the circulating strains of influenza and reporting these to local and provincial public health authorities. Community laboratories are not currently licensed to perform influenza tests, but are an important resource for any other diagnostic testing that may be needed as illness spreads through our district.
This Surveillance section characterizes current and planned influenza surveillance activities relevant to pandemic planning and response. Each section provides some detail on activity currently, but does not describe the actual data elements that will be collected or included in reports. These details await

direction and reporting requirements currently being developed by the Surveillance workgroup of the Ontario Health Pandemic Influenza Planning group.

When a pandemic is declared, surveillance activities will be directed by the Public Health Agency of Canada and directed provincially by the MOHLTC. NBPSDHU will participate in these activities, and will enhance regional surveillance activities to monitor for the local introduction and spread of pandemic viral strain.

## Current Surveillance

**Sporadic Influenza Cases**
Diseases designated as reportable and communicable under the Health Protection and Promotion Act (HPPA) and associated Ontario regulations must be reported to the North Bay Parry Sound District's Medical Officer of Health in a timely manner by laboratories, administrators of institutions, and physicians (walk-in clinics and private practices). Influenza is a reportable and communicable disease.

- The NBPSDHU regularly sends out reminders of reporting responsibilities, changes to the requirements by the province, and general contact information via mail, website postings, and newsletters. A communicable disease resource reference called the "What Now" binder is provided to all daycares, schools and LTCH's outlining reporting requirements. The What Now binder also contains up to date disease information. Schools are required to report abnormal absenteeism to the health unit. Elementary schools are required to report to the health unit when absenteeism rates are above 10%. Secondary schools must report absenteeism rates above 15%.

The NBPSDHU works closely with the long term care homes to facilitate efficient information sharing and consultation. To facilitate these ends, the CDC team hosts an annual health care facilities day, where representatives from all facilities participate in an interactive event aimed at increasing their knowledge of communicable disease prevention and management. Influenza outbreak management is an important topic at each annual health facilities day.

The Communicable Disease Control (CDC) team investigates and follows up each report of laboratory-confirmed influenza to collect basic demographic information, vaccine history, assess possible sources of infection, and to determine if there is any further risk of transmission to vulnerable populations (e.g. long-term care home resident).

Each influenza season, the CDC team performs descriptive analyses early on and into the season to describe the epidemiology of the population affected (i.e. age, gender, geography, institutional or community) by influenza. During a pandemic such data may help ensure appropriate targeting of interventions early on. During the influenza season (October to April), aggregate summaries of case counts, their basic epidemiology, and comparisons to previous seasons are generated weekly.

The NBPSDHU CDC team summarizes and describes influenza activity as it progresses in the community throughout the season. Baseline comparisons are made on a regular basis and this Influenza information will continue to be provided before and into the early phases of the Pandemic. In the event of a pandemic, reports will continue and increase in frequency to capture the new information available. Once the pandemic strain has spread through the district (i.e. once there is evidence that all demographic groups are affected), the majority of cases will not be lab-confirmed and reporting requirements will likely change as per provincial direction.

Influenza data during Influenza season are transmitted weekly to the MOHLTC, data transmissions are bi-weekly outside of influenza season. All information is shared in near real-time with the rest of Ontario

Public Health Units and the Ministry of Health and Long-Term Care through their entry into the integrated Public Health Information System (iPHIS).

**Influenza Outbreaks**

Outbreaks of respiratory diseases in institutions are immediately (i.e. by telephone) reportable to the Medical Officer of Health under the HPPA and its associated regulations. The MOHLTC defines a respiratory 'outbreak' as the detection of one lab confirmed influenza and additional cases or two or more cases of respiratory illness linked in space and time within an institutional facility. Each acute care hospital and long-term care home has a key contact within NBPSDHU for the early reporting of suspect respiratory outbreaks. NBPSDHU provides support to receive notice and initiate investigations of any respiratory outbreaks in institutions on a 24 hour/7 day per week basis.

NBPSDHU investigators work closely with each institution to facilitate the rapid implementation of infection control measures, and to identify the causative agent of an outbreak for a more targeted response. Nasopharyngeal swabs are used to collect specimens from ill facility clients and sent to the Public Health Lab in Orillia for testing, including rapid direct antigen tests for influenza. If negative, additional tests are conducted for influenza and other agents. Generally, confirmation of influenza permits the administration of the appropriate chemotherapy and prophylaxis regimen for those affected.

NBPSDHU notifies the following organizations of all active institutional outbreaks in the district; hospital Infection Control and Occupational Health, long-term care facility administrators, Community Care Access Centers, Emergency Medical Services, the Coroner's Office, Provincial Transfer Agency, and the Ministry of Health and Long-Term Care. This notification provides information about patients who may be transferred between institutions, so that appropriate precautions and infection control actions are taken.

The NBPSDHU's website is updated weekly to include number of lab confirmed influenza cases in our district during the influenza season. This information will continue to be provided before and into the early phases of a pandemic. The internet has been identified as an important resource for pandemic information. Efforts continue to improve the NBPSHU website and its scope of use.

Basic data on respiratory outbreaks (e.g. signs and symptoms, number ill, number at risk, deaths, and hospitalizations) are first reported to the MOHLTC within 24 hours of notification, and then again when the outbreak is declared over. Respiratory Outbreak Report forms provided by the MOHLTC are used to collect and track information until electronic reporting becomes available for outbreak data. A modified version of this form to be used for more frequent reporting during a pandemic is being developed by the OHPIP Surveillance workgroup.

**Trends in Influenza-like Illness – Febrile Respiratory Illness**

After SARS, it was recognized that emerging or threatening respiratory diseases would likely present as influenza-like illness (ILI) or an unspecified Febrile Respiratory illness (FRI). The MOHLTC has requested all health care settings to systematically assess all clients for the presence of FRI symptoms. Any clusters of FRI in an institutional setting or individual cases with a positive travel history are to be reported to Public Health immediately. This system is particularly useful early on in a pandemic, to identify any ill individuals who may have traveled to areas with circulating pandemic strains so that immediate precautions to minimize the risk of transmission are taken.

Clusters of FRI are investigated as suspect respiratory outbreaks (see above) and individual reports are investigated to understand how travel history may provide information on possible communicable agents.

**Trends in Influenza-like Illness – Sentinel Physicians**

The Federal Flu Watch program includes data on influenza-like illness reported from sentinel physicians across the country representing various areas. When generalizable and representative, these data can

illustrate when influenza-like illness enters and how it moves through the community. The Public Health Agency of Canada (PHAC) coverage standards are 1 physician per 250,000 population. Currently the North Bay Parry Sound district has no sentinel physician.

**Emerging Threats to Our District**

- Increased awareness of trends in zoonotic disease such as avian influenza that may pose a threat to our district is necessary to be prepared for the arrival of a pandemic variant of influenza. The Communicable Disease Control team regularly scans web resources, publications, and participates at meetings related to emerging diseases from other parts of Canada and globally to stay abreast of issues related to emerging pathogens. Public Health Bulletins on communicable diseases that may affect those living in our district, are sent out regularly to health care practitioners.

**Information Systems**

The NBPSDHU is currently using the new provincial information system for communicable diseases, the integrated Public Health Information System (iPHIS). This system allows for detailed case and outbreak surveillance reporting and management.

## Planned Surveillance

Surveillance is critical for the early detection of the pandemic flu strain in a population. Efforts to facilitate early identification of trends in influenza-like illness syndromes and increased absenteeism from work or school are ongoing. These are described below.

**School Absenteeism**

**Elementary/Secondary Schools**

In the interpandemic period, school surveillance for increased absenteeism is done passively. This relies on schools notifying public health of increased absenteeism.

When a pandemic has been declared (Phase 6), active surveillance for school absenteeism may be initiated to detect introduction and/or spread of the pandemic strain. Influenza viruses are known to circulate rapidly among school-age children, and absenteeism rates above 10% during influenza seasons are known to correlate with spread in the general population. Contact with schools is undertaken by public health nurses on a regular basis to inquire about levels of absenteeism.

The procedure for pandemic school surveillance is as follows:

1. 30 secondary and elementary schools have been selected as sentinel schools due to their size, board and location in the North Bay Parry Sound district. Each of these schools is assigned to a Public Health Nurse (PHN). Review Appendix 4.1 for list of sentinel schools and their contact information. PHN to identify a primary contact with the school for absenteeism rates, usually the school secretary.
2. PHN to contact each school once per week to obtain the daily absenteeism rate. If rates are below 10%, no further action is required; school contacts will be advised to call the PHN if rates rise significantly prior to next week.
3. Schools may be contacted more frequently if there is concern that an outbreak is beginning. PHN may fax the school a copy of the *School Communicable Disease Reporting Form* (Appendix 4.2).
4. If the rate is above 10%, the school is asked to fill out the above mentioned form, providing the PHN with the list of absent students, their date of birth, parent's name and their contact information.
5. Parents are contacted to ascertain the reason for their child's absence from school. PHN will review the incubation period, communicability and means of prevention/treatment as well as the recommended exclusion guidelines regarding Influenza.

6. PHN may provide parents a pamphlet for information including instructions for self-care and when to seek medical attention.

Passive surveillance will continue with the remaining schools in the North Bay Parry Sound district.

**Workplace Absenteeism**

Absenteeism data provide additional means to assess what segments of the population are experiencing illness and how it is moving across the district. Requesting specific large employers to provide attendance records on a regular basis may allow NBPSHU to understand the impact on the population. See Appendix 4.3 for participating employers and Appendix 4.4 for workplace reporting form.

**Telehealth**

Telehealth offers professional health care advice by a Registered Nurse. During a pandemic, Telehealth will be reporting on a weekly basis the numbers of calls received regarding influenza like illness.

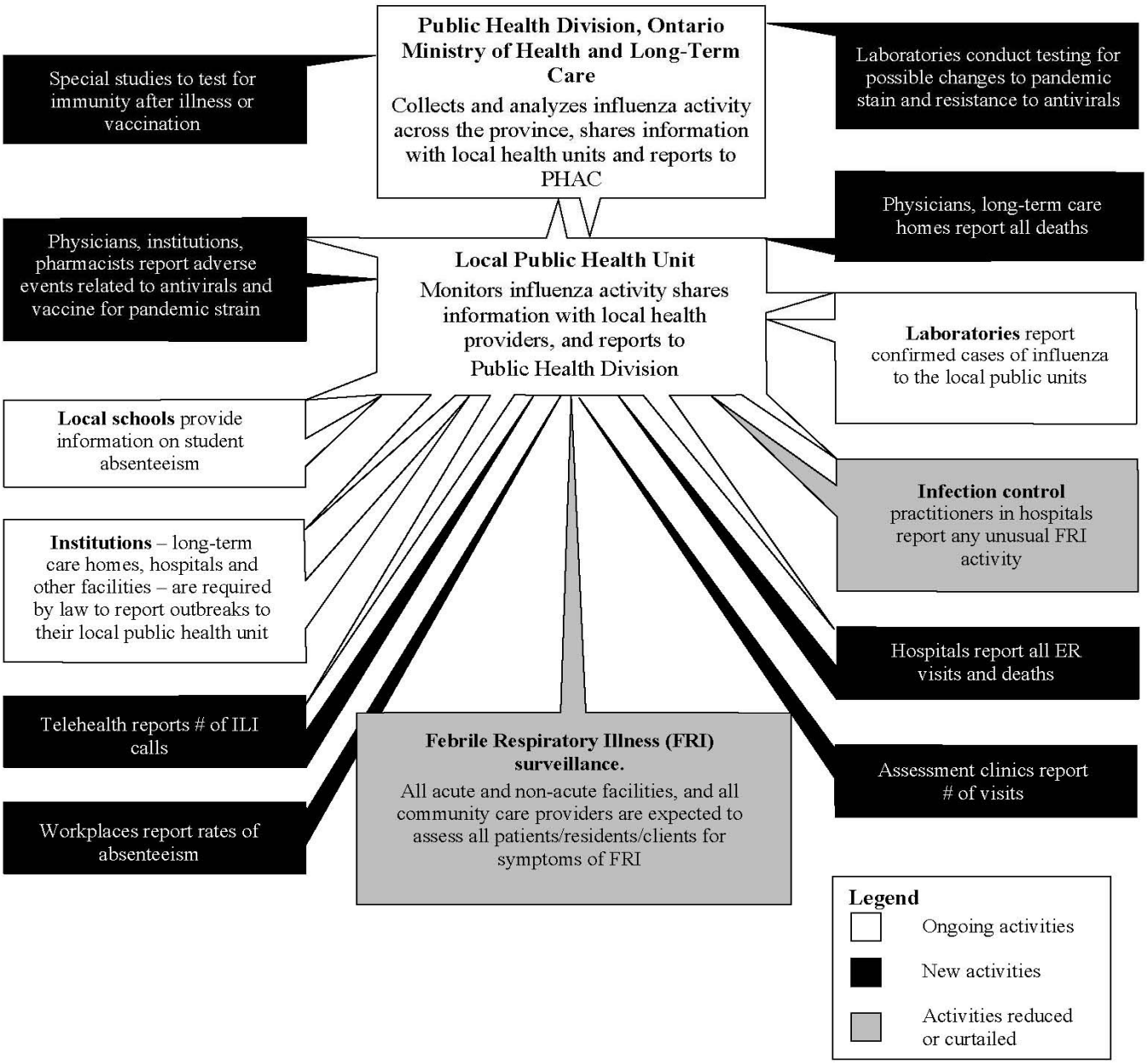
**Emergency Room Surveillance**

Acute Care hospitals screen all Emergency patients with MOHLTC Febrile Respiratory Illness screener and report failures to health unit.

**Sending Mass Alerts/Information**

Identifying efficient methods to alert health colleagues and community partners of important trends, threats, or changes has been an ongoing priority for NBPSDHU. The newly upgraded email and fax systems are used to convey urgent information. These systems rely on well maintained contact lists and databases. NBPSDHU have been working to ensure all lists are updated regularly.

## Figure 4.1: Surveillance Activities during a Pandemic Period



# SECTION 5 - VACCINES AND ANTIVIRALS

# Vaccine and Antivirals

Vaccination is the primary means to prevent disease and death from influenza during an epidemic or pandemic. The National Advisory Committee on Immunization (NACI) issues annual recommendations on the use of influenza vaccine in persons who are most at risk for influenza or those who could spread influenza to persons vulnerable to the serious side effects of influenza. In the event of a pandemic, the Canadian Pandemic Influenza Committee (PIC) will provide recommendations to provinces and territories on the use of the pandemic vaccine and priority groups for immunization. Even once a vaccine is available, it will only be effective in preventing illness in 70-90% of healthy adults. Ontario and the NBPSDHU will adopt the national recommendation on priority groups at the time of a pandemic to facilitate equitable access in a just manner *(OHPIP, June 2005, p. 24-25)*.

Antivirals (anti-influenza drugs) are effective for both influenza treatment and prophylaxis, and may provide a secondary management strategy during a pandemic – particularly when a vaccine may not be available for the first wave. Antivirals will likely be the only virus-specific intervention during the initial response. The protection provided by antivirals is virtually immediate and does not interfere with an individual's response to influenza vaccines. At this time, there is no evidence that putting large segments of the Canadian population on prophylactic antivirals will slow or stop the spread of the disease, although antivirals may be an important option for maintaining essential services until a vaccine becomes available. Early treatment of targeted persons can also help by maintaining essential health and emergency services and by shortening the duration of illness and preventing complications in high risk persons and those who are seriously ill *(OHPIP, June 2005, p. 24)*.

As vaccines and antivirals will both be in short supply in the event of a pandemic, the North Bay Parry Sound District will use the ethical framework provided by the province to guide the decision making process, and establish a decision review process that people can use to appeal decisions about access to vaccines and antivirals *(OHPIP, June 2005, p. 9-12).*

The Vaccine and Antiviral section of the plan describe the steps that will be taken to provide a safe and effective vaccine and antiviral program for all the residents of The North Bay Parry Sound District as quickly as possible during a pandemic.

