

P ublic Health

Emergency Preparedness

Niagara Region Influenza Pandemic Plan

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Version 1



TABLE OF CONTENTS

MESSAGE FROM THE MEDICAL OFFICER OF HEALTH	1
EXECUTIVE SUMMARY	2
CHAPTER 1 BACKGROUND.....	6
1.0 INTRODUCTION	6
1.1 LEGISLATIVE AUTHORITY	6
1.2 PANDEMIC EMERGENCY MANAGEMENT	6
1.3 AIM OF PANDEMIC EMERGENCY MANAGEMENT	7
1.4 PANDEMIC INFLUENZA DEFINITIONS AND RISK FACTORS*	7
1.5 PANDEMIC STRATEGIC PLANNING ASSUMPTIONS	7
1.6 DEFINITION OF EMERGENCY	8
1.6.1 Tier One Emergency – Local Municipal	8
1.6.2 Tier Two Emergency - Regional.....	8
1.6.3 Tier Three Emergency - Provincial.....	8
1.7 INFLUENZA PANDEMIC – TIER TWO REGIONAL EMERGENCY	9
1.8 PANDEMIC EMERGENCY MANAGEMENT LINKAGES	9
1.8.1 Lead Agency – Public Health Department	9
1.8.2 Corporate Support – Emergency Management	10
1.8.3 Department/Service Support – Emergency Plans	11
1.8.4 Local Municipal – Emergency Management	12
1.9 PANDEMIC EMERGENCY OPERATIONS	13
1.9.1 IMS Functionality for Influenza Pandemic.....	13
1.9.2 Niagara Region Pandemic Incident Management	14
1.9.3 Niagara Region IMS Functional Roles and Responsibilities.....	14
1.9.4 Command Staff/Emergency Administration	14
1.9.5 General Staff Operations and Planning/Emergency Response.....	15
1.9.6 Logistics, Finance, and Administration/Emergency Support.....	18

CHAPTER 2	PLANNING APPROACH.....	20
2.0	INTRODUCTION	20
2.0.1	Purpose and Scope.....	20
2.0.2	Goals of Pandemic Planning.....	21
2.0.3	Objectives.....	21
2.0.4	Implications and Assumptions.....	22
2.1	STEERING COMMITTEE MEMBERSHIP	23
2.1.1	Goal of the Steering Committee.....	23
2.1.2	Objectives of the Steering Committee.....	24
2.2	SUB-COMMITTEES	24
2.2.1	Surveillance Sub-Committee.....	24
2.2.2	Vaccine/Antiviral Sub-Committee.....	25
2.2.3	Public Health Measures Sub-Committee	25
2.2.4	Health Services Sub-Committee	26
2.2.5	Emergency Response Sub-Committee.....	27
2.2.6	Communications Sub-Committee	28
2.3	ETHICAL FRAMEWORK FOR INFLUENZA PANDEMIC PLANNING, RESPONSE, AND RECOVERY	28
2.3.1	Decision-Making Principles	29
2.3.2	Core Ethical Values.....	30
2.4	LEGAL/LEGISLATIVE FRAMEWORK.....	33
2.4.1	Health Promotion and Protection Act.....	33
2.4.2	Emergency Management and Civil Protection Act.....	34
2.4.3	Personal Health Information Protection Act, 2004 (PHIPA).....	34
2.4.4	Quarantine Act	34
2.4.5	Coroners Act	35
2.4.6	Occupational Health and Safety Act	35
2.4.7	Other Legislative References.....	35
CHAPTER 3	INFLUENZA PANDEMIC – GENERAL INFORMATION	37
3.0	INTRODUCTION	37
3.1	WHAT IS INFLUENZA?.....	37
3.2	WHAT IS AN INFLUENZA PANDEMIC?	38
3.3	HOW OFTEN DO INFLUENZA PANDEMICS OCCUR?.....	39
3.4	WHAT IS THE DIFFERENCE BETWEEN SEASONAL INFLUENZA AND INFLUENZA PANDEMIC?	39
3.5	WHAT IS AVIAN INFLUENZA?.....	40
3.6	WORLD HEALTH ORGANIZATION ALERT PHASES.....	40
3.7	POTENTIAL HEALTH IMPACT OF INFLUENZA PANDEMIC ON THE	41

REGION OF NIAGARA	41
CHAPTER 4 SURVEILLANCE	43
4.0 INTRODUCTION	43
4.1 GOAL OF INFLUENZA PANDEMIC SURVEILLANCE	43
4.2 OBJECTIVES OF PANDEMIC SURVEILLANCE (ADAPTED FROM OHPIP).....	43
4.3 MONITORING THE NATIONAL AND INTERNATIONAL INFLUENZA SITUATION	43
4.4 SURVEILLANCE ACTIVITIES	45
4.5 NIAGARA REGION SURVEILLANCE ACTIVITIES BY PANDEMIC PHASES	48
Appendix 4-A: MOHLTC FRI Surveillance and Reporting Guidelines	52
Appendix 4-B: Ontario Preliminary Report of an Institutional Respiratory Outbreak	53
Appendix 4-C: Ontario Final Report of an Institutional Respiratory Infection Outbreak	54
Appendix 4-D: Reporting of Student Absenteeism to NRPHD	54
Appendix 4-E: Reporting of Influenza (FRI) Activity in Physicians' Practices to NRPHD	56
Appendix 4-F: Example of Outbreak Fax Sent to Local Health Providers	57
Appendix 4-G: Surveillance Tools and Protocols	57
Appendix 4-H: MOHLTC Criteria for Acceptance of Patient Specimens Submitted to the Ontario Public Health Laboratories (OPHLs)	59
Appendix 4-I: Information Sheet Used by NRPHD to Notify Hamilton Public Health Laboratory of an Outbreak.....	60
Appendix 4-J: MOHLTC Daily Hospital Reporting Form	61
Appendix 4-K: MOHLTC Pandemic Data Collection Form for Institutions (Preliminary and Weekly Report).....	62
Appendix 4-L: MOHLTC Pandemic Data Collection Form for Institutions	63
Appendix 4-M: Investigation Protocol for Clusters	64
Appendix 4-N: MOHLTC Surveillance Protocols	64
Appendix 4-O: MOHLTC High-Risk Groups	64
Appendix 4-P: MOHLTC Case Definitions	64
CHAPTER 5 ANTIVIRALS AND VACCINE.....	65
5.0 INTRODUCTION	65
5.1 GOALS	66
5.2 OBJECTIVES	66
5.3 NIAGARA REGION ANTIVIRAL/VACCINE ACTIVITIES BY PANDEMIC PHASES	66
5.4 ANTIVIRALS	68
5.4.1 Antiviral Medications	68
5.4.2 Allocation Plans.....	70
5.5 NIAGARA REGION HEALTHCARE/ESSENTIAL SERVICE WORKERS.....	71
5.6 PERSONAL AND CORPORATE STOCKPILES.....	72
5.7 DISTRIBUTION PLANS	72

5.8	ANTIVIRAL MEDICATION DISTRIBUTION	73
5.9	VACCINES	75
5.10	NEXT STEPS	75
CHAPTER 6 PUBLIC HEALTH MEASURES		76
6.0	INTRODUCTION	76
6.1	PUBLIC HEALTH MEASURES OVERVIEW:.....	76
6.2	PUBLIC EDUCATION OVERVIEW	77
6.3	CASE MANAGEMENT.....	77
6.3.1	The Goal of Case Management	78
6.4	QUARANTINE.....	78
6.5	ACTIVE SURVEILLANCE.....	79
6.6	COMMUNITY-BASED DISEASE CONTAINMENT STRATEGIES.....	79
6.6.1	School/Day Nursery Closures	79
6.6.2	Large Gathering Restrictions/Cancellations.....	80
6.6.3	Social Distancing.....	80
6.7	NIAGARA REGION PUBLIC HEALTH MEASURES ACTIVITIES BY PANDEMIC PHASES 81	
6.7.1	Public Education Recommendations	82
6.8	ONTARIO HEALTH PLAN FOR AN INFLUENZA PANDEMIC (OHPIP)	
	RECOMMENDATIONS FOR TRAVEL AND BORDER RELATED MEASURES:.....	93
	Appendix 6-A Facts about Pandemic Influenza.....	94
	Appendix 6-B FAQ: What You Should Know about a Flu Pandemic	94
	Appendix 6-C Handwashing Technique	98
	Appendix 6-D Handwashing Sign.....	99
	Appendix 6-E Emergency Preparedness	100
	Appendix 6-F Respiratory Etiquette Sign (Cover Your Cough)	102
	Appendix 6-G How to Stop Germs at Work.....	108
CHAPTER 7 HEALTH SERVICES		111
7.0	INTRODUCTION.....	111
7.1	PRINCIPLES.....	111
7.2	COMMUNITY-BASED HEALTH CARE.....	112
7.3	ALTERNATE CARE SITES	113
7.4	SPECIAL GROUPS.....	113
7.5	ACUTE CARE FACILITIES.....	113
7.6	LONG-TERM CARE FACILITIES	114