## Objectives:

- To store, allocate, distribute and administer vaccine to the appropriate groups of individuals
- To monitor safety and effectiveness of vaccination programs
- To develop a strategy for the use of antivirals during a pandemic
- To store, allocate, distribute and administer antivirals to the appropriate groups of individuals
- To address issues around safety and security of antiviral supply

## Vaccines –Phase I

In the Interpandemic period the NBPSDHU promotes annual universal influenza immunization to the general public and high-risk populations through newspaper and radio advertisements, physician newsletters and newspaper articles. Community clinics are provided in all areas of the district. In 2005, approximately 14,800 people receive vaccines through the health unit clinics. The number of doses of influenza vaccine distributed to the physicians, hospitals, long term care facilities and nursing agencies was 40, 490. From the number of doses of influenza vaccine that were distributed/administered, it would appear that approximately 46% of the population was immunized. This number does not take into account vaccine wastage and those children who may have received a second dose.

All the long-term care facilities are involved with the annual Big Shot Challenge. From 2003-2005, there has been an increase in the percentage of both residents and staff being immunized. The percentage of

residents immunized increased from 92% to 95% and the percentage of staff immunized increased from 76% to 91.2%. The NBPSDHU Communicable Disease Department and the long-term care homes will continue to work together to ensure the residence and staff coverage rates continue to improve.

Hospital staff coverage has been significantly lower than long-term care homes. The health unit will continue to work with the infection control and prevention and the occupational health nurses in these facilities to help promote the vaccine.

The health unit currently receives vaccines from the Ontario Government Pharmacy, then stores and distributes the provincially funded vaccines to all the health care agencies. The plan for distributing larger quantities of antiviral and vaccines to the priority groups will be developed based on the provincial distribution plan.

### ☼*NEXT STEPS*

1. Develop training program and partnerships for deployment of staff for immunization

## Phase II - PART 1 (Priority Groups 1, 2 and 3)

The NBPSDHU will provide support to and/or conduct mass antiviral/immunization clinics for priority groups 1, 2 and 3 (Appendix 5.1). It is assumed that organizations employing medical and nursing staff will administer and/or vaccinate their own priority staff with assistance and support from NBPSDHU as needed. The organizations that have physicians, can arrange medical directives for their own facility (e.g. hospitals, LTCH, CHC). For organizations without physicians that employ members of priority groups (e.g. nurses, physiotherapists) such as nursing agencies and Community Care Access Centres, essential services, NBPSDHU will provide clinics for the staff in these facilities.

For the distribution of antivirals and the administration of vaccine the health unit municipalities and unorganized territories have been divided into 5 geographical areas: West Nipissing (3), East Nipissing (6), North Bay (6), East Parry Sound (13) and West Parry Sound (8). See Appendix 5.3, and for geographical representation refer to Appendix 5.4.

In order to anticipate the potential amount of antiviral medication and vaccine required to protect priority groups 1, 2 and 3, NBPSDHU is conducting an enumeration process as directed by the MOHLTC to count the number of individuals in each priority group (see Appendix 5.2 for groups enumerated). The use of antiviral medication for prevention purposes cannot be guaranteed at this time, the priority groups may change based on age and risk groups most affected by the pandemic. The list below identifies the organizations and individuals that are currently being enumerated by NBPSDHU.

**Acute Care Hospitals**
Hospitals are an important component of the health care system that will be under enormous stress during a pandemic. Hospitals have initiated their own pandemic plans including prioritization of individuals working at the hospital to receive influenza vaccine once it becomes available. These plans, in conjunction with the information gathered from the enumeration process, will ensure that the appropriate individuals are vaccinated within the priority groups established by the provincial pandemic plan to maintain critical hospital functions. Hospitals are expected to hold and staff influenza vaccination clinics for individuals working at their facility. Hospitals will also be responsible for providing security, vaccination supplies (excluding vaccine) and space to conduct vaccination of individuals working at the hospital. The NBPSDHU will offer assistance to hospitals by providing staff and resources as needed.

*Table 5.1 Acute Care Hospitals*

| Hospitals | Geographical Location | Town | Essential Staffing |
|---|---|---|---|
| Mattawa General Hospital | East Nipissing | Mattawa | 95 |
| North Bay General Hospital | North Bay | North Bay | 1014 |
| North Bay Psychiatric Hospital | North Bay | North Bay | 389 |
| West Nipissing General Hospital | West Nipissing | Sturgeon Falls | 246 |
| West Parry Sound Health Centre | West Parry Sound | Parry Sound | 501 |
| Algonquin Health Services - Burk's Falls District Health Center | East Parry Sound | Burks Falls | 28 |

**Long-Term Care Homes (LTCH)/Chronic Care Hospitals**
LTCH residents are a vulnerable population. It will be critical to maintain the health of staff caring for these individuals to avoid transmitting influenza to this high-risk population. It is expected that NBPSDHU will assist LTCH's by providing NBPSDU staff and resources to assist LTCH's as needed.

*Table 5.2 Long-Term Care Homes*

| Long Term Care Homes | Geographical location | Town/City | Essential Staffing |
|---|---|---|---|
| Cassellholme Home for the Aged | North Bay | North Bay | 283 |
| Belvedere Heights Home for the Aged | West Parry Sound | Parry Sound | 124 |
| Algonquin Nursing Home | East Nippissing | Mattawa | 73 |
| Empire Living Centre | North Bay | North Bay | 31 |
| Leisureworld Caregiving Centre | North Bay | North Bay | 62 |
| Au Chateau Home for the Aged | West Nipissing | Sturgeon Falls | 170 |
| Nipissing Manor Nursing Care Center | East Nipissing | Corbeil | 106 |
| Lakeland Long Term Care | West Parry Sound | Parry Sound | 73 |
| Barcley House | North Bay | North Bay | 24 |
| Lady Isabelle Nursing Home | East Parry Sound | Trout Creek | 77 |
| Eastholme Home for the Aged | East Parry Sound | Powassan | 117 |
| Southwind Retirement Home | East Parry Sound | South River | 8 |

**Community Care Access Centers**
NBPSDHU will coordinate (manage vaccine inventory, assist with vaccination clinics as needed) the administration of vaccinations to this group. NBPSDHU will attempt to provide immunization clinics as close to the location of the offices as possible, such as community health centers, schools, civic centers. Planning has begun to determine these locations.

**Community Care Settings**
(Physicians, Community Health Centres, Nursing Agencies, etc.)
Physicians and other health care workers in the community will require vaccination. NBPSDHU will provide coordination (manage vaccine inventory, assist with vaccination clinics as needed) of vaccination clinics for physicians/ other health care workers and their support staff who are essential to the operation of the facility. NBPSDHU will attempt to provide immunization clinics close to the location of physician/ health care workers offices in locations such as civic centers, schools, hospitals. Planning has begun to determine these locations.

**Emergency Responders**
(Emergency Medical Services, Fire Services)
The vaccination of employees working for NBPSDU, Emergency Medical Services and Fire Services will also be a priority during a pandemic. The ambulance services part of hospital will receive antivirals and /or immunization through the hospital. NBPSDHU will work closely with the other ambulance /EMS to ensure that all necessary staff is vaccinated within the priority groups established by the provincial plan. Clinics will be established close proximity to the numerous emergency and fire services

**Critical Infrastructure/Municipality**
(Telecommunications, Public Transportation, Public Works, Religious Leaders, Traffic Controllers, Police, Funeral Directors, Municipal Councillors etc.) Vaccination of these persons is important to maintain essential services in all the municipalities in the NBPSDHU area. There are currently 31 municipal governments in the area. NBPSDHU will attempt to provide vaccination clinics close to the work place for these organizations.

**Public Health Unit**
The vaccination of public health staff will be essential to implement and maintain public health measures in response to an influenza pandemic. The public health staff will be provided with antivirals and immunization according to the MOHLTC priority groups. The staff will be redeployed according to the NBPSDHU pandemic influenza plan.

NBPSDHU does not have sufficient staff with expertise in running mass vaccination clinics for all the health unit area to ensure that those in the MOHLTC priority groups are immunized. There is a need to develop a larger roster of casual nurses and a list of nursing students who can be trained.

**NOTE:** Planning for the locations where vaccination clinics will be held for the above groups, has begun. Locations that are being considered for vaccination clinics for priority groups include: municipal governments, community centres, elementary and secondary schools with Public and Catholic School Boards.

In the pre-pandemic phase, the health unit has established an estimate of the number of people in the priority groups as defined in the Ontario Pandemic Plan. Table 5.3 provides the total estimated numbers for the NBPSDHU vaccine priority groups. Table 5.4 provides the estimate of the total number of people in each priority group according to the five areas in the two districts. This data was collected through the enumeration process.

***Table 5.3 Total Number of People by Priority Groups***

| Priority Groups | Total Essential Staff | Estimated numbers in each priority group | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1a | 1b | 2a | 2b | 2c | 3a | 3b |
| Hospitals | 2296 | 1492 | 19 | 196 | | 589 | | |
| Long Term Care | 1148 | 748 | 14 | 103 | 1 | 278 | 3 | 1 |
| General Practitioners | 237 | 79 | | 158 | 0 | 0 | | |
| Nurse Practitioners | 43 | 18 | | 25 | | | | |
| Specialists | 150 | 71 | 0 | 79 | 0 | 0 | | |
| Coroners | 12 | 6 | 0 | 6 | 0 | 0 | | |
| CCAC | 151 | 32 | 2 | 76 | 0 | 41 | | |
| Ambulance | 165 | 118 | | 7 | 0 | 33 | 6 | 1 |
| Fire | 697 | 417 | 5 | 0 | 0 | 6 | 236 | 33 |
| Police | 875 | 0 | 0 | 0 | 0 | 133 | 742 | |
| Municipalities | 622 | 14 | 8 | 1 | 0 | 2 | 388 | 209 |
| Other Community Services | 390 | 253 | 62 | 20 | 3 | 50 | 2 | |
| Community Living Associations | 224 | 55 | 16 | 142 | 4 | 7 | 0 | 0 |
| Funeral Homes | 59 | 2 | 2 | 0 | 3 | 0 | 51 | 1 |
| Airport | 5 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Public Health | 168 | 107 | 6 | 2 | 53 | | | |
| First Nations | | | | | | | | |
| Total | 7242 | 3412 | 134 | 815 | 64 | 1139 | 1433 | 245 |

***Table 5.4 Overall Numbers Identified for Priority Groups***

| Priority Groups | Total Essential Staff | Estimated numbers in each priority group in the 5 areas of the District | | | | |
|---|---|---|---|---|---|---|
| | | East Nipissing | East Parry Sound | North Bay Area | West Nipissing | West Parry Sound |
| Hospitals | 2296 | 95 | 28 | 1406 | 246 | 501 |
| Long Term Care | 1148 | 106 | 202 | 473 | 170 | 197 |
| General Practitioners/Staff | 237 | 15 | 27 | 123 | 27 | 45 |
| Nurse Practitioners/Staff (Nursing Stations) | 43 | 0 | 9 | 12 | 7 | 15 |
| Specialists/staff | 150 | 0 | 0 | 92 | 0 | 14 |
| Coroner/staff | 12 | 0 | 0 | 8 | 0 | 4 |
| CCAC | 151 | * | 44 | *72 | * | 35 |
| Ambulance | 165 | 14 | | 64 | 16 | 71 |
| Fire | 697 | 98 | 156 | 203 | 16 | 224 |
| Police | 875 | *** | *** | 142 | 26 | *** |
| Municipalities | 622 | 86 | 122 | 226 | 24 | 164 |
| Other community services | 390 | * | 45 | 314 | 1 | 30 |
| Community Living Associations | 224 | 0 | 47 | 108 | 20 | 49 |
| Funeral Homes | 59 | 3 | 18 | 27 | 3 | 8 |
| Airport | 5 | 0 | 0 | 3 | 0 | 2 |
| Public Health | 168 | 0 | 5 | 146 | 0 | 17 |
| First Nations | | | | | | |
| Total | 7254 | 417 | 703 | 3416 | 556 | 1376 |

*Covered from staff in North Bay

*** North Eastern OPP – numbers in the enumeration data cover a larger geographical area.

## ☼*NEXT STEPS*

1. Additional groups to be enumerated:
   First Nations
   Pharmacies
   Telecommunication
   Transportation
   Electricity
   Gas and Oil

## Part II (Priority Groups 4, 5 and 6)

NBPSDHU will conduct the mass immunization clinics for priority groups 4, 5 and 6 (Appendix 5.1) These groups include members of the general population at the highest risk of severe illness and death from influenza infection (including infants, the elderly and those with serious underlying medical illness), healthy adults and children from 24 months to 18 years of age.

There are 31 municipalities in the two districts with a total population of 118,060 (See Appendix 5.3 for population breakdown). The two districts have been divided into 5 areas to assist with planning community clinics throughout area. Table 5.5 is a summary of the population according to age groups in the 5 areas. There are also 6 First Nation communities, and Armed Forces Base in North Bay and a Coast Guard Station in Parry Sound.

***Table 5.5 General Population According to Age and Area in the Districts***

| Age Groups | Total Number in General Population | Estimated numbers in each age group in the 5 areas of the District | | | | |
|---|---|---|---|---|---|---|
| | | East Nipissing | East Parry Sound | North Bay Area | West Nipissing | West Parry Sound |
| Age 0-4 | 5740 | 320 | 515 | 3415 | 720 | 770 |
| Age 5-19 | 20185 | 1325 | 2290 | 10225 | 3145 | 3200 |
| Age 20-64 | 69740 | 3745 | 7265 | 39470 | 8975 | 10285 |
| 65 and older | 19100 | 860 | 2365 | 9735 | 2405 | 3735 |
| Total | 118,060 | 6,095 | 12,455 | 66,270 | 15,260 | 17,980 |

According to Statistics Canada 2002. 2001 Community Profiles

The mass immunization clinics will be planned in all areas of the two districts and the number of clinics and the number of persons to be immunized will be based on the data in Table 5.5 minus the data from Table 5.4. A detailed outline of the potential locations and size of the clinics is in the process of being develop. This information will be part of the Mass Immunization Plan.

## Vaccines - Other Populations

**First Nations**

There are six First Nation Communities within the two districts**.** Each First Nation is currently developing their continuity plans. Presently, the NBPSDHU provides/distributes vaccines to these six communities for the First Nation populations.

It is intended that this method of distribution will continue to be implemented in the same manner during the event of the Pandemic. This is furthermore being formalized through a written agreement between the provincial government and the federal government.

***Table 5.6 First Nation Population According to Age and Community***

| First Nation Community | Estimated numbers in each age group | | | | |
|---|---|---|---|---|---|
| | **Age 0-4** | **Age 5-19** | **Age 20-64** | **65 and older** | **Total** |
| Dokis | 15 | 35 | 130 | 15 | 195 |
| Henvey Inlet | 10 | 35 | 65 | 10 | 120 |
| Magnetawan | 10 | 15 | 45 | 0 | 75 |
| Nipissing | 75 | 325 | 855 | 125 | 1375 |
| Wasauksing | 40 | 105 | 210 | 25 | 375 |
| Shawanaga | 15 | 50 | 105 | 5 | 175 |
| Total | 165 | 565 | 1410 | 180 | 2315 |

According to Statistics Canada 2002. 2001 Community Profiles

## Storage and Distribution of Vaccines:

The Ministry of Health will develop the overall plan for vaccine distribution. Currently all vaccines are distributed from the health unit to all the doctors offices, nursing stations, hospitals and long-term care facilities. The inventory of all the vaccines are tracked through the government program called Biological Inventory Ordering System (BIOS). This system is set up to track all the orders where publicly funded vaccines are stored.

Vaccines have to be stored between $2^{o} – 8^{o}$ C. Currently the Influenza vaccine is packaged in vials containing ten doses. To vaccinate 120,000 people we would need 12,000 vials. 10 vials of the vaccines takes up 2.5”x 6”x 3” (45cu inches) of fridge space. To store 12,000 vials it would take 45 cubic inches/per 100 doses therefore for 120,000 doses of vaccine 4,500 cubic ft of fridge space will be needed. It could be assumed that ministry of health may ship out vaccines in divided shipments.

## ☼*NEXT STEPS*

1. Develop tracking tool
2. Mass immunization/antiviral distribution plan being developed

# Antiviral Medication

Antiviral medications work by disrupting the replication of the influenza virus. They can be used to treat individuals showing early signs and symptoms of influenza and have been shown to reduce the length and severity of influenza-related illness. Antiviral medication can also be used to prevent illness when given to those exposed to influenza. Since vaccine production requires up to 4 to 6 months from the identification of a novel influenza virus, antiviral medication may be used to prevent influenza illness early in the pandemic. Antiviral medication will be used throughout the pandemic to treat individuals with influenza illness.

## Types of Antiviral Medications

There are two types of antiviral medication used to prevent influenza A and B infection and treat influenza illness. The two types are: M2 ion channel inhibitors (amantadine and rimantadine) and neuraminidase inhibitors ( Oseltamivir – Tamiflu; and Zanamivir – Relenza). Amantadine and rimantadine blocks the functioning of the influenza M2 protein in influenza A viruses. It is taken orally but has some limitations. Some influenza viruses are resistant to Amantadine and those that are not can become resistant quickly once infected individuals begin to take this medication. The neuraminidase inhibitors such as Tamiflu and Relenza are the other antiviral medications that will be useful in a pandemic. They work by blocking a key protein that helps both influenza A and B viruses replicate. The main limitation of Relenza is the inhaled route of administration and rare side effects observed in people with asthma and COPD. If resistance to Tamiflu is observed, it will be imperative to have a backup option. Relenza could be this option.

Antiviral medications are effective in reducing duration of influenza illness if administered within two days (48 hours) of onset of symptoms. The neuraminidase inhibitors also reduce the complications of influenza infection such as secondary bacterial pneumonia and hospitalization. Antiviral medication will most likely be used to treat those with severe influenza illness during a pandemic, those sick enough to require hospital care. Although, the effectiveness of antiviral medications against a novel pandemic virus is unknown it is likely that the neuraminidase inhibitors will reduce the severity of influenza illness caused by a pandemic.

While the provision of antiviral medication to the contacts of initial pandemic cases will slow the viruses' introduction to other residents in the district, the characteristics of influenza make it unlikely that this will be completely successful. Influenza has a short incubation period and can be transmitted to others before illness occurs, thus making it difficult to completely eliminate transmission. However, a substantial attempt will be made to quickly respond to initial cases with antiviral medication for contacts. This will increase the time available to begin vaccine development before widespread illness from the pandemic virus occurs.

If the provision of antiviral medication to prevent illness in contacts of initial pandemic cases fails to prevent the viruses' introduction into our district, antivirals will be redirected to protecting essential roles in the community. Using the MOHLTC priority system, much like that described for vaccine distribution, certain populations will be given antiviral medications to prevent illness during the first pandemic wave before vaccine is available. Models based on previous pandemics have shown that long-term preventive use of antiviral medications may reduce the number of deaths and illness due to the pandemic.

## Stockpiling of Antiviral Medications

Unlike vaccine, antiviral medications can be stockpiled in preparation for the influenza pandemic. This is because antiviral medications can be manufactured before identification of the pandemic strain of virus, plus they have a long shelf life (five to seven years). The World Health Organization (WHO) has specifically recommended that countries stockpile oseltamivir, the neuraminidase inhibitor. Studies done

through the WHO Global Influenza Surveillance Network have shown that the H5N1 strain of avian influenza is susceptible to oseltamivir, and resistant to M2 ion channel inhibitors.
Tamiflu is the brand name of the antiviral drug oseltamivir being stockpiled by Health Canada.

Originally it was assumed that 10 doses of Tamiflu would be adequate to provide prophylaxis to one person following a single exposure to influenza virus. It was also assumed that 10 doses would provide a course of treatment to a person ill with influenza. **If those assumptions are correct, the amount of Tamiflu needed for a single course of treatment/prophylaxis to 120,404 people (the estimated population in the area serviced by the NBPSDHU) would be 1,204,040.**

However, there is now speculation that in the first wave of the pandemic the doses of Tamiflu for the priority groups may be needed until the first wave is over. This would mean a huge increase in the amount of Tamiflu needed in this district alone. Also, if each pandemic wave lasts up to eight weeks, and multiple waves are expected, then antiviral supplies **will be inadequate for all but the highest priority groups.**

## Priority Groups

Antivirals will likely be the only specific intervention available in the early months of the pandemic, and supplies of these drugs are expected to be limited. Therefore, the province has developed a list of groups who should have priority to receive antivirals in times of short supply. The list is meant as a planning guide only, and will be re-examined when epidemiologic data about the pandemic virus are available. The priority groups are listed in Appendix 5.1.

The MOHLTC had identified priority groups for the use of antiviral medications for both treatment and prophylaxis. For full table, see Appendix 5.1.

**Priority groups for <u>TREATMENT</u> have been identified as:**
Group 1 – persons hospitalized for influenza
Group 2 – ill health care workers and first responders/emergency service providers
Group 3 – ill high risk persons in the community
Group 4 – ill high risk residents in institutions

**Priority groups for <u>PROPHYLAXIS</u> have been identified as:**
Group 1 – front line health workers and key decision makers
Group 2 – remaining health care workers
Group 3 – emergency/essential services workers
Group 4 – high risk residents of institutions
Group 5 – persons at high risk of being hospitalized for illness other than influenza
Group 6 – persons at high risk in the community.

## Current Planning

The enumeration of those in the MOHLTC priority groups 1, 2 and 3 are now underway, and will also support the identification of roles of those most likely may receive antiviral medication for treatment and prophylaxis.

There are many issues that must be clarified before plans for the use of antiviral medications are complete:
1. province wide criteria for the use of antiviral medication for treatment (e.g. illness severity criteria, course of treatment, co-treatment with other drugs)
2. procedures for the distribution of antiviral medication to the NBPSDHU for preventive use and to health care facilities for treatment.

3. direction on methods of antiviral medication distribution/dispensing for prevention to contacts of cases and priority individuals for longer term prevention.
4. drafting of medical directives and guidelines for the use of antivirals by the province or NBPSDHU.
5. some of the same issues described in the plan for the mass vaccination of residents are also present in plans to provide antiviral medication to groups to prevent influenza illness.

## ☼*NEXT STEPS*

Plans being developed:

Development of antiviral clinic logistics to include, but not limited to:

- antiviral storage
- distribution
- dispensing
- record keeping
- monitoring of antiviral uptake
- adverse reactions
- security
- transportation
- education
- communication
- surveillance

# SECTION 6 - PUBLIC HEALTH MEASURES

# Public Health Measures

Public Health Measures are non – medical interventions that may be used to reduce the spread of the influenza virus. Public Health Measures include public education, case and contact management, community based disease control strategies (such as social distancing, school closures and restriction/cancellation of large public gatherings) and travel restrictions and border measures. The type of measures used depends on the epidemiology of the virus and the measures needed to curtail community transmission within the NBPSDHU catchment area and across the province.

A comprehensive approach to public health measures would include individual public health measures (use of PPE, case management and contact tracing, annual influenza immunization, etc) and community based public health measures (canceling public gatherings, closing schools).

The Public Health Measures section of the plan describes the steps that will be taken to by the District Health Unit to slow pandemic spread, gain time for implementing medical measures (such as vaccine) and to reduce the impact of a pandemic.

## Objectives:

- To establish non-medical interventions to reduce the spread and impact of the disease, such as contacting tracing, school closures, limiting public gatherings, and travel restrictions
- To establish an internal and external plan to meet the challenges of an influenza pandemic
- To establish guidelines for public health staff on how to implement pandemic influenza public health measures
- To provide public education through media campaigns, posters, pamphlets, special telephone lines, and websites on proper respiratory hygiene, self protective practices, personal and family social distancing
- How to care for your self and others when ill, including where to go for prevention/treatment; other information resources i.e. Telehealth, internet sites, community services; and information on closures, cancellations and changes to general community services
- To review the surge capacity with in NBPSDHU. Redeploy staff to provide consultation services, education and advice to these organizations
- To help coordinate volunteer support-based program for health care workers and their families
- To identify high risk groups (elderly, chronic health conditions, homeless, and vulnerable populations – working poor, single parents, impacted by PHM) assess needs and work with emergency social service providers and volunteer organizations to offer coordinated support and assistance
- To provide support and guidance to health care workers, emergency responders, and employers
- To coordinated a health response in conjunction with healthcare stakeholders to ensure an efficient continuum of care
- To identify mechanisms to liaise with personnel at health care settings, daycares, Telehealth, volunteer organizations, student nurses, and social agencies dealing with vulnerable and high risk populations (i.e. homeless) to address issues related to public health measures aimed at controlling the spread of respiratory infections
- To provide consultation on social distancing during a pandemic to organizations, businesses and service providers
- To develop educational materials on influenza and personal protective measures
- To develop a plan to liaise with media personnel to deliver information effectively (i.e. media campaigns, website, pamphlets, dedicated telephone lines)
- To facilitate communication of public health measures between identified stakeholders

Public Health Measures are being considered in the planning at all levels of government as a means to minimize the transmission of the novel virus during a pandemic. 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. Planning for criteria and triggers for the implementation of any public health measure is continuing with the federal and provincial planning workgroups.

## Public Education

An influenza pandemic is a global health emergency and therefore public demand for information will be extremely high and sustained as the illness spreads and is confirmed in the district. Public education must exist during all of the pandemic phases.

The goal of public education is to**:**

- Minimize the time needed to disseminate educational materials to the public during an alert and as the pandemic evolves and information needs change
- Increase baseline public knowledge (i.e. before an alert is issued) by providing information on pandemic influenza during the Interpandemic period
- Establish NBPSDHU as an accurate, reliable and trusted source of information on pandemic influenza through a well coordinated and prepared educational/communication plan

During the pandemic, information will be made available on risks, risk avoidance, and how/when to seek health care services. Each community will establish a communication link to their residents to address questions and issues for the general public. The hours of operation may be expanded during the pandemic as needed. Information will continue to be shared with the public using a variety of communication channels, including media, print, and website.

## Case Management

Individuals reported to NBPSDHU 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 febrile respiratory illness. 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 (see page 36) in the district 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 and 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 manufacturing and administration, 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 the district. Ongoing evaluation of the epidemiological data from individual cases and comparisons with information from other affected countries may help focus on control efforts. To facilitate the acquisition of data about the novel virus attempt to isolate individuals who are suspected/confirmed to be ill with the novel strain in hospital initially with the highest priority for those for whom hospital treatment is clinically indicated.

The goals of case management:

- Cases will have knowledge about how to reduce disease transmission
- Reduce opportunity for transmission of the novel virus
- Possible containment of an inefficiently spread virus or delay the spread of the pandemic virus
- Documentation and reporting of ill individuals meeting surveillance case definitions
- A well-integrated case management system that adapts as the situation evolves

Compliance among isolated individuals will likely vary with severity of the illness and their perception that they are actually infected with the pandemic virus. Personal situations, for example, the tolerance of employers and/or compensation available may also affect compliance.

Legal orders for isolation may be necessary in some situations; however this "individual focused" intervention will not likely be sustainable beyond the earliest stages of the pandemic.
Individual case management practices will likely be stopped once disease transmission has occurred in the general community. Specific criteria and triggers for this decision are to be developed in partnership with the OHPIP public measures workgroup.

## Self Isolation

Individuals who are ill will be asked to stay home from work, school/day nursery and public events. The key message will be to isolate yourself at home, adults for a minimum of 5 days after onset of symptoms (7 days for young children) or until symptoms have resolved or which ever is longer. Infection control measures should be implemented if ill individuals must leave their home to visit a health care provider (e.g., phone ahead, wear a mask). Refer to Appendix 6.1 for Influenza Caring for Yourself and Your Family pamphlet which outlines general influenza messaging.

**When to Seek Medical Attention**
The decision on when to seek medical attention can be complicated by many factors which may include factors such as age, existing health problems, or current medications, to name a few. Below are some points to think about when you are trying to decide whether or not you need to seek medical advice. You may get advice from your family doctor/general practitioner, or the NBPSDHU.

Telehealth Ontario's confidential telephone service will be available for the general public (available 24 hours per day, 7 days per week) at 1-866-797-0000.

**Adults**
If you are a **normal healthy person** and have been suffering with influenza, it is time to call your doctor, health line or 911 if:

- You become short of breath while resting or doing very little
- Your breathing is difficult or painful
- You are coughing up bloody sputum
- You are wheezing
- You have had a fever for three or four days and you are not getting better – or you may be getting worse
- You have started to feel better, and suddenly you get a high fever and start to feel sick again.
- You or others note that you are extremely drowsy and difficult to wake up or that you are disoriented and confused
- You have extreme pain in your ear.

Seek medical attention as soon as possible, in order to prevent your condition from worsening. Bacteria may have infected your damaged tissues. At this point your doctor may consider giving you an antibiotic.

If you have heart or lung disease or any other chronic condition that requires regular medical attention, if you are frail, if you have an illness, or if you are on treatments or medications that affect your immune system and you get the flu, call your doctor. If you are living with a long-term illness, your doctor may suggest changes to your usual management routine and/or provide you with extra help in treating influenza and preventing complications, such as prescribing an antiviral medication. Antiviral medications must be taken within 48 hours of the first symptoms to be effective so call your doctor right away.

**Children**
The Canadian Paediatric Society recommends that you should contact your doctor or take your child to the emergency department if your child has symptoms of influenza and:

- Has lung or heart disease, has an illness or is taking treatment that affects the immune system, takes acetylsalicylic acid (ASA or Aspirin) regularly for a medical condition or has any other chronic illness requiring regular medical care
- Is less than 3 months old and has a rectal temperature over 38.5°C
- Has trouble breathing when resting, is wheezing, has chest pain when breathing or is coughing up bloody sputum (phlegm)
- Drinks very little fluid and has not urinated at least every 6 hours when awake
- Has vomiting or severe diarrhea
- Is constantly irritable and will not calm down
- Is listless, not interested in playing with toys or unusually sleepy
- Still has a fever and is not feeling better after 5 days or was feeling better and suddenly develops a new fever
- Has a seizure (convulsion/fit)

Take your child immediately to a hospital emergency department or call 911 if your child:

- Has severe breathing trouble or blue lips
- Is limp or unable to move
- Is hard to wake up or does not respond
- Has a stiff neck
- Seems confused
- Has a seizure (convulsion/fit)

## Management of Contacts of Cases

Contact tracing will be a public health measure used only in the initial stages of the pandemic strain entering the district. According to the Canadian Pandemic Influenza Plan, contacts are those individuals who have had face to face exposure within one meter of a case. NBPSDHU staff will ask each case to identify close contacts from 24 hours prior to symptoms until isolation at home or in the hospital. NBPSDHU staff will contact those individuals and assess for symptoms.

The goals of contact management:

- Identification of infected contacts of cases prior to their becoming communicable
- Early detection of additional cases, decreasing interval between onset of communicability and isolation
- Potential limitation of spread or slowing of the spread
- People in close contact with cases will have knowledge regarding how to reduce the possibility of further exposure to the virus
- To gain knowledge on the impact of implemented strategies

General Recommendations:

- Health care workers who are contacts of cases due to occupational exposure should follow the directions provided by their occupational health and/or infection control departments within their facility
- Risk assessments should be performed in order to ensure that the following recommendations are tailored to suit the specific situations particularly prior to declaration of a pandemic
- All contacts of cases should be provided with information on:
  - Personal protective measures (e.g. hand washing)
  - Symptoms of influenza-like illness (ILI)
  - What to do if they develop symptoms (i.e., who to call and when)
  - How to seek medical attention for any reason, and
  - The objectives and expectations with respect to any activity restrictions
  - Information on spatial distancing (minimum of 1 metre)
- Educate contacts and members of their household on practicing good hand and respiratory etiquette and to frequently clean and then disinfect household surfaces that could be potentially contaminated, particularly during the 3 days following last exposure to a case. Refer to Appendix 6.2, Appendix 6.3 and Appendix 6.4 for handwashing etiquette signage.
- If a contact of a case develops one or more symptoms compatible with influenza, then they should be managed as a case
- Any use of antivirals for post-exposure prophylaxis should ideally be monitored with outcomes (break-through infection and any adverse events) reported to the appropriate health authority

## Quarantine

Quarantine of well individuals who have been exposed to a confirmed case of influenza is 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 pandemic influenza strain in the district. Individuals identified as contacts may be asked to isolate themselves at home for the incubation period of influenza.

Once transmission occurs in the community, this measure will no longer be effective to slow or contain transmission. At that time, NBPSDHU will use community-wide communication strategies to inform the general public of what to do when they have been exposed to influenza, how to care for themselves and how/when to seek health care services.

Information will also be posted on the NBPSDHU pandemic influenza web page. 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. phases 6).