7.7	Alternative Health Practitioners (e.g. Chiropractors, naturopaths, etc.)	114
7.8	COMMUNITY Health Centres	114
	Appendix 7-A Preparedness Plan for Niagara Physicians' Offices Structure and Communication	115
	Appendix 7-B Infection Control - Niagara Physicians Office Infection Control	119
	Appendix 7-C Patient Assessment or Patient Care Record	121
	Appendix 7-D MOHLTC Triage Criteria	122
CHAPTER 8 INFECTION CONTROL		123
8.0	INTRODUCTION	123
8.1	GENERAL INFORMATION ON INFLUENZA	123
8.1.1	Influenza	123
8.1.2	Modes of Transmission	123
8.1.3	Communicability	124
8.1.4	Incubation Period	124
8.1.5	Symptoms	124
8.2	INFECTION CONTROL PRACTICES FOR THE GENERAL PUBLIC	124
8.2.1	Hand Hygiene	125
8.2.2	Respiratory Etiquette	125
8.2.3	Avoid Touching Your Eyes, Mouth, and Nose	125
8.2.4	Stay Home if You Are Ill to Avoid Infecting Others	126
8.2.5	Use of Masks	126
8.2.6	Get Vaccinated	127
8.3	ENVIRONMENTAL CLEANING WHEN CARING FOR A PERSON WITH KNOWN OR SUSPECTED INFLUENZA AT HOME	128
8.4	INFECTION CONTROL PRACTICES FOR COMMUNITY SETTINGS	129
8.5	INFECTION CONTROL PRACTICES FOR HEALTH CARE SETTINGS	129
CHAPTER 9 PANDEMIC COMMUNICATIONS PLAN		132
9.0	INTRODUCTION	132
9.1	OBJECTIVES	132
9.2	COMMUNICATION PRINCIPLES	133
9.3	COMMUNICATIONS ACCOUNTABILITIES	134
9.4	COMMUNICATIONS COMMITTEES	135
9.4.1	Niagara Region Communications Sub-Committee	135
9.4.2	Pandemic Response Communications Group (Community-based)	136
9.5	COMMUNICATION METHODS	137
9.5.1	External Stakeholders (General Public/Community)	137
9.5.2	Internal Stakeholders	140
9.5.3	Misinformation and Rumour Management	141
	Appendix 9-A: Pandemic Phases	142
	Appendix 9-B: Public Sector Communicators Membership List	146

Appendix 9-C: Niagara Region Media Contact List..... 147
Appendix 9-D: Media Templates 148
Appendix 9-E: Incident Management Structure, Pandemic..... 151
Appendix 9-F: Niagara Region Information Flow - Draft 152
Appendix 9-G: Communications Plan for Issues and Incidents 153

ALPHABETICAL LISTING OF ACRONYMS/ABBREVIATIONS..... 154

ACKNOWLEDGEMENTS..... 157

Message from the Medical Officer of Health

The Niagara Region Public Health Department is pleased to release the Niagara Region Influenza Pandemic Plan, Version 1. This plan sets out a comprehensive region-wide approach for pandemic preparedness and emergency response planning, and provides thorough information to guide local pandemic planning activities.

This plan has been prepared by representatives from Public Health, the health care sector, emergency response providers, school boards, and numerous other community stakeholders over the past year. Working relationships among stakeholders have been strengthened and will aid in future planning and response to other emergencies and health-related issues. In addition, this document is based on current federal and provincial pandemic plans.

You will notice redundancy within the document, for example infection control practices, as we aimed to create a holistic plan, with stand-alone chapters. This document aims to be a springboard to stimulate dialogue and assist planning efforts among colleagues, stakeholders, and our broader community, as growing involvement in pandemic preparedness develops.

This is a living document and will be updated as necessary to reflect current best practices and changes to federal and provincial pandemic plans.