**Active Surveillance**

Active surveillance is used for well people who have had contact with someone who is ill with a fever and respiratory symptoms. Those on active surveillance are in quarantine and will require daily follow-up by NBPSDHU to ensure that they remain well. NBPSDHU will call once a day and ask if they have any of the following symptoms:

- fever (temperature greater than 38°C or 100.40°F)
- new or worsening cough or shortness of breath
- body aches & pains
- headache
- tiredness (can be extreme)
- sore throat
- runny or stuffy nose

- nausea, vomiting or diarrhea (in children)

Once transmission occurs in the community, active surveillance will become more difficult to maintain as we move through the different pandemic phases. NBPSDHU, at some point, will then provide only guidance to contacts on how to self-monitor for symptoms of influenza-like illness and provide instructions regarding quarantine and how and when to seek medical attention.

## Community Based Disease Control Strategies

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, together with other levels of government, will be responsible for decisions regarding the implementation of community-based disease control strategies in order to best protect the public. The triggers for the following measures will depend on the measure and on the way the pandemic unfolds. In general, implementation decisions regarding these measures will likely be made locally. However, it is recognized that directions may also be forthcoming from the Federal and Provincial governments to ensure consistency of a broad-based approach.

In the pandemic response phase, the NBPSDHU general message to the public will be to stay home from public events/locations whenever possible, particularly if they are ill and to practice "social distancing" whenever possible. Reduction of non-essential travel will be stressed.

## Stay home (i.e., self-isolate)

If you have fever and new onset of respiratory symptoms.

Individuals who are ill will be asked to stay home from work, school/day nursery and public events. The key message will be to isolate yourself at home, adults for a minimum of 5 days after onset of symptoms (7 days for young children) or until symptoms have resolved or which ever is longer. Infection control measures should be implemented if ill individuals must leave their home to visit a health care provider (e.g., phone ahead, wear a mask). Refer to Appendix 6.5 for grocery store contact list which identifies stores which deliver groceries.

## School/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 spread of the disease (both in this age group and in younger siblings, parents and close contacts of school and child care attendees). These control measures will undoubtedly cause increased hardship to parents and caregivers and will have profound effects on the business sector, as parents/caregivers may need to take time off work to provide child care. The costs/benefits will need to be weighed before making the decision to implement this control measure. The Canadian Pandemic Influenza Plan outlines advantages and disadvantages of this public health measure. It states that this strategy would be triggered by the declaration of one or more confirmed cases in the local community by the local public health unit (i.e., confirmation of pandemic presence) and depending on the epidemiological context (i.e., extent to which these settings are expected to contribute to transmission based on observed age of cases etc.). It would not be necessary or desirable to wait until spread within these settings is demonstrated. To assist with this decision the NBPSDHU will need to assess whether or not there is contingency plans in place for alternate methods of schooling, childcare supports, loss of workforce due to family members needing to stay home, maintaining essential services, etc. The NBPSDHU will also need to assess whether or not other measures would be effective in curtailing transmission (limiting after school activities and gatherings), will the public be receptive, have the schools/boards chose to close independently to address safety concerns, or are the parents in the community deciding to keep their children home.

## Large Gathering Restrictions/Cancellations

Consideration will need to be given to the benefit of canceling large indoor gatherings in the community. This could potentially decrease the number of opportunities for exposure to influenza from close proximity to others. Gatherings may include funeral services, sporting events, religious gatherings, conferences or any other large public events. Planning will need to continue to identify criteria and triggers for such decisions with key stakeholders.

Due to the unknown effectiveness and difficulty with sustainability of canceling or restricting large indoor public gatherings, it is not recommended as a broad public health measure. If the epidemiology of the pandemic suggests higher morbidity and/or mortality in specific types of individuals (e.g. adolescents) then cancellation of specific events known to attract this "high risk" group should be considered especially if the virus is being efficiently transmitted. The objective of these "targeted" cancellations/restrictions would be to reduce transmission.

## Social Distancing

Once pandemic influenza 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 more people you are in contact with, the more you are at risk for coming in contact with someone who is infected with influenza. Social distancing means reducing or avoiding contact with other people, as much as possible. Some possible strategies for social distancing include:

- Minimize visitors to your home
- Cancel or postpone family gatherings, outings or trips
- Avoid shaking hands, hugging, or kissing people as greetings
- Stock up on household items (6 to 8 weeks) such as groceries or other supplies (e.g. cleaners, tissues, medications) so you do not have to go shopping as often. This will ensure that you are ready in the event of an emergency in the community such as pandemic influenza
- Avoid peak shopping times and find out which stores are open 7 days a week/24 hours per day.
- Order groceries online or over the phone for delivery
- Arrange to pay bills at ATMs, online or over the phone
- Work from home or arrange to work flex hours to avoid rush hour crowding on public transit
- At work, minimize your contact with other people: keep your office door closed; use stairs instead of crowded elevators; bring your lunch to work and eat at your desk away from others; cancel non-essential face-to-face meetings and instead use teleconferencing, videoconferencing, emails, or fax; and if you need to meet with people, stay at least one meter apart (three feet)
- Consider walking, driving or riding a bike

## Community Use of Masks

**Use of masks by well individuals**

The use of masks is a difficult and unresolved issue. There is no evidence that the use of masks in general public settings will be protective when the influenza virus is circulating widely in the community. However it is acknowledged that individual people who are wearing a surgical mask properly at the time of an exposure to influenza may benefit from the barrier that a mask provides. At this time the Canadian and provincial plans recommend the use of surgical masks and eye protection for health care workers providing direct care (face-to-face contact) to patients with influenza-like illness.

As well, the plans recommend that people who are ill with influenza-like illness who must leave their home to receive medical attention should wear a mask. The plans do not recommend masks as a community-based disease control strategy. However the federal plan states that members of the public may wish to purchase and use masks for individual protection.

At this time the World Health Organization does not have a formal position on the issue of masks but will likely be recommending evaluation of the effectiveness of mask use (and respiratory etiquette) with respect to prevention of cases, costs and alleviation of public concern.

Although masks may provide some reassurance to people, the effectiveness of this measure in preventing infection in the general community is unknown. If masks are used, they should only be used once and must be changed if wet (because they become ineffective when wet). As well, people who use masks should be trained on how to use them properly to avoid contaminating themselves when removing the mask. In addition, there may be issues of access to masks due to cost or supply shortages and other feasibility concerns.

Further consideration should be given to the wearing of masks in community situations where potential exposure to infectious individuals is likely and unavoidable e.g. care of an ill family member, large public gatherings. Additional research needs to be done on this on an urgent basis.

## Travel and Border Related Measures

An extensive list of measures that could be considered at the international level is addressed in the report from the WHO international consultation on public health measures. In general the report does not encourage entry screening for travelers from affected areas with the exception of geographically isolated infection- free areas (e.g. islands) where it is considered to be potentially more feasible. There is potential value of exit screening for all travelers from areas with human infection when human-to-human transmission was known to be occurring (i.e., starting in the Pandemic Alert Period, Phases 4 & 5). This could be achieved through health declarations/questionnaires and potentially temperature screening in combination with widespread messaging recommending that ill persons postpone travel. Implementation of “stop lists” (i.e., of isolated or quarantined persons) is considered feasible for certain countries but is generally not encouraged, as was medical examination for travelers at risk or with fever.

# SECTION 7 - HEALTH SERVICES

# Health Services

During a pandemic, the demand for health services will increase significantly, and the health care settings will have to reduce or curtail other services in order to meet the population's health needs. The NBPSDHU is responsible to assess clinical capacity, estimate pandemic needs and identify additional care locations and resources.

The Health Services section of the plan describes steps that all health care settings will take to protect worker health as well as the potential impact on each sector and how each sector will determine which services are available during the pandemic. As a district, stakeholders will evaluate space, staff, equipment and bed capacity and develop a coordinated plan to respond to a pandemic.

In the OHPIP June 2005, Health Services includes: *laboratory services, public health services, community based agencies, emergency services and hospital or acute care services.

## Objectives:

- To ensure all health services and settings have developed and are maintained appropriate occupational health and infection prevention and control programs to protect workers
- To establish the essential health services that will be provided in the district during a pandemic and those services that will be reduced or stopped in order to ensure equitable health care delivery under emergency conditions
- To coordinate the health human resources required during a pandemic and how they will be redeployed
- To coordinate resources for alternate sites to ensure that patients are appropriately triaged and cared for
- To coordinate the storage and distribution of equipment and supplies during a pandemic

## Communication

During a pandemic, regular teleconferences will be established with designated people. Notification of meetings will be by e-mail if at all possible. All participants will give an update as to their capacity to admit. This information will change dependent on the number of beds available and also the human resources capacity.

Those who have access to the Public Health Portal will have access to Ministry information.

## Occupational Health, and Infection Prevention and Control

Adherence to infection prevention and control policies and procedures is imperative to minimize the transmission of influenza whether or not vaccine and antiviral medications are available. Routine practices and additional precautions to prevent the transmission of infection during the delivery of health care during a pandemic are important. Certain precautions may be feasible only in the pandemic alert and early pandemic periods, as they may not be achievable or practical as the pandemic spreads and resources (equipment, supplies and human resources) become scarce. Strict adherence to hand-washing or hand hygiene products is the cornerstone of infection prevention and may at times be the only significant preventative measure available during a pandemic. Hands can be contaminated with influenza virus by contact with inanimate surfaces or objects in the immediate environment of a patient with influenza. Influenza A and B viruses have been shown to survive on hard surfaces for 24-48 hours, 8-12 hours on cloth and paper and up to 5 minutes on hands after touching contaminated surfaces. The influenza virus is easily killed by hospital germicides, household cleaning products, and soap. Hand hygiene products are a priority for all health care settings and since there may be an interruption in supply of hand antiseptic products, soap and hand towels. This needs to be considered when stockpiling supplies.

This section provides an overview of infection prevention and environmental control guidelines that will be critical to minimize the transmission of pandemic influenza with or without the availability of immunization or chemoprophylaxis, and for preventing other infectious diseases. Infection control procedures are essential and universal in health care settings.

In the early phase of an influenza pandemic, it may be prudent for health care providers to wear masks when interacting in close face-to-face contact with coughing individuals to minimize influenza transmission. This use of masks is advised when immunization and antivirals are not yet available but is not practical or helpful when transmission has entered the community. Masks may be worn by health care providers to prevent transmission of other organisms from patients with an undiagnosed cough. A surgical mask is recommended. When using surgical masks: they should only be worn once and changed if wet and they should cover the mouth and nose. Masks should not be touched while being worn and not allowed to dangle around the neck.

Along with environmental control precautions, additional precautions discussed for health care settings include patient accommodation or placement, patient cohorting, patient admission, patient activity restrictions and visitor restrictions.

Each member of the Health Services sub-committee has been sent a copy of "Preventing Respiratory Illnesses, Protecting Patients and Staff: Best Practices in Surveillance and Infection Prevention and Control for Febrile Respiratory Illness (FRI)", September 2005, developed by the MOHLTC. www.health.gov.on.ca/english/providers/program/infectous/diseases/ic_fri.html

## Environmental Cleaning

### ☼*NEXT STEPS*
Standard will be developed by MOHLTC.

## Acute Care Facilities

There are six hospitals in the North Bay Parry Sound district area. In order to respond effectively to pandemic influenza, special measures for delivering health services have to be implemented. Assuming that there will be a large number of cases and limited resources during a pandemic, the measures within the plan were designed to ensure that influenza patients are appropriately triaged and cared for, while provisions for essential health services continued.

An important objective of this plan is to coordinate resources in order to ensure equitable health care delivery under emergency conditions. This is accomplished on multiple levels. First, an inventory of hospital beds, ventilators, staff and space is established and maintained throughout in order to estimate current and potential capacities. The purpose of inventories is to have a central location for the collection of bed information in case of transfers during a pandemic.

**Bed Capacity**
Acute care facilities in the North Bay Parry Sound district have been surveyed to assess the current and potentially available number of beds. This will be an ongoing, daily assessment during a pandemic.

## ☼*NEXT STEPS*

**Bed and Ventilator Capacity**
Bed and ventilator capacity may be saturated early into the pandemic so hospitals will need to follow criteria for ventilator use. The MOHLTC is developing these criteria to guide individual facilities. The availability of vaccine and antivirals will affect health service usage.

# Long Term Care Homes

There are nine long term care homes in the North Bay Parry Sound district. Management of patients and residents in long-term care homes is considered separately. Because of their age and/or underlying medical condition, most individuals living in long-term care homes are at increased risk for developing complications after influenza infection. It is expected that long-term care residents will remain in the long-term care facility for treatment during a pandemic.

A comprehensive infection prevention and control program forms the basis for a successful pandemic influenza plan. Strict adherence to infection control policies and procedures is critical to prevent the spread of the virus in LTCH with or without the availability of immunization or chemoprophylaxis.

The use of droplet and contact precautions are ideal to minimize the spread of influenza; however, this may not be practical during a pandemic. Routine practices should be utilized that include strict adherence to hand hygiene, good hygiene measures such as disposal of tissues, covering nose and mouth when coughing and the use of personal protective equipment in the early stages of a pandemic. Gowns are not required to perform routine care of a patient with confirmed influenza.

LTCH's should refer to Health Canada's 1) Infection Control Guidelines Hand washing, Cleaning Disinfection and Sterilization in Health Care, and 2) Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care. Recommendations for environmental cleaning are established by the MOHLTC. "A Guide to Influenza Pandemic Preparedness and Response in Long-Term Care Homes" can be accessed at www.health.gov.on.ca.

Residents with influenza should receive "care in place" and not transferred to an acute care facility. Each LTCH should have a designated area within the facility for acute influenza care.

Each facility will need to plan to acquire an four week supply over and above normal usage of personal protective equipment for example gloves, surgical masks, face shields and gowns.

Long term care homes need to establish a screening triage site for assessing staff/visitors before entering their facility.

If unable to appropriately store a four week supply, ensure a contract has been established with the provider. Supplies need to be guaranteed delivery, possibly on short notice.

# Retirement Homes

## ☼*NEXT STEPS*

Due to the difference in funding and guidelines they normally follow direction from the Ministry of Health. Under development.

Table 7.1 indicates bed and ventilator capacity at Acute Care facilities.

***Table 7.1 Acute Care - Bed and Ventilator Capacity***

| | BED CAPACITY | | | | VENTILATOR CAPACITY | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Total Bed Capacity** | **Total Beds with $O_2$** | **Current Beds Available** | **Current Beds Available with $O_2$** | **Portable** | **Portable Available** | **Permanent** | **Permanent Available** | **Generator Capacity** |
| Burk's Falls Health Centre | | | | | | | | | |
| Mattawa General Hospital | | | | | | | | | |
| - LTC Beds | | | | | | | | | |
| North Bay General Hospital | | | | | | | | | |
| - LTC Beds | | | | | | | | | |
| West Nipissing General Hospital | | | | | | | | | |
| - LTC Beds | | | | | | | | | |
| West Parry Sound Health Centre | | | | | | | | | |
| Northeast Mental Health Centre | | | | | | | | | |
| - LTC Beds | | | | | | | | | |
| Total | | | | | | | | | |

**Note: Long term care normally utilizes portable oxygen.**

Table 7.2 indicates bed capacity at Long Term Care facilities.

***Table 7.2 Long-Term Care Home's - Bed Capacity***

| | BED CAPACITY | | | | | |
|---|---|---|---|---|---|---|
| | **Total Bed Capacity** | **Current Beds Available** | **Total Private Rooms** | **Current Private Rooms Available** | **Interim Beds** | **Interim Beds Available** |
| Algonquin Nursing Home | | | | | | |
| Au Chateau Home for the Aged | | | | | | |
| Belvedere Heights Home for the Aged | | | | | | |
| Cassellholme Home for the Aged | | | | | | |
| Easholme Home for the Aged | | | | | | |
| Lady Isabelle Nursing Home | | | | | | |
| Lakeland Long Term Care | | | | | | |
| Leisureworld Inc. | | | | | | |
| Nipissing Manor | | | | | | |
| Total | | | | | | |

Table 7.3 indicates bed capacity at Retirement Home's.

***Table 7.3 Retirement Home's - Bed Capacity***

| | BED CAPACITY | | | | | |
|---|---|---|---|---|---|---|
| | **Total Bed Capacity** | **Current Beds Available** | **Total Private Rooms** | **Current Private Rooms Available** | **Interim Beds** | **Interim Beds Available** |
| Barclay House | | | | | | |
| Empire Living Centre | | | | | | |
| Southwind Retirement Home | | | | | | |
| Total | | | | | | |

## Triage Sites

Each facility will establish their own triage site (screening site) in order to reduce exposure to residents, staff, visitors and direct the ill to the proper site for assessment. See Appendix 7.1

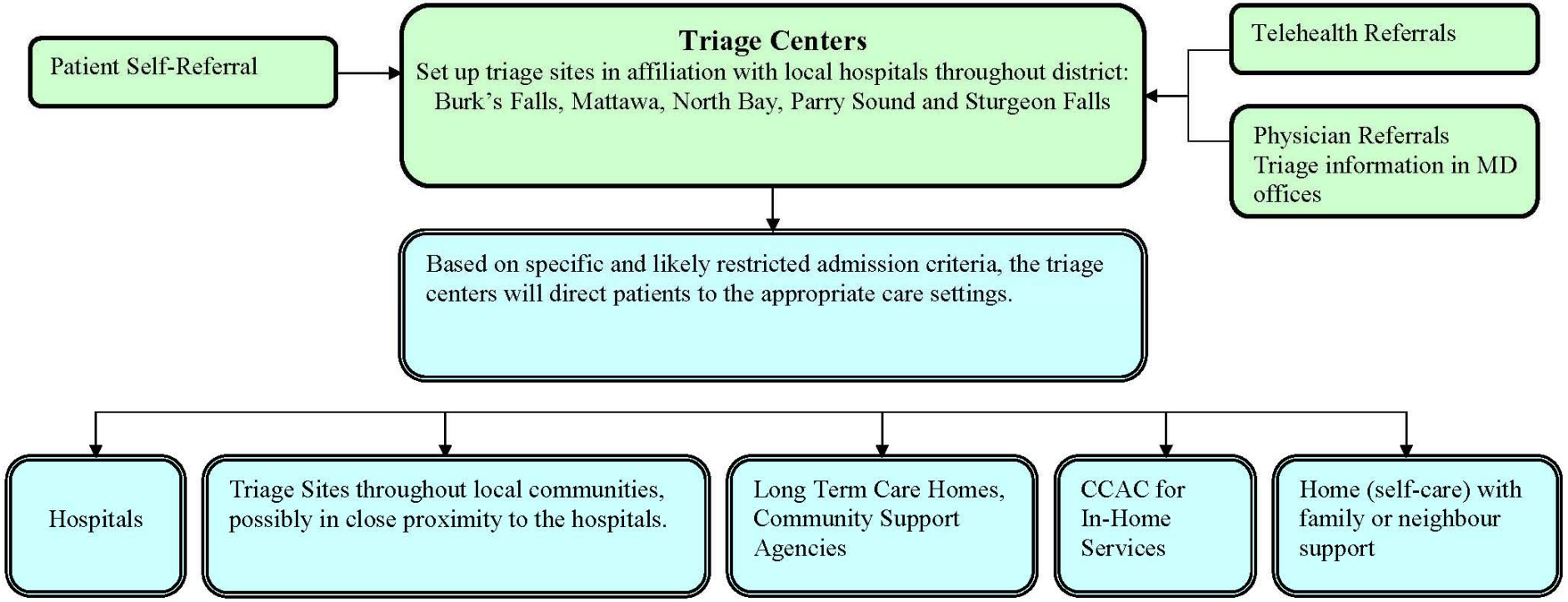
### Alternate Care Site/Triage Sites

***Table 7.4 Alternate Care/Triage Sites***

| Hospital | Site Location | Designation (A or T) | Number of Beds Alternate Site | | Contact Information/Designation | Contact Number |
|---|---|---|---|---|---|---|
| | | | Total | Available | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Designation:**
A = Alternate Care Site
T = Triage Site

**Figure 7.1: Framework for Supporting Patients during a Pandemic (*Work in Progress*)**




Each care setting may use a "Care in Place" approach.

## Equipment and Supplies

During an influenza pandemic the health care sector must have access to adequate equipment and supplies. A system should be in place to stock pile four (4) weeks supply over and above regularly used quantities of sector specific supplies including: PPE for routine practices, laboratory testing, infection control for influenza, diagnostic equipment and supplies for direct care.

If unable to appropriately store a four week supply, ensure a contract has been established with the provider. Supplies need to be guaranteed delivery, possibly on short notice.

The following is a preliminary list of medical equipment and supplies needed to provide care in each site: (a check list should be created to monitor inventory)

Beds and linen
Lights
IV equipment
Sterilizers
Blood pressure machine, stethoscope and thermometers
Hand sanitizers, bandages, gauze, dressing supplies, alcohol swabs, gloves, scissors, tongue Blades, pulse oximeter
Emergency drugs
Airway supplies
Privacy screens
Telephone, fax machine
Sharps containers
Biomedical waste disposal
Portable defibrillator
Oxygen

Each facility needs to develop an inventory checklist and update daily during a pandemic.

## Physician Offices/Walk-in Clinics and Nursing Stations

Pandemic influenza raises many issues for physicians and nurse practitioners. There will be an increase in illness among themselves, their families and colleagues. There will be an increase burden on their practices due to increase illness in the community.

### ☼*NEXT STEPS*

- Encourage stakeholders including Walk-in Clinics to identify the essential and non essential health services, and identify services to reduce or curtail during a pandemic.
- MOHLTC will be sending out infection control kits for physicians.

## Community Care Access Centres

There are three Community Care Access Centres (CCAC's) in district. The CCAC's are working with service providers to develop a pandemic response in the community.

## Mental Health Services

Since both front-line health care workers and the public are expected to experience acute stress during the pandemic, providing a psychosocial response plan and access to mental health services is to be included as part of the plan.

## Stress Management

Ethical decision-making is also a major part of stress that will happen during a pandemic. Due to the prolonged nature of a pandemic, all areas of the community will be faced with increased stress levels.

An increased burden will be placed on members of the religious community and pastoral care services.

A speaker on ethics has been approached and will address members of the Pandemic Planning committees and stakeholders regarding ethical issues and coping strategies.

## Human Resources Management

The best use of resources will be achieved through system-wide prioritization. A pandemic will require a regional prioritization of needs and resources, across the health care system, not just a review of resources at a single institution. For example, in terms of human resources, health care professionals may need to be moved from vaccination clinics to hospitals or from one hospital to another. Beds, ventilators and other equipment may need to be moved to alternate care sites. This still requires a review of logistical, ethical, and practical issues throughout the district.

Work is in progress in identifying current health care workers who could be re-located within an institution and recruiting additional health care professionals, other health care workers and volunteers who could offset some of the increased demands on health care workers.

## Volunteers

"A volunteer is a person registered with a government agency or government designated agency, who carries out unpaid activities, occasionally or regularly, to help support Canada to prepare for and respond to an influenza pandemic. A volunteer is one who offers his/her service or his/her own free will, without promise of financial gain and without economic or political pressure or coercion." *P.410, Canadian Pandemic Influenza Plan.*

Existing volunteer agencies will be the primary source of trained, screened volunteers in the community. Developing ongoing communications and planning procedures with these agencies will be essential to the planning effort. Potential sources of volunteers include:
Red Cross, St. John Ambulance, Salvation Army, Volunteer Fire Departments, Scouts, Cadets, Guides, Big Brother/Big Sisters and Community Service Agencies.
Most agencies already have recruitment, screening and training and management programs in place. All facilities will maintain a current registry of volunteers.

Municipalities will also be responsible for training/maintaining their volunteer services.

## Laboratory Services

Under development.

### To prepare for the Pandemic ask yourself:

### "Are we doing all we can now to be prepared?"

# SECTION 8 - EMERGENCY RESPONSE

# Emergency Response

Emergency Response is the broad range of activities required to respond to any emergency, including a health emergency. It includes measures to prepare for emergencies (developing and testing plans and establishing communication systems) and the services that are provided during an emergency by emergency responders: i.e. police, fire and essential community services such as utility, telecommunications, social service providers, public health, and healthcare workers.

The Emergency Response section of the plan describes the steps that will be taken by emergency responders, healthcare stakeholders and the NBPSDHU to maintain essential services in the North Bay Parry Sound district during a pandemic. It focuses on the safety and health of all responders, the protection of property and environment and strategies to reduce economic and social impact.

## Objectives:

- To encourage all stakeholders to plan for Business Continuity
- To establish communication/collaboration with local stakeholders, emergency service personnel, public health units and other levels of government for coordinating pandemic response activities
- To establish and activate command structures and operational procedures
- To establish a continuous state of readiness, public safety, and order through ongoing education, testing and updating of pandemic response plans
- To ensure availability of vital resources and essential services
- To implement security measures for vaccine/antiviral transportation
- To implement security measures/crowd control at key locations including:
  - hospitals
  - vaccine/antiviral storage sites
  - strategic facilities/clinics/hospitals/alternate care sites
  - Emergency Operations Centre (EOC) for NBPSDHU and Municipalities
- To activate a plan to support vulnerable populations
- To activate and maintain a district wide Mass Causality Plan

# Elements of the Emergency Plan

## Vaccine and Antiviral Security

Vaccine will be delivered to the NBPSDHU by Ontario Government Pharmacy trucks and then distributed to vaccination and antiviral distribution sites (to be determined). O.P.P. and local police services will provide security as required for the transportation of vaccine. Refer to Appendix 8.1, for a contact list for Vaccine Security.

## Public Order Security

Police Services will provide perimeter control in high traffic areas such as hospital/alternate care site parking lots, as required. In the event of societal disruption, police services have identified the need to mobilize every available officer for public order needs. Police Services respond to all 911 calls in collaboration with Emergency Medical Services and Fire Services. As a viable part of the tiered emergency call response, further planning is needed in order to review Police Services roles in responding to influenza related calls. Police officers may also be called upon to enforce public health orders. Planning needs to occur as to how this will occur during a pandemic.

### ☼*NEXT STEPS*

Still under development.

The NBPSDHU has been invited to participate on provincial teleconferences with the Correctional Services Branch. Handwashing, infection control and environmental cleaning practices are currently being reviewed and the health unit has been invited to work with their Occupational Health Safety Committee (April, 2006).

## Vaccine Storage

Vaccine may need to be stored temporarily until they are deployed to various sites for administration. Refer to Appendix 8.2, for a contact list of transportation companies for refrigerated trucks.

## Maintaining Critical Essential Services

A pandemic will not be like a physical disaster. A pandemic has unique characteristics when compared with a more "typical" disaster. For example:

- **Widespread impact:**
  The impact of a pandemic would likely be widespread, even national, not localized to a single area; therefore there may be little outside assistance. Many business continuity plans (BCP's) assume some part of an organization is unaffected and can take up the required capacity.
- **Not a physical disaster:**
  A pandemic is not a physical disaster. It has some unique characteristics that require implementation of activities to limit contact, such as restriction of movement, quarantine and closure of public gatherings.
- **Duration:**
  A pandemic would not be a short, sharp event leading immediately to commencement of a recovery phase. Many BCP's assume the event is short/sharp and that recovery can start immediately – it occurs in phases.

- **Notice:**
  It is quite likely that there will be some advance warning from the development of the pandemic overseas, but it is always possible that any warning period may be very short. Should pandemic influenza spread within Canada, it will provably be some weeks before the full impact on workforce will be felt, although there may be some early impacts resulting from closures of schools and similar containment measures.
- **Primary effect is on staffing levels:**
  Unlike natural disasters, where any disruption to infrastructure service provision is likely to be hardware-related, disruptions to infrastructure service provision in the event of a pandemic is anticipated to be mainly human-resource oriented. The NBPSDHU recommends that businesses and services should plan for up to a 35% staff absence rate for a period of about 2 weeks at the height of a severe pandemic wave and lower levels of staff absence for a few weeks at either side of the peak. Overall a pandemic wave may last about 8 weeks. Note that the pandemic may come in waves of varying severity over time.

Staff absences can be expected for many reasons:

- Illness/incapacity (suspected/actual/post-infectious)
- Some employees may need to stay at home to care for the ill
- People may feel safer at home (e.g. to keep out of crowded places such as public transportation);
- Some people may be fulfilling other voluntary roles in the community; and
- Others may need to stay home to look after young/school-aged children (as schools/daycares may be closed)

A pandemic may have other impact on infrastructure providers, for example:

- Supplies of materials needed for ongoing activity may be disrupted, e.g. if they are imported as air freight
- Availability of services from sub-contractors may be impacted ( this may affect maintenance of key equipment and is an area that merits close planning attention); and
- Demand for infrastructure services may be impacted – demand for some services may increase (internet access is a possible example); while demand for others may fall (e.g. certain types of travel may reduce)

Business continuity plans may need to be reviewed to ensure that they are robust to significant staff absences and other pandemic related risks. The business continuity toolkit (Appendix 8.1) is designed to assist with this planning.

**Communication with staff**

It is likely that there will be anxiety regarding a pandemic which can contribute to increased work absence and/or increased distress to staff. The suggested ways to manage this include:

- Communicate the possibility of a pandemic – and your organization's plans to manage it – very early to staff. Utilize the resources under the communication section of this plan for this purpose
- Discuss with staff the possible health and safety issues and leave arrangements if they are ill or need to look after those who are or who have been "shut out" of childcare and school, etc.
- Have a comprehensive management plan in place that is clearly communicated to staff. Ensure that communications management during the pandemic is part of the plan. It will be important to have systems in place to allow your agency to communicate in a pandemic
- In activating any plan, provide clear, timely and pro-active communication to staff, including how your organization is handling the situation; and
- Establish a "communications tree" so that people can keep in touch

The planning for maintenance of critical essential services in our community will need to continue. The role of the municipal offices will include: declaration of an emergency to free up required resources and reallocation of staff, provision of essential services, ensuring the health and safety of municipal workers and communication with staff and the public. It is important that all divisions of the municipalities develop business continuity plans to ensure the continued delivery of essential services.

Refer to Appendix 8.3 for the NBPSDHU Pandemic Business Continuity "Toolkit".
Refer to Appendix 8.4 for municipal resources – CEMC contact information, HIRA work sheet, EOC's Infection Control, Pandemic Scenarios (for exercises).

**Ambulance Operators in the North Bay Parry Sound District**
Refer to Appendix 8.5, for a contact list of Ambulance Operations across the NBPS district.

**District Fire Departments**
Refer to Appendix 8.6, for a contact list of Fire Departments across the NBPS district.

**Correctional Facilities and Capacity**
Refer to Appendix 8.7, for a contact list for Correctional Facilities and Capacity

## Critical Infrastructure

The following, lists electrical, gas and oil, and water contact lists across the district. Business continuity planning has begun within many of the public and private companies.

**Electrical, Gas and Oil, and Water**
Refer to Appendix 8.8, for a contact list of Electrical, Gas and Oil, and Water companies across the NBPS district.

**Psychosocial Services**
People impacted by a disaster, including pandemics, have to adjust to significant changes in their lives. The resulting psychological, social and economic disruptions affect the well-being of individuals, families and the community as a whole. During these events, people may have to grieve for their losses, deal with personal or family crises, or perhaps look for a new job. Many will need to learn to talk about their feelings and experiences and how to face the challenges of an unknown future.