On behalf of myself, Dr. Sider, Dr. Feller, and the Pandemic Planning Team, I welcome any recommendations to the strengthening of this document. In terms of next steps, we are committed to further developing this document, to allow for a robust, comprehensive, and operational plan.

Dr. Robin C. Williams, MD, DPH, FRCPC
Medical Officer of Health
Niagara Region Public Health Department

Executive Summary

This is the first official pandemic influenza plan for the Region of Niagara. It has been written by a steering committee which consisted of six sub-committees: Surveillance, Vaccine and Antivirals, Public Health Measures, Health Services, Emergency Services, and Communications. These sub-committees included representatives from Public Health, the health care delivery sector, emergency response, school boards, and other community stakeholders. The plan sets out a comprehensive region-wide strategic approach to health preparedness and response planning, and provides information to guide local pandemic planning groups. It is also important to note that Niagara Region's plan is closely aligned with provincial direction provided in the Ontario Health Plan for an Influenza Pandemic (OHP/IP).

The goals of the Niagara Region Influenza Pandemic Plan are in keeping with the provincial goals, which consist of the following:

1. Minimize serious illness and overall deaths through appropriate management of Niagara's health care system, and
2. Minimize societal disruption in Niagara as a result of an influenza pandemic.

The ethical and legal frameworks outlined in the Ontario Health Plan for an Influenza Pandemic for the province also provide the templates for response within the Region of Niagara.

The Niagara Region Influenza Pandemic Plan is written in response to the existing threat of a possible influenza pandemic. Its value, however, goes beyond assisting with the community response to a possible pandemic. Many of the aspects of the influenza pandemic plan will also assist in dealing with other health-related emergencies such as biologic, chemical, radiologic, 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.

This first influenza pandemic plan represents the work that has been done to date. In some areas, the document contains concrete plans for how a particular area of response will be implemented. In other areas, it contains a range of options or an inventory of resources to assist with possible responses. This is felt to be a practical approach, as in many circumstances the exact situation requiring a response, and therefore the most appropriate response, cannot be accurately predicted in advance. In other areas of the plan, ideas are presented for future consideration and development.

This is a living document and will be reviewed as new information is available to reflect current best practices. It will require revisions as the international, federal, and provincial documents on which it is based are modified, and as further scientific information to assist with planning becomes available.

The following provides an overview of the structure and content of this planning document.

Introduction – Chapter 1

This chapter reviews the legislative authority necessary during an influenza pandemic, the aim of the emergency management, and the response necessary. It reviews the planning assumptions established in the Region of Niagara to assist in the planning process. The chapter defines the pandemic emergency management linkages such as the lead agency, corporate support, departmental/service support, and local municipal management. The IMS structure is identified and outlined within this chapter.

Planning Approach – Chapter 2

This chapter outlines the goals and planning objectives of the steering committee and the six sub-committees. In addition, the chapter reviews the ethical and legal/legislative framework which will guide the emergency response during an influenza pandemic. Each of the applicable Acts are summarized and links are provided to the entire document.

Pandemic Influenza – General Information – Chapter 3

This chapter describes the basic features of how the influenza virus spreads, typical symptoms, how long it takes for infection to develop, and how long the virus persists in the environment. It reviews Avian Influenza and why health care experts are concerned about this influenza virus in its relationship to an influenza pandemic. Pandemic is defined, as well as how often pandemics have occurred in history and the preventative strategies learned from these prior pandemics. The World Health Organization's (WHO) alert phases are reviewed. Lastly, the potential health impact on the Region of Niagara is outlined.

Surveillance – Chapter 4

This chapter reviews the importance of surveillance information in preparing for an influenza pandemic. The chapter outlines the websites and sources of information that provide information on the influenza situation around the world. Many of these sources are currently monitored on an ongoing basis and monitoring of these sites will be enhanced as a pandemic becomes more likely. The current mechanisms for monitoring influenza activity within the Region of Niagara are reviewed in the appendixes, which is primarily a "passive" system whereby reports are received by the Niagara Region Public Health Department. Additional surveillance mechanisms will be implemented to detect the arrival of influenza in the community. This form of "active" surveillance involves looking for signs of influenza through regular contact with health care organizations, schools, workplaces, and child care centres. The surveillance activities are described for each phase of the pandemic.

Antivirals and Vaccine – Chapter 5

The World Health Organization, the Public Health Agency of Canada, and the Ministry of Health and Long-Term Care (MOHLTC) 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. The availability of antiviral drugs will normally precede the availability of influenza vaccine. Until a vaccine is available, antivirals may be recommended for use preventively for specifically identified groups such as health care workers and other essential service workers. Antivirals have also been recommended for use in treating those at high risk of complications due to influenza. Priority groups for both antiviral medication and vaccination are being identified by the Ontario Ministry of Health and Long-Term Care. A plan to distribute the antiviral drugs during a pandemic is outlined; however, next steps include identifying distribution sites within the community. The issues related to personal and corporate stockpiling of antiviral drugs are being reviewed and not yet available for publication. The mass vaccination plan, including roles and responsibilities within the clinics, is included.

Public Health Measures – Chapter 6

This chapter outlines Public Health Measures that 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 cross-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). Two categories of Public Health Measures have been determined – individual and community. This chapter describes each of the measures which will be taken during each phase of the pandemic.

Health Services – Chapter 7

The delivery of health care services in the Region of Niagara during a pandemic will be extremely challenging. Niagara is already designated an under-serviced area in terms of availability of health care practitioners, and both community-based and hospital-based systems will be further stressed by employee absenteeism and the increased volume of patients seeking care. Due to the sheer size of the numbers involved, care for influenza patients must be largely community-based care and, in many cases, home-based care. In spite of this, increased numbers of patients will require emergency and in-patient care. While all health care providers will be impacted by influenza pandemic, the following groups will absorb the greatest shock: primary care physicians and nurse practitioners, ER doctors, internists and paediatricians, and all nursing personnel in ER. Optimal management of influenza in the Niagara Region will depend on 1) successfully supporting the efforts of community-based health care workers, 2) effectively utilizing scarce manpower and equipment resources in hospital and long-term care facility settings, and 3) strategically implementing alternative methods of health care delivery that are responsive, efficient, and needs based. The NRPHD pandemic plan for health services aims to facilitate the above by providing vision, education, leadership, communication tools, and limited manpower.

Infection Control – Chapter 8

This chapter outlines the basic principles of infection control related to influenza. Infection control practices are outlined for the general public. In addition, infection control references for health care and community settings are provided. Adherence to infection control practices is essential to minimize the transmission of influenza. Frequent and careful hand washing is emphasized as a key infection control strategy and may be the only significant preventive measure available, particularly early in a pandemic. If the pandemic virus behaves differently (e.g. different routes of transmission, longer incubation period or period of communicability), infection control practices will be adjusted accordingly.

Note: The Ministry of Health and Long-Term Care is continuing to develop a provincial position on personal protective equipment (i.e. masks). In the absence of a provincial position, references to masks and/or respirators throughout this document should be interpreted broadly (i.e. facial protection).

Pandemic Communications Plan – Chapter 9

This chapter outlines communication objectives, principles, and accountabilities during a pandemic. Internal and external stakeholders are identified, with specific strategies outlined to communicate pandemic key messages/information in a transparent, accessible, and real-time manner.

Chapter 1 Background

1.0 INTRODUCTION

This Influenza Pandemic - Emergency Management Strategy will serve the Regional Municipality of Niagara Emergency Management Organization (EMO) as an operational guideline for managing an appropriate response to a influenza pandemic emergency situation either occurring within, or impacting, the Regional Municipality of Niagara.

To accomplish the above, this Strategy serves to further define the provisions described within the Regional Municipality of Niagara – Emergency Management Plan specific to an influenza pandemic emergency situation. This includes refinements to the definition of an influenza pandemic as a public health emergency, the regional emergency control and operations, structure, the responsibilities of key staff, and provisions for declaring and terminating an emergency. The strategic plan will also serve as a framework for the alignment of local municipal/external governmental and non-governmental services and agencies.

For this Emergency Management Strategy to be effective, all stakeholders must be familiar with its provisions and contents. The strategic plan must be maintained on a regular basis, as government, departments, services, and structures change their response protocols over time. Therefore, it will be reviewed and maintained on a regular basis in order for it to remain effective, appropriate, and up to date.

1.1 LEGISLATIVE AUTHORITY

In the Province of Ontario, the Solicitor General is responsible to the Premier of Ontario for administration of emergency management policy and legislation. Through the provisions of the **Emergency Management and Civil Protection Act**, 2006 every municipality shall establish, maintain and empower by by-law both an Emergency Management Plan and an Emergency Management Program. This Act empowers municipalities to activate emergency management structures and make emergency declarations in response to any major threat to the life, health, safety, and well-being of residents of that municipality.