## Mental Health Support Resources

***Table 8.1 Mental Health Support Resources***

| Resource | Geography | Address | Contact Information |
|---|---|---|---|
| Adult Protective Services | East Parry Sound | 67 Main West, Huntsville, ON P1H 2L2 | (705) 789-6670 |
| Muskoka-Parry Sound Community Mental Health Service | East Parry Sound | 87 Main Sundridge, ON P0A 1Z0 | (705) 384-5392 |
| Muskoka-Parry Sound Community Mental Health Services | East Parry Sound | U 1 67 Main Street, Huntsville, ON P1H 1W9 | (705) 789-8891 |
| VCARS (Victim Crisis Assistance Referral Services) | East Parry Sound | 520 Valois Drive Mattawa, ON POH 1V0 | (705) 744-4268 |
| Algonquin Child and Family Services | Nipissing | 222 Main Street East, North Bay, ON P1B 1B1 | (705) 476-2293 |
| Canadian Mental Health | Nipissing | 156 McIntyre Street West, North Bay, ON P1B 2Y6 | (705) 474-1299 |
| Mental Health Clinic | Nipissing | 200 First Avenue West North Bay, ON P1B 3B9 | (705) 494-3050 |
| Critical Incident Stress Team | Nipissing | Peter Mansell | |
| Near North Palliative Care Network | Nipissing | 269 Main Street West North Bay, ON P1B 2T8 | (705) 497-9239 |
| Nipissing Family Program FASST | Nipissing | 489 McIntyre Street West, North Bay, ON P1B 2Z3 | (705) 497-8887 |
| PEP Place (People for Equal Partnership in Mental Health) | Nipissing | 489 McIntyre Street West, North Bay, ON P1B 2Z3 | (705) 494-4774 |
| Rehabilitation Resources | Nipissing | 1765 Jane Street, North Bay, ON P1B 3K3 | (705) 476-6400 |
| VCARS (Victim Crisis Assistance Referral Services) | Nipissing | 135 Princess Street West North Bay, ON P1B 6C2 | (705) 472-2649 |
| Alliance Center | West Nipissing | 725 Coursol, Sturgeon Falls, ON | (705) 753-2271 |
| Right Path Counselling & Prevention Services | West Nipissing | Sturgeon Falls, OP | (705) 753-1375 |
| VCARS (Victim Crisis Assistance Referral Services) | West Nipissing | 225 Holditch Street Sturgeon Falls, ON P2B 1T1 | (705) 753-9194 |
| Muskoka Parry Sound Community Mental Health Services | West Parry Sound | 26 James Street, Parry Sound, ON P2A 1T51 | (705) 746-4264 |
| Muskoka Parry Sound Community Mental Health Services – Assertive Community Treatment Team | West Parry Sound | 26 James Street, Parry Sound, ON P2A 1T51 | (705) 746-3700 |

## Isolation Framework for Community Living Settings

The issue of isolating individuals in community living settings who are unwilling/unable to be isolated is a complex issue. Settings would include shelters, rooming houses, boarding homes, university residences, correctional facilities, group homes for developmentally challenged individuals, etc. It is an assumption that not everyone who is ill in these settings will be able to be sent to an acute care facility for health services. Care in place will need to occur.

In order to begin to address this issue, NBPSDHU has met with some Association of Community Living service providers. Business continuity planning has begun at individual agencies.

## Association for Community Living Listings

***Table 8.2 Association for Community Living***

| Agency | Geographical Area | Contact Name | Phone |
|---|---|---|---|
| Almaguin Highlands Community Living | East Parry Sound | Kerry Carnevale | (705) 384-5384 |
| Community Living –Mattawa | Mattawa | Laura Pearce | (705) 744-2414 |
| North Bay & Area Disabled Adult & Youth Centre | Nipissing | Anne Durette | (705) 474-3851 |
| North Bay and District Association for Community Living | Nipissing | Rheal Thorn | (705) 476-3288 |
| Community Living West Nipissing | West Nipissing | Sylvie Belanger | (705) 753-1665 ext. 204 |
| Community Living Parry Sound | West Parry Sound | JoAnn Dmick | (705) 746-9330 |

## Child Care/Supportive Care Issues

It is expected that the need for childcare will increase throughout the pandemic. While it is anticipated that the mortality rate for children infected with pandemic influenza will be low, the infection of parents and other caregivers is likely to have a more significant impact on the welfare of their children. Protecting children whose parents and/or family are unable to care for them either on a temporary or permanent basis will be necessary. Work is currently being done through the Public Health Measures sub-committee involving daycare workers. A meeting is planned with the Daycare Supervisors in the Nipissing District in January 2006.

### ☼*NEXT STEPS*

Still under development.

## Children's Aid Society (CAS)

***Table 8.3 Children's Aid Society***

| Agency | Geographical Area | Contact Name | Phone | Fax |
|---|---|---|---|---|
| Children's Aid Society for the Districts of Nipissing & Parry Sound | East Parry Sound | 108 Ontario Place<br>Burk's Falls, ON P0A 1C0 | (705) 382-1333 | (705) 382-1444 |
| Children's Aid Society Nipissing (North Bay) | Nipissing | 433 McIntyre Street West<br>North Bay, ON P1B 2Z3 | (705) 472-0910 | (705) 472-9743 |
| Children's Aid Society for the Districts of Nipissing & Parry Sound | West Parry Sound | 25 Church Street<br>Parry Sound, ON P2Z 1Y2 | (705) 746-9354 | (705) 746-9358 |

Other vulnerable populations may also be affected by ill or deceased care providers. The issue of provision of support in the community will need to be addressed in the future. This may include vulnerable seniors, disabled individuals, etc.

### ☼*NEXT STEPS*

Discussion/consultation with stakeholders working with vulnerable populations will need to occur in order to plan effectively for support to this community.

## Management of Volunteers in Influenza Pandemic

Volunteer agencies played a key role in SARS response and it is anticipated that they will play an integral role in a future pandemic. Volunteers are the responsibility of each organization and municipality.

It is estimated that in the NBPSDHU area, there will be 19,910 to 46,457 people clinically ill, with 15,047 to 35,110 requiring outpatient care, 315 to 734 requiring hospitalization and 97 to 227 people will die. Response activities will include provision of healthcare, managing mass fatalities and increased pressure on other public services.

Many of these response activities will need to occur simultaneously and within each phase. The health care system may become overwhelmed within a short period of time and there will be a great need for additional human resources within the public service sector.

The issue of volunteerism will therefore become another key element in responding to a pandemic influenza. Volunteer agencies played a key role in the SARS outbreak and it is anticipated that they will play an integral role in a future pandemic.

Pandemic volunteer management planning should be based on Canadian Pandemic Influenza Plan, Ontario Health Pandemic Influenza Plan, and learning from the SARS experience.

**Pre-pandemic Period**
During the pre-pandemic period, the NBPSDHU will encourage agencies that utilize volunteers to recruit/develop/train volunteers so that they can be operationalized in the pandemic period. Efforts to educate all the stakeholders, including the general public about the expected influenza pandemic are ongoing. This also includes messaging related to the promotion of volunteerism and the expected great need for human resources.

**Pandemic Period**
Activities related to volunteer management during the pandemic period will be four-fold:

**a) Needs Assessment**
During the initial phase of the pandemic period and as part of the overall response, a needs assessment will need to be conducted by agencies to determine the extent of the emergency and to develop response objectives. Based on this and having in mind already available resources, areas in which it may be necessary to engage volunteers will be identified.

**b) Volunteer agencies supportive assistance**
Volunteer agencies may be providing supportive assistance to the emergency response. For example, during SARS the Canadian Red Cross and The Salvation Army were delivering medical kits to people in quarantine. The decision to do this will be made based on the needs assessment and other service related considerations (efficiency, skill-sets required, cost savings, etc.).

## Utilization of volunteers by the Health Unit

In certain service areas it may be possible that newly registered volunteers are temporarily and directly engaged by the NBPSDHU, provided they have the required skill set. Examples of these service areas

include: providing administrative support to mass vaccination clinics, greeting at mass vaccination centers, providing support to homeless shelters, etc. Utilization of volunteers at the NBPSDHU needs to be further developed.

**Post-pandemic Period**

Agencies that utilize volunteers are encouraged to conduct debriefing sessions with their volunteers. In addition, Emergency Management Ontario (EMO) will organize debriefing meetings with partnering volunteer agencies to identify achievements and areas of improvement. Volunteer management plans will be revised to reflect the learning and new best practices.

# Mass Fatality Plan

The NBPSDHU continues to meet with key stakeholders in the funeral home sector to further plan for body management issues. Education sessions continue to be provided, upon request.

## Management of Mass Fatalities during Pandemic Influenza

The total number of deaths (including all other causes) during a pandemic wave of six to eight weeks is estimated to be similar to that which usually occurs over a period of six months. Planning for mass fatalities is therefore necessary, as there will be a strain on the current system for a prolonged period of time. Some of the issues that need to be addressed include:

- pronouncement and certification of deaths
- transportation of bodies
- morgue capacity, including capacity in acute care facilities
- planning and gathering at funerals
- supply management

A few documents providing guidance for planning around these and other related matters are already in place:

- The Canadian Pandemic Influenza Plan provides an annex that contains guidelines to assist local authorities and other relevant agencies in planning for the management of mass fatalities during a pandemic influenza, including dealing with issues such as corpse management, temporary morgues, transportation, social/religious considerations, etc.
- The Ontario Health Pandemic Influenza Plan outlines a requirement to develop a plan at the local level for mass fatalities resulting from a pandemic influenza.
- The Office of the Chief Coroner of Ontario has prepared a Provincial Multiple Fatality Plan. This plan has a recent addition that reflects the anticipated increased mortality during an influenza pandemic.

## Care of Deceased and other Technical Considerations

As the practice and legal requirements in the care and management of the deceased vary by province, it is important to outline requirements specific to Ontario. Under regular circumstances, what happens with the body of the deceased depends largely on the services selected and the final destination for the deceased. The executor and/or next of kin bear legal responsibility in the disposition of the deceased. Having in mind the estimated rate of mortality in pandemic influenza, it is expected that the funeral services sector will be significantly affected and funeral directors overwhelmed. Body storage and limited resources will be the main issue since capacity in funeral homes and hospitals is limited. Certain services may need to be adapted so that the capacity of the system is utilized in the most efficient way.

The following is an outline of the usual steps, along with some technical considerations that may be of influence in the situation of pandemic influenza:

**Pronouncement of Death**: In Ontario, there is no statutory requirement for who can pronounce death, although traditionally it has been done by someone with either medical training (nurse, paramedic, physician), or by someone in a position of authority (police officer). Deaths can be certified, however, only by a physician, or in certain specified circumstances by a Registered Nurse, Extended Class. Deaths warranting further investigation have to be reported to a coroner (deaths under circumstances listed in section 10 of the Coroners Act). The attending physician, or in some cases the coroner, completes the Medical Certificate of Death and submits it to the funeral home who takes it along with the Statement of Death (see below) to the local Division Registrar of the Office of the Registrar General of Ontario.

A family member or Funeral Director completes the Statement of Death with information about the deceased and submits it to the local Division Registrar of the Office of the Registrar General of Ontario. The Office of the Registrar General is responsible for registering deaths and issuing certified death certificates. They are required for such purposes as settlement of estates, insurance and access to or termination of certain government services, if the Proof of Death provided by the funeral home is not accepted.

Once the Certificate of Death and Statement of Death are completed, the next step is to obtain a burial permit. Burials and cremations cannot be performed until the burial permit is issued. Funeral Directors look after this requirement for the family. If the death occurs in Ontario but the burial is to take place outside of Ontario, the body cannot be removed until an Ontario burial permit is obtained. If the death occurs outside of Ontario but the burial or other disposition is to take place in Ontario, a burial, transit or removal permit is required from the jurisdiction where the death occurred.

If the deceased had expressed a wish to donate organs for transplant or the entire body for scientific research, arrangements are made quickly because there are specific time limits for making such donations. Donations can be refused for a range of reasons and the process for dealing with this issue in a pandemic is yet to be developed, although organs or bodies from potential donors who have died as a result of a contagious disease would not likely be accepted.

Because of the expected increased mortality rates in a pandemic the Emergency Management Unit of the Ministry of Health and Long-Term Care is working to develop an expedited process for pronouncement, certification and registration of deaths that would minimize potential roadblocks and backlogs.

**Transportation**: The deceased is transported to a provider, cemetery or other destination, depending on the services selected. Funeral Directors usually look after this for the family. There are no special legal requirements in terms of driver license or vehicle for transportation of a corpse.

**Morgue Storage**: In order to deal with the increase in fatalities, it may be necessary to develop strategies to augment funeral home and hospital morgue capacities. If the body is not going to be cremated, plans to expedite the embalming process should be developed since in the case of a pandemic, bodies may have to be stored for an extended period of time.

Temporary storage facilities must be considered. These may include refrigerated trucks. Use of local businesses for the storage of human remains is not recommended and should only be considered as a last resort. The post-pandemic implications of storing of human remains at these sites can be very serious and may result in negative impacts on business with ensuing liabilities.

**Autopsy:** In order to establish the facts of death and to increase the medical knowledge about the disease the Coroner can order an autopsy. Many deaths in a pandemic would not require an autopsy. However, for the purpose of public health surveillance, respiratory tract specimens or lung tissue for culture or direct antigen testing could be collected post-mortem. Permission will be required from the next-of-kin for this purpose where the death has not been the subject of a coroner's investigation.

**Embalming** is not required in Ontario, but may be necessary under some circumstances. Cremated bodies are usually embalmed less often than bodies being buried.

**Funeral Service**: Funeral homes should implement infection control measures to reduce the risk of influenza transmission through contact with families and friends of the deceased. Deceased bodies are not "contagious" and infection control measures are not required for the handling of persons who died from influenza. For specific infection control measures, refer to Chapter 10.

**Burial**: Bodies to be buried may or may not be embalmed and may need to be stored in a temporary vault prior to burial.

**Cremation:** Most crematoriums can handle one body every four hours but could run 24 hours to cope with increased demand. Cremations have fewer resource requirements than burials and, where acceptable, may be an expedient and efficient way of managing large numbers of corpses during a pandemic. Cremated bodies are embalmed less frequently. Families may choose to have a funeral service followed by cremation or to have the body cremated first and a memorial service later.

The table below from the Canadian Influenza Plan outlines limiting factors and possible solutions for each step in the management of a corpse.

## Corpse Management

***Table 8.4 Corpse Management***

| Steps | Requirements | Limiting Factors | Planning for possible solutions/expediting steps |
|---|---|---|---|
| Death pronounced | • Person legally authorized to perform this task | • If death occurs in the home then one of these authorized persons will need to be contacted<br>• Availability of people able to do this task | • Provide public education re: how to access an authorized person<br>• Consider planning an on call system 24/7 specifically for this task |
| Death Certified | • Person legally authorized to perform this task | • Body bags<br>• Supply of human and physical (body bags) resources<br>• If death occurs in the home: the availability of these requirements | • Consider collecting corpses and having one authorized person perform this task en masse to improve efficiency |
| Body wrapped | • Person(s) trained to perform this task | | • Consider developing a rotating six month inventory of body bags, given their shelf life<br>• Consider training or expanding the role of current funeral home staff to include this task<br>• Provide this service in the home in conjunction with pronouncement and transportation to morgue |
| Transportation to the morgue | • In hospital: trained staff and stretcher<br>• Outside hospital: informed person(s), stretcher and vehicle suitable for this purpose | • Availability of human and physical resources | • In hospital consider training additional staff working within the facility<br>• Consider keeping old stretchers in storage instead of discarding<br>• Look for alternate suppliers of equipment that could be used as stretchers in an emergency e.g. trolley manufacturers<br>• Outside hospital: provide public education or specific instructions re: where to take corpses if the family must transport |

| Steps | Requirements | Limiting Factors | Planning for possible solutions/expediting steps |
|---|---|---|---|
| Morgue storage | • A suitable facility that can be maintained at<br>• +4 to +8 º Celsius | • Capacity of such facilities | • Identify and plan for possible temporary morgue sites |
| Autopsy if required/requested | • Person qualified to perform autopsy and suitable facility with equipment | • Availability of human and physical resources<br>• May be legally required in some circumstances | • Ensure that physicians and families are aware that an autopsy is not required for confirmation of influenza as a cause of death |
| 1.Cremation* | • Suitable vehicle for transportation from morgue to crematorium<br>• Availability of cremation service<br>• A cremation certificate | • Capacity of crematorium/speed of process<br>• Availability of coroner or equivalent official to issue certificate | • Identify alternate vehicles that could be used for mass transport<br>• Examine the capacity and surge capacity of crematoriums within the jurisdiction<br>• Discuss and plan appropriate storage options if the crematoriums become backlogged<br>• Discuss and plan expedited cremation certificate completion processes |
| 2.Embalming** | • Suitable vehicle for transportation from morgue | • Availability of human and physical resources<br>• Capacity of facility and speed of process | • Consult with service provided regarding the availability of supplies and potential need to stockpile or develop a rotating 6 month inventory of essential equipment /supplies |
| 3. Funeral Service | • Appropriate location(s), casket (if not cremated), Funeral director | • Availability of caskets<br>• Availability of location for service and visitation | • Contact suppliers to determine lead time for casket manufacturing and discuss possibilities for rotating 6 month inventory<br>• Consult with the Funeral Services Association of Canada (FSAC) to determine surge capacity and possibly the need for additional sites (e.g. use of churches etc. for visitation) |
| 3a.Transportation to a temporary burial site | • Suitable vehicle and driver | • Availability of human and physical resources | • Identify alternate vehicles that could be used for this purpose<br>• Consider use of volunteer drivers |
| 3b.Temporary storage | • Access to and space in a temporary storage area | • Temporary storage capacity and accessibility (e.g. ice rinks, curling rinks, cold storage lockers or refrigerated trucks) | • Expand capacity by increasing temporary storage sites |
| 3c. Burial | • Grave digger, space at cemetery | • Availability of grave diggers and cemetery space<br>• Extreme cold and heavy snow fall | • Identify sources of supplementary workers |

* Cremated bodies are not usually embalmed; families may choose to have a funeral service followed by cremation or to have the body cremated first and a memorial service later.
** Bodies to be buried may be embalmed and may need to be stored in a temporary vault prior to burial.