In addition, under the provisions of the **Health Protection and Promotion Act**, the Medical Officer of Health may also take actions, make declarations, and implement powers in response to any public health emergency occurring within their area of jurisdiction, in this case within the boundaries of the Regional Municipality of Niagara.

1.2 PANDEMIC EMERGENCY MANAGEMENT

An influenza pandemic emergency situation as defined within this Strategy is different from the normal daily operations carried out by the Niagara Region Public Health Department (NRPHD) and other professional/volunteer emergency first response agencies within Niagara Region, including (but not limited to) the Niagara Regional Police Service, Niagara Emergency Medical

Services, the Municipal Fire Services, Niagara Health System including the Community Services Department, and/or any other Corporate Department/Office/Board.

1.3 AIM OF PANDEMIC EMERGENCY MANAGEMENT

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

1. Minimize serious illness and overall deaths through appropriate management of Niagara's health care system, and
2. Minimize societal disruption in Niagara as a result of an influenza pandemic.

1.4 PANDEMIC INFLUENZA DEFINITIONS AND RISK FACTORS*

Influenza is a contagious respiratory illness caused by a group of viruses: Influenza Types A, B, and C. Most seasonal influenza epidemics are caused by types A and B; Type C rarely causes human illness. Influenza generally can cause mild to severe illness. Most healthy people recover from influenza without complications, some people – such as older people, young children and people with certain health conditions – are at high risk for serious complications from influenza, including bacterial pneumonia, dehydration, and worsening of chronic medical conditions (e.g. congestive heart failure, asthma, diabetes). Influenza pandemics occur when all four of the following occur:

1. A novel influenza A virus emerges.
2. The new virus spreads efficiently from human to human.
3. The new virus causes serious illness or death.
4. The population has little or no immunity to the new virus.

* Ontario Health Plan for an Influenza Pandemic 2006 (OHPIP 2006).

1.5 PANDEMIC STRATEGIC PLANNING ASSUMPTIONS

Planning assumptions are based on the cumulative (2 – 4 months) estimated impact on Niagara Region in the event of a pandemic:

Clinically ill requiring out patient care:	34,425 to 80,323
Hospitalizations:	829 to 1,934
Deaths:	326 to 760
Daily Emergency Room visits:	63,370 – 116,602

The impact estimates are based on information extrapolated from previous pandemics based on population estimates for Niagara of 421,571 – 1998 data.

Note: Based on cumulative attack rate of 35% (OHPIP 2006).

1.6 DEFINITION OF EMERGENCY

The Regional Municipality of Niagara – Emergency Management Plan defines three Tiers of emergencies that could occur as follows:

- (i) Tier One Emergency – Local Municipal
- (ii) Tier Two Emergency – Regional Emergency
- (iii) Tier Three Emergency – Provincial Emergency.

1.6.1 TIER ONE EMERGENCY – LOCAL MUNICIPAL

A Tier One Emergency – Local Municipal is any emergency occurring within the boundaries of one or more Niagara Region Local Area Municipalities that is within the combined capabilities of the Local Area Municipality/Municipalities and the Niagara Region to co-operatively respond to, effectively manage, and recover from, as declared by the Local Head of Council.

1.6.2 TIER TWO EMERGENCY - REGIONAL

A Tier Two Emergency – Regional is any large-scale or widespread emergency occurring within the boundaries of Niagara Region impacting multiple municipalities that is within the combined capabilities of the Local Area Municipalities and the Niagara Region to co-operatively respond to, effectively manage, and recover from, as declared by either the Local Municipal Heads of Councils and/or the Regional Head of Council.

In rare situations, a Regional Emergency Declaration may be required to best facilitate region-wide co-ordination of emergency support. These large-scale or widespread emergencies could include the following:

- Public Health and Safety Emergency (Disease Outbreak/Environmental Hazard).
- Critical Infrastructure Failure (Utility Outage/Water Supply Disruption).
- Natural Disaster (Severe Weather/Large Scale Flooding/Winter Storms).

1.6.3 TIER THREE EMERGENCY - PROVINCIAL

Any widespread emergency, which impacts large portions of the Province of Ontario that is within the capabilities of the Province of Ontario and its collective Municipalities to effectively

respond to, manage, and recover from (assisted or otherwise), as declared by the Premier of Ontario. Provincial emergencies could also include local emergency declarations by either the Local Municipal Heads of Councils and/or the Regional Head of Council.