It is predicted with a higher young person mortality, there will be more visitations.

**Refrigerated Trucks for Secure Alternate Storage Site**
Refer to Appendix 8.8, Table 8.6 for a contact list of alternate refrigerated storage sites across NBPS district.

**Funeral Homes in the NBPSDHU Area**

The funeral services sector will be significantly affected by increased rates of mortality, employee absenteeism, and possibly shortages of supplies. Public health measures, such as cancellations of large gatherings may also affect this sector. In order to mitigate the disruption, it is recommended that funeral homes develop continuity plans for pandemic influenza to address issues such as supplies, equipment, vehicles and personnel.

***Table 8.5 Funeral Homes***

| Funeral Home | Area Covered | Contact Name(s) | Address | Telephone # December 2005 | Body Capacity at one time | Alternate Secure Storage Area for Bodies |
|---|---|---|---|---|---|---|
| A M Paul Funeral Home | Nipissing | Richard Paul | 531 Main Street<br>Box 130<br>Powassan, ON P0H 1Z0 | (705) 724-2024 | 10 | Winter 40-50 |
| Dempster-Allair Funeral Home | East Parry Sound | Charlie Allair | 210 Ontario Street<br>P.O. Box 39<br>Burks Falls, ON P0A 1C0 | (705) 382-3222 | 2 visitation<br>6 storage | Yes |
| Hillside | Nipissing | Patrick Theoret | 362 Airport Road<br>North Bay, ON P1B 8W9 | (705) 474-7655 | 30 | Yes |
| Logan's Funeral Home | West Parry Sound | Hugh Logan & Others | 81 James Street<br>Parry Sound, ON P2A 1T7 | (705) 746-5855 | 2 visitation<br>6 storage | Yes |
| Martyn Funeral Home | Nipissing | Ian Martyn & Mac Bain | 464 Wyld Street<br>North Bay, ON P1B 1Z5 | (705) 472-8810 | 6 | Winter vaults |
| McGuinty Funeral Home | Nipissing | Maurice & Grant McGuinty | 591 Cassells Street<br>North Bay, ON P1B 3Z8 | (705) 472-8520 | 5 | none |
| Moore's Funeral Home | East Parry Sound | Dave Opatovsky & Michael Herbert | 9 Paget Street<br>Sundridge, ON P0A 1Z0 | (705) 384-5802 | Several | Cemetery vaults |
| Raney Funeral Home | East Parry Sound | Kelly Raney | 18 Hunter Street<br>South River, ON P0A 1X0 | (705) 386-2624 | 3 | ??? |
| Smith Funeral Home | Mattawa | Tim Smith | 274 First Street<br>Mattawa, ON P0H 1V0 | (705) 744-0300 | 4 visitation<br>6 storage | Yes |
| Theoret Bourgeois Funeral Home | West Nipissing | Colin Bourgeois | 119 King Street<br>Sturgeon Falls, ON | (705) 753-0350 | | |
| Theoret Bourgeois Funeral Home | West Nipissing | | 2 Racette Street<br>Verner, ON P0H 2M0 | (705) 594-2321 | | |
| Torrance Funeral Home and Chapel Ltd. | West Parry Sound | | 89 Bowes Street<br>Parry Sound, ON | (705) 746-4664 | 10-15 | ??? |

A total number of deaths in a six month period has been estimated to be approximately 512 (+ Hillside and Theoret) across the district. The projected death rate during a pandemic has been 227 based on the CDC formula which would occur over the pandemic period. The Canadian Pandemic Plan suggests estimating deaths for a pandemic as the six month death rate to occur over 4-6 weeks. It appears that our death rate of 512 is significantly higher than what is projected by the CDC formula.

## Morgue Capacity

***Table 8.6 Morgue Capacity***

| Hospital | Location | Morgue Capacity |
|---|---|---|
| BFHC | | 0 |
| MGH | | 0 |
| NBGH | Scollard Site | 6 |
| NBGH | McLaren Site | 4 |
| WNGH | Sturgeon Falls – WNGH | 2 |
| WPHC | Parry Sound – WPHC | 6 |

**Supply Management**
The Funeral Service Association of Canada (FSAC) is recommending to funeral directors that they do not order excessive amounts of supplies such as embalming fluids, body bags, etc. but that they have enough on hand in a rotating inventory to handle the first wave of the pandemic (e.g. enough for six months of normal operation). Fluids can be stored for years, but body bags and other supplies have a limited shelf life. Cremations generally require fewer supplies since embalming is less frequent. As the funeral homes are the only non government 'agency' involved in handling of bodies, the cost of these supplies may be a burden on many and therefore options will need to be considered provincially to support this sector.

Families having multiple deaths are unlikely to be able to afford multiple higher-end products or arrangements. Funeral homes could quickly run out of lower-cost items (e.g. inexpensive caskets) and should be prepared to provide alternatives.

**Social/Religious Considerations**
A number of religious and ethnic groups have specific directives about how bodies are managed after death and such needs must be considered as a part of pandemic planning. The wishes of the family will provide guidance; however, if no family is available local religious or ethnic communities can be contacted for information. As a result of these special requirements, some religious groups maintain facilities such as small morgues, crematoria and other facilities, which are generally operated by volunteers. Religious groups should be contacted to ensure these facilities and volunteers are prepared to deal with pandemic issues.

Religious groups should be involved in planning for funeral management, bereavement counseling, and communications, particularly in ethnic communities with large numbers of people who do not speak the official languages.

# Evaluating and Testing of the Pandemic Influenza Response Plan

The plan and related activities will be tested through a table top or other simulation exercises. Municipalities are encouraged to incorporate pandemic influenza into the testing of their plans. An example of a municipal pandemic exercise is included in Appendix 8.4.

Revisions to the Plan and appendices shall be carried out bi-annually or as changes are required.

# SECTION 9 - COMMUNICATIONS

# Communications

Effective internal and external communications is critical for a coordinated response to an influenza pandemic. A wide range of groups at all levels will need to share accurate, timely and consistent information about what is known about the pandemic strain and the risks to public health as well as advice on how to manage those risks at each stage of a pandemic.

During a pandemic, media attention will be intense, and information demands will continue over several months. Sustaining public and workplace confidence over that time will be a challenge. Credible spokespeople will be required nationally, provincially, locally and within workplaces. (*OHPIP, June 2005, p. 89*)

The Communications section of the plan describes steps that will be used to establish communication strategies to maintain public confidence in the public health and community health services and for the dissemination of timely, transparent, accurate, consistent and accessible information among public health officials, health care providers, the media and the general public during the pandemic.

**Goals of the Communication Section of the plan:**

- Clearly explain and promote the North Bay Parry Sound Pandemic Influenza Plan
- Provide information to the public and stakeholders to assist them in making the best possible decisions about their well-being during all phases of a pandemic

## Objectives:

- Stakeholders and the general public will understand the North Bay Parry Sound Pandemic Influenza Plan
- To develop and test a broad network for disseminating pandemic information
- To determine the communication strategies and messages that should occur during each phase of the pandemic through a variety of methods to reach appropriate audiences
- To provide information to public health, health care providers, the media and the general public that is timely, transparent, accurate, consistent and accessible
- To integrate local communications with provincial and federal efforts to ensure a consistent response, flexible as required
- To increase awareness, knowledge and skills to cope with an influenza pandemic
- To establish a mechanism for key stakeholders and health care workers to share lessons learned to continually improve North Bay Parry Sound District Pandemic Influenza Plan
- To provide information on a daily basis or more often as required

## Target Audiences

**Stakeholders and Partners**

- North Bay Parry Sound District Health Unit staff
- Board of Health
- Mayors and Councillors from all district municipalities
- Municipal staff
- Health facilities including Long Term Care Facilities, Hospitals
- Health care professionals, including but not limited to: Physicians, Nurse Practitioners, Nursing Stations, Nurses, Pharmacists, Dentists
- Police Services, Fire Services, Ambulance
- District Social Service Administration Boards
- Daycare providers
- School Boards

- Schools
- Health Agencies including: Telehealth, Community Care Access Centre, VON, Paramed,
- Community agencies and groups, such as Salvation Army, Association for Community Living, Mental health
- First Nations health workers
- Communication professionals in health care and other sectors
- Media – TV, Radio, Print, Technology (Internet), Bilingual
- Funeral industry
- Coroner's Office
- Volunteer agencies

**External**

- General Public - recognizing the varying social, cultural and linguistic needs
- Business, Trade & Industry – Chambers of Commerce
- Colleges and Universities
- Court Services
- People with influenza and their caregivers
- People with chronic conditions and their caregivers
- Faith communities
- International community
- Visitors/tourist industry
- Neighbouring municipalities
- Other health units

## Core Risk Communications

Appropriate risk communication considerations should be applied before, during and after a crisis. Effectively communicating complex, scientific or technical information can improve public responses to a serious crisis. The communication plan takes into account the following:

- Provide information that is relevant and easily understood
- Protect NBPSDHU credibility and reduce the chances of panic
- Don’t over-reassure
- Don’t underestimate risk
- Acknowledge uncertainty and change of circumstances
- Acknowledge people’s fears and pain
- Give people things to do to adjust to the new environment
- Give people a choice of actions to match their level of concern
- Promote awareness of the changed environment

## Core Evaluation

Evaluation of the communications functions will improve program delivery and determine if communication is effective in meeting its objectives. The development of evaluation tools to gauge changes in attitudes, behaviours, knowledge, skills, status or levels of functions will be considered for each pandemic period. Key evaluation objectives and criteria of program success will be developed. It will be essential to work on tools which will provide necessary information during the interpandemic period.

Evaluation activities will include monitoring of:

- Media - Daily monitoring and analysis of media coverage will determine if the strategy is working and whether improvements are required. To facilitate lessons learned and evaluation of

communications after the pandemic, copies of newspaper clippings will be saved and radio and TV broadcasts will be reviewed.
- Website visits
- Telephone inquiries
- Track public presentations
- Track requests for information
- Track resource distribution

## Current Resource and Reference Sites

**For Stakeholders and Health Care Workers:**

- Health Notices from MOHLTC, PHAC, WHO
- Health Care Provider Hotline 866-212-2272, or www.health.gov.on.ca/english/providers/program/emu/emu_mn.html
- Telephone, email, fax, website, videoconferencing, public education, advertising, stakeholder communications, media releases, and public service announcements (PSA's) from NBPSDHU

**For Public:**

- PHAC - Weekly FluWatch bulletin (http://www.phac-aspc.gc.ca/fluwatch/), travel alerts, and advisories for the public, public information line
- MOHLTC website (www.health.gov.on.ca), fact sheets, media conferences/briefings, advertising,
- Telehealth (phone number) 1-866-797-0000
- NBPSDHU Website (www.nbpsdhu.ca) with North Bay Parry Sound Pandemic Influenza Plan; fact sheets, media releases, notices, links to other websites
- Media releases, media advertising, public service announcements produced by NBPSDHU
- Fact sheets, posters, pamphlets produced by NBPSDHU

## Interpandemic - Phases 1 and 2 "Advisory"

Before the pandemic arrives, ongoing strategies will be used to increase awareness of pandemic influenza, the importance of personal protective measures to prevent influenza, pre-planning for families and workplaces as well as the North Bay Parry Sound District Pandemic Plan. There will also be ongoing refinement, preparation and testing of communication channels.

A list of media contacts with after hours contact information will be updated and maintained on a regular basis (see Appendix 9.2)

## Pandemic Alert - Phases 3 to 5 "Alert"

Strategies during the pandemic alert period include using a variety of communication vehicles to increase awareness of what the North Bay Parry Sound District is doing to prepare for a pandemic and what individuals, businesses and others can do to prepare.

**Electronic (Internet/Email)**

- updates on websites – posting of the Health Unit Pandemic Influenza Plan, intranet/internet updates
- Establishment of secure intranet site for health professionals (through Smart Systems for Health)
- Respond to requests for information via email

**Radio**
- PSA's and paid ads with messages on hand washing, cover your cough/sneeze, stay home when ill, and pandemic preparedness

**Print Media**
- Articles, ads and stories about hand washing, cover your cough/sneeze, stay home when ill, and pandemic preparedness

**Cable TV and Community Channels**
- Messages and interviews about hand washing, cover your cough/sneeze, stay home when ill, and pandemic preparedness

**Personal presentations**
- Presentations to the public, health care workers, stakeholders, municipalities, and businesses
- Bilingual displays with appropriate messaging developed for a variety of audiences such as child care, schools, and workplaces
- Pandemic preparedness messages included with other health unit program messages

**Newsletters**
- Camera ready advertisements with key messaging
- Articles to insert into newsletters (business, schools, municipalities, Chambers of Commerce, etc.)

**Mass Mailings**
- Bill inserts for municipalities with hand washing/cover your cough messages (bilingual design and include a fax order form)
- Public service announcements on personal protective measures developed for physicians' offices, hospitals, elevators, schools

**Point of Purchase**
- Posters, fact sheets and brochures for schools, physicians' offices, pharmacies, hospitals, workplaces, public places, municipalities, etc.

**Telephone**
- Health Unit Community Information Services or on-duty CDC nurse available to respond to requests for information during regular office hours
- Health Unit call centre would be activated (5 additional telephone lines)

**Key Messages**

Key messages during the Pandemic Alert Period will focus on strategies in place to prepare for a pandemic. Key messages will inform the public about the situation and what they can do to protect themselves.
- North Bay Parry Sound District is preparing for a pandemic
- Businesses and municipalities need to be prepared - we can help you plan
- The public needs to be prepared
- Wash your hands at least five times a day
- Cover your cough
- Stay home if you are ill
- Get your flu shot

Medical interventions such as vaccines and antiviral drugs will not be available for everyone. Messages will provide information about the distribution and specific things people should know or be doing to minimize risk and maintain health. For example:

- NBPSDHU is responsible for the distribution and administration of vaccine and antiviral medication in the district
- Priority groups have been established federally and provincially for the distribution of vaccine and antiviral medication
- The health unit has a planned approach to reach the priority groups (with details on how people can obtain vaccine or antiviral medication)

**Key Spokespersons**

The key spokespersons will focus on preparedness during the pandemic alert period.

- Medical Officer of Health for NBPSDHU
- Director of Infectious Diseases
- Health partner/stakeholder spokespersons – to be determined
- Chair of Board of Health

**Information Approval Process**

NBPSDHU is the communications lead during the pandemic alert period. The Medical Officer of Health, the Director of Infectious Diseases, and the Communications Coordinators will establish internal communications verification and clearance/approval procedures for health unit. Other pandemic messages will be developed in coordination with the health unit to ensure consistent key messaging**.** The health unit will collaborate with provincial officials and other health units.

## Pandemic Period - Phase 6 "Emergency"

**Goals**

- Reduce death and illness associated with sustained transmission of a new and virulent strain of influenza in the general population
- Minimize societal and economic disruption
- Communicate the changing role of the health unit during a Phase 6 pandemic period, including the activation of health unit and municipal Emergency Operations Centres

**Objectives**

- Clarify the roles and responsibilities concerning decision-making authority and how decisions will be communicated
- Outline ongoing surveillance activities
- Communicate the importance of continuing with stringent infection control measures and other public health measures
- Communicate the symptoms of illness and notify health partners, the media and the public, especially seniors, long-term care providers, schools and vulnerable populations
- Announce changes in levels of NBPSDHU clinical and non-clinical services

**Strategies**

The strategy during pandemic period Phase 6 will be to assist the public in coping with the pandemic influenza. This includes an explanation of what to expect during this phase of sustained transmission in the general population, including altering behaviours and changes in services for all audiences - internal, external and stakeholders.

The internal strategy requires a clear explanation of what to expect when the health unit Emergency Operations Centre has been activated. Details about the Incident Management System (IMS) and the roles

and responsibilities of the Medical Officer of Health and the Public Information/Liaison functions will be communicated to staff and to the media.

The communications resources of the municipalities may be utilized to ensure residents and businesses are kept apprised of developments during the pandemic period, including any changes to the provision of municipal services and any major actions required. Each municipality is encouraged to connect with the NBPSDHU on a regular basis for updated information.
Stakeholder communication includes ensuring a timely exchange of information between the Ministry of Health and Long-Term Care (MOHLTC) Ministry Emergency Operations Centre, the municipal Emergency Operations Centres and the NBPSDHU Emergency Operations Centre, and sharing relevant information with all stakeholders. Refer to Appendix 9.1, Communications Cycle Pandemic Period.

**Electronic (Internet/email)**
- Regular media updates early in the morning
- Communications to stakeholders and staff via e-mail and secure website for management of overall NBPSD response, including business continuity
- Continue to update websites
- Regular communication between stakeholders, MOHLTC, municipal EOC's and NBPSDHU EOC
- Develop handwashing video for access over Internet

**Radio**
- Media releases, media advisories, ads and PSA's with messages around activation of Incident Management System (IMS), roles and responsibilities of each section in the IMS, services available and alternatives as well as those listed in key messages
- Municipalities will provide notification of reduction of services and possible alternatives

**Print Media**
- Media releases, media advisories, ads and PSA's of key messages listed below
- Regular updates on services available and possible alternatives

**Cable TV and Community Channels**
- Regular updates on services available and possible alternatives
- Introduce Crisis Intervention numbers through cable stations

**Personal Presentations**
- Coordinate time, location and protocols for media briefings
- Regular staff meetings and teleconferences to update stakeholders and own staff
- Updates and information exchange with stakeholders

**Point of Purchase**
- Posters, notifications and personal protective measures messages for schools, workplaces, health care facilities, public places, etc.

**Telephone**
- Pre-recorded messages on Health Unit line
- Linkages with Telehealth
- Updates and information exchange with hospitals and health partners
- Option to teleconference with media for media conferences

**Key Messages**
Medical interventions such as vaccines and antiviral drugs will not be available for everyone. Messages will continue to provide information about the distribution and specific things people should know or be doing to minimize risk and maintain health. For example:

- Media conferences (decide what we need to know? eg. number of people ill, triage centres)
- NBPSDHU is responsible for the distribution and administration of vaccine and antiviral medication in the district
- Priority groups have been established federally and provincially for the distribution of vaccine and antiviral medication
- The health unit has a planned approach to reach the priority groups (with details on how people can obtain vaccine or antiviral medication)
- Updated information on the number of cases (confirmed, suspected and potential)
- Identification of which government level is responsible for which key decisions, programs, services
- Self-imposed isolation information to protect people from unnecessary exposure
- Personal protective measures messaging continues – hand washing, "cover your cough" messages
- Business continuity messages (could include health precautions in the workplace, screening, environmental cleaning)
- How to stay healthy at home and at work
- Self diagnosis – symptoms and prevention
- Self treatment – what to do if you or your family get sick
- When to seek medical attention - list and degree of symptoms
- How to seek medical attention - where to go, protocol on how to enter hospital or medical centre
- Caring for the seriously ill
- Death at home - what to do next
- Bereavement counselling and support messages
- Where to go for non medical help – child care, pets, food
- Assess and publicize the current impact on the district, including reduction of programs
- Detailed information for health professionals
- Acknowledge and thank internal, external and key stakeholders for their efforts and cooperation
- Advise stakeholder staff on appropriate personal protection

**Spokespersons**
The NBPSDHU will continue to provide expert medical advice and leadership through key spokesperson during the activation of the NBPSDHU Emergency Operations Centre. Health unit key spokespersons will actively participate in the Office of Emergency Management response.

- Medical Officer of Health – NBPSDHU
- Director of Infectious Diseases – NBPSDHU
- Corporate spokespersons, to be determined (Physicians/CEO of Hospital/Community Emergency Management Coordinator)
- Chair of Board of Health

**Information Approval Process**
During a pandemic period, the information approval process becomes centralized through the NBPSDHU Office of Emergency Management (OEM).

Approval of the Health Unit messages is the responsibility of the Medical Officer of Health or designate. The responsibility for preparing and releasing information to the public falls under the Public Information function of the Incident Management System. For more information please refer to the North Bay Parry Sound District Emergency Plan.

**Audience**
All stakeholders and external audiences must be considered during the pandemic period. Communications content and delivery will be tailored to audiences as required. Particular focus and messages will be crafted for:

- People who are sick
- People who are taking care of people who are sick
- Stakeholders and their staff
- Federal, provincial governments
- International audience
- Business community
- Hospitals and other health partners

**Media Relations**
The media are a prime transmitter of communication and information. They play a critical role in setting agendas and in determining outcomes.

The pace of media relations will accelerate significantly once the pandemic period begins. Messages to the public and staff, businesses and governments and the international community about the situation in North Bay Parry Sound district will be delivered through the media. Media releases, fact sheets, backgrounders, brochures, speaking notes, TV and radio ad scripts will be some of the communication products. Once an emergency has been declared and the Incident Management System has been implemented, the responsibility for health unit media relations and communication strategy shifts to the Public Information function under the Medical Officer of Health or designate. The NBPSDHU Communications will support the Public Information media relations function along with communications staff from other municipalities.

News conferences will be held on a daily basis at a fixed time. Timing would depend on when provincial and federal conferences take place. The Medical Officer of Health or designate will update the public health aspect of the pandemic's impact on North Bay Parry Sound district. A communicable disease expert will be needed to provide clinical updates. The municipalities, Board of Health Chair, health spokes persons, EMS, Fire Dept, Police and other agencies may be part of the media conferences. There may be a need for joint conferences with hospitals and other agencies, such as school boards, and senior governments. Communications staff may be required to be on call late into the evening and possibly around the clock.

**Risk Communications**
This period will involve a highly complex information environment. Communicating catastrophic news and helping people learn to cope with trauma and uncertainty requires attention to the following:

- Assessing the environment in which information is being introduced
- Understanding the public's attitude toward the situation
- Acknowledging and attempt to contain public anxiety, grief and distress
- Dealing with resistance to accept change
- Recognizing and acknowledging anger and frustration
- Keeping up with changes in decision making
- Addressing worry and concern

**Evaluation**
Evaluation during Phase 6 provides a significant opportunity to add to the international body of knowledge about this type of emergency communication plan**.** Evaluation will identify the benefits and costs of changes and assist in reaching an agreement on any needed adjustments in order to improve response strategy.

## Postpandemic Period

**Goals**
- Declare end of emergency operations
- Address public health needs, including grief and post-traumatic stress counseling
- Provide information on the re-establishment of essential public health services
- Acknowledge contribution of all stakeholders and staff

**Objectives**
- Join with other stakeholders in public announcements to show comprehensive approach
- Publicly address community emotions after pandemic
- Make people aware of uncertainties associated with subsequent waves
- Prepare for transfer of responsibilities from North Bay Parry Sound Emergency Management Program Committee back to NBPSDHU
- Request and advocate for recovery assistance as required

**Strategies**
The strategy during this period is to help people move toward hope for the future through actions they can take and through the actions of all responders to the pandemic.

**Electronic (Internet/email)**
- Communications to stakeholders and staff via e-mail and secure website
- Continue to update websites with key messages below
- Regular communication between stakeholders, MOHLTC, municipal EOC's and NBPSDHU EOC

**Radio**
- Media releases, media advisories, paid ads and PSA's with key messages

**Print Media**
- Media releases, media advisories, ads and PSA's of key messages listed below

**Cable TV and Community Channels**
- Update with key messages

**Personal Presentations**
- Updates and information exchange with stakeholders
- Meetings to assess

**Point of Purchase**
- Posters, fact sheets, and brochures with key messages

**Telephone**
- Pre-recorded messages on Health Unit line
- Updates and information exchange with stakeholders

**Key Messages**
- Official announcement of end to emergency measures
- Communication to residents and staff regarding the social and economic recovery plans
- Announcements and notifications of gradual restoration of services
- Continued promotion of personal protective measures
- Information about possible relapse

- Healthy community messages with appropriate partners

## ☼*NEXT STEPS*

The next steps will be to meet with other Pandemic Committees to discuss their communication needs and incorporate their requirements into all materials as appropriate. As well, an overall operational communication campaign and evaluation plan will have to be developed and updated on a regular basis with all necessary messages, information and resources. Media resources (PSA's, Media Advisories, Media Releases, camera-ready fillers and articles) will be drafted. Appendix 9.1 – refer to clock and who would attend news conferences (to be developed).

# SECTION 10 – ACKNOWLEDGEMENTS AND REFERENCES

# Acknowledgements

## PANDEMIC INFLUENZA PLANNING MEMBERS

### Pandemic Influenza Planning Committee

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*Debbie Wight, North Bay Parry Sound District Health Unit

* Co-chairs of sub-committee's

## References and Resources

Public Health Agency for Canada, Pandemic Influenza Plan http://www.phac-aspc.gc.ca/cpip-pclcpi/index.html
-Frequently asked questions, travel information and more

Ontario Ministry of Health and Long-Term Care, Influenza Pandemic Plan
http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/ ohpip_mn.html
- includes provincial emergency response status, Ontario planning, Universal Influenza Program, and more

World Health Organization, Pandemic Preparedness
http://www.who.int/csr/disease/influenza/pandemic/en/
- situation updates (avian influenza), pandemic alert status, and more

Halton Region Health Department, Pandemic Influenza Response Plan
http://www.region.halton.on.ca/health

Toronto Health Unit, Pandemic Influenza Plan
http://www.toronto.ca/health/pandemicflu/index.htm

Halton Region Health Unit, Business Continuity Tool Kit
http://www.region.halton.on.ca/health

Peel Regional Health Unit, Business Continuity Plan
http://www.region.peel.on.ca/health/bcp/index.htm

BC Center for Disease Control, BC Pandemic Influenza Preparedness Plan
http://www.bccdc.org/content.php?item=150

Vancouver Coastal Health Authority, Pandemic Influenza Plan
http://www.vch.ca/public/communicable/pandemic.htm

Vancouver Island Health Authority, Pandemic Influenza Plan
http://www.viha.ca/mho/pdf_toplevel/PanFluPlanVIHA_October2005.pdf
http://www.phac-aspc.gc.ca/influenza/pandemic_e.html

Other resources
Centers for Disease Control and Prevention
http://www.cdc.gov/flu/pandemic/
- includes key facts about pandemics, the avian influenza virus (bird flu) and more

Community and Hospital Infection Control Association (CHICA) Canada
http://www.chica.org/flu.html
- detailed information for professionals about Pandemic Influenza, world situation, surveillance, prevention and treatment.

Infection Control In Health-Care Facilities
http://www.cdc.gov/flu/professionals/infectioncontrol/
- detailed information for professionals, including infection control measures, outbreak management, clinical diagnosis and more.

- Health Canada-Public Health Agency, Pandemic Influenza – Frequently asked questions, travel information and more
- World Health Organization (WHO), Avian Influenza – situation updates (avian influenza ), pandemic alert status, and more
- Centers for Disease Control (CDC), Information about Influenza Pandemics – includes key facts about pandemics, the avian influenza virus (bird flu) and more
- Ministry of Health and Long Term Care, Pandemic Influenza – includes provincial emergency response status, Ontario planning, Universal Influenza Program, and more
- Community and Hospital Infection Control Association (CHICA) Canada – detailed information for professionals about Pandemic Influenza, world situation, surveillance, prevention and treatment.
- CDC Guidelines and Recommendations, Infection Control in Healthcare Facilities – detailed information for professionals, including infection control measures, outbreak management, clinical diagnosis and more.

Main Page: www.phac-aspc.gc.ca

General Influenza Information: www.phac-aspc.gc.ca/influenza/index.html
and www.phac-aspc.gc.ca/drd-dmr/index.html
Influenza Surveillance (FluWatch): www.phac-aspc.gc.ca/fluwatch/index.html
Pandemic Influenza Information: www.phac-aspc.gc.ca/influenza/pandemic_e.html
Canadian Pandemic Influenza Plan: www.phac-aspc.gc.ca/cpip-pclcpi/index.html

"Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care" (CCDR 1999, vol 25S4):

www.phac-aspc.gc.ca/publicat/ccdr-rmtc/99vol25/25s4/index.html

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www.phac-aspc.gc.ca/publicat/ccdr-rmtc/98pdf/cdr24s8e.pdf

Public Safety and Emergency Preparedness Canada (formerly OCIPEP):
Main page: http://www.psepc.gc.ca/index_e.asp

World Health Organization
Main Page: http://www.who.int/en/
General Influenza Information: www.who.int/topics/influenza/en/
Guidelines for Pandemic Preparedness:
www.who.int/csr/disease/influenza/pandemic/en/index.html
FluNet: www.who.int/GlobalAtlas/home.asp
Influenza Pandemic Preparedness Plan:
www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html

U.S. Centers for Disease Control and Information (CDC)
Main Page: http://www.cdc.gov/
General Influenza Information: www.cdc.gov/flu/
Pandemic Preparedness: www.cdc.gov/flu/references.htm#prepare
Pandemic Influenza Preparedness and Response Plan (Draft): www.dhhs.gov/nvpo/pandemicplan/
FluAid: www2.cdc.gov/od/fluaid/default.htm

FluSurge (pdf manual): www.cdc.gov/flu/pdf/FluSurge1.0_Manual_043004.pdf
FluSurge (program download): www.cdc.gov/flu/flusurge.htm

U.S. Department of Health and Human Services
Main Pandemic Page: http://www.dhhs.gov/nvpo/pandemics/
Draft Pandemic Influenza Response and Preparedness Plan:
http://www.dhhs.gov/nvpo/pandemicplan/index.html
Preparing for the Next Pandemic: http://www.dhhs.gov/nvpo/pandemics/flu5.htm

California Hospital Emergency Incident Command System (HEICS III):
Main Page: www.emsa.ca.gov/dms2/heics3.htm

# SECTION 11 - APPENDICES

# APPENDIX 1 Influenza

## 1.1 Ontario's Ethical Framework

**APPENDIX 2 The Plan**

## APPENDIX 3 Roles and Responsibilities

**3.1 OHPIP – Integrated Plan 2006**
**3.2 Screening Questionnaire for Possible Death from Influenza Outside of a Health Care Setting**

## APPENDIX 4 Surveillance

### 4.1 Sentinel School List

### 4.2 School Communicable Disease Reporting Form

### 4.3 Workplace Absenteeism Reporting Participants

### 4.4 Workplace Absenteeism Reporting Form

## APPENDIX 5 Vaccines and Antivirals

### 5.1 Priority Access Groups for Vaccines and Antivirals

### 5.2 Enumeration for the NBPSD Pandemic Influenza Plan

### 5.3 Age Characteristics of the Population, Census Subdivisions, 2001

### 5.4 North Bay Parry Sound District Health Unit Map

## APPENDIX 6 Public Health Measures

**6.1 "Influenza Caring for Yourself and Your Family" pamphlet**

**6.2 "Did you wash your hands?" poster**

**6.3 ". . . clean YES germs NO . . ." poster**

**6.4 "Cover your Cough" poster**

**6.5 Grocery Store Contact**

## APPENDIX 7 Health Services

### 7.1 Alternate Care/Triage Sites

## APPENDIX 8 Emergency Response

**8.1 Vaccine Security**

**8.2 Refrigerator Trucks for Secure Alternate Storage Sites**

**8.3 NBPSDHU Business Continuity Tool Kit**

**8.4 Municipal Resources**

8.4.1 NPBSDHU – CEMC's
8.4.2 Notice to All CEMC's
8.4.3 Community Planning Worksheet
8.4.4 Pandemic Scenarios
8.4.5 Infection Prevention & Control Guidelines for Emergency Operations Centres

**8.5 Ambulance Operations**

**8.6 Fire Departments**

**8.7 Correctional Facilities Capacity**

**8.8 Electrical, Gas and Oil, and Water**

# APPENDIX 9 Communications

## 9.1 Communication Cycle Pandemic Period