1.7 INFLUENZA PANDEMIC – TIER TWO REGIONAL EMERGENCY

An influenza pandemic will have a significant impact throughout society and will involve the comprehensive Regional Emergency Management Structure.

An influenza pandemic occurring within, or impacting, the Regional Municipality of Niagara is considered a Tier Two - Regional Emergency situation that requires co-operation between the Region and the Local Municipalities in order to effectively respond.

A public health emergency, such as influenza pandemic, is the responsibility of the Niagara Region Public Health Department. Therefore, the responsibility for leading the region-wide response will be at the direction of the Medical Officer of Health as head of the Public Health Department. The criteria for declaration of an influenza pandemic in Niagara are currently being developed.

1.8 PANDEMIC EMERGENCY MANAGEMENT LINKAGES

Within Niagara Region, the responsibility for managing the response to an influenza pandemic emergency is both multi-agency and multi-jurisdictional. Therefore, pandemic response plans have been developed as part of a multi-stakeholder process.

The following clarifies the various planning linkages and responsibilities for leading an influenza pandemic response within Niagara Region.

1.8.1 LEAD AGENCY – PUBLIC HEALTH DEPARTMENT

The Niagara Region Influenza Pandemic Plan will be activated by the Medical Officer of Health in response to a pandemic emergency. It describes both the Public Health Department response and establishes the linkages, liaison, and support structures with other key pandemic response stakeholders, as described within the Ontario Health Plan for an Influenza Pandemic.

1.8.1.1 Public Health Emergency Management and Support

The Public Health Department – Emergency Response Plan may be activated at the direction of the Medical Officer of Health/Associate Medical Officers of Health in response to a pandemic emergency. Once activated, the function of the Department's Health Management Team (HMT) is to provide leadership and direction to the corporation and to the broader health sector agencies.

1.8.1.2 Public Health Emergency Operations

Under the provisions of the Niagara Region Influenza Pandemic Plan, several Public Health Department Divisions/Programs have been designated specific responsibilities during a pandemic emergency. Those responsibilities may pertain to the following:

- Disease Surveillance.
- Administration of Vaccines/Antivirals.
- Public Health Services.
- Public Health Measures.
- Emergency Services.
- Communications/Emergency Information.

The above services/provisions will be lead from within the Public Health Department Emergency Operations Centre (PHD-EOC) and supported from within the Regional Emergency Operations Centre (REOC).

1.8.1.3 Public Health Department – Emergency Operations Centre

Public Health Emergency Operations Cycle Meetings:

Once the PHD-EOC is operational, the HMT members will meet according to the Operations Cycle as set by the Medical Officer of Health/Associate Medical Officers of Health. Because the role of HMT is to lead the Corporate response to the pandemic emergency, HMT operations cycle meetings may need to be staggered in accordance with the Regional Emergency Control Group (RECG) operations cycle meetings, Provincial Teleconferences, Media forums, Community Emergency Management Co-ordination Teleconference, and Health Sector Teleconferences. Information from such venues could impact the strategic priorities and incident action plans developed by the HMT.

This will also provide for alignment between meetings because key HMT members may need to attend both HMT and RECG operations cycle meetings. These persons include the Medical Officer of Health, Emergency Management Program staff, Emergency Services Division (Niagara EMS) staff, and Health Department Communications staff.

1.8.2 CORPORATE SUPPORT – EMERGENCY MANAGEMENT

The Regional Emergency Management Plan may be activated to manage the corporate response and to centralize corporate support to the Public Health Department as Lead Agency.

1.8.2.1 Regional Emergency Operations

Once activated, the RECG will assemble at the REOC.

At this time, the Medical Officer of Health acts as Incident Manager, linking with the Senior Public Health Department staff member assigned to lead the operations within the PHD-EOC.

1.8.2.2 Provincial Emergency Operations Centre Linkages/Direction/Orders

Co-ordination with the Provincial Emergency Operations Centre (PEOC) will be managed out of the Regional Emergency Operations Centre (REOC) through either Emergency Management staff or through the Provincial Emergency Response Team (PERT) liaison member present.

In a province-wide pandemic response or area-specific emergency response, provincial direction/orders may be given to the Regional Emergency Control Group (RECG) under the authority of the **Emergency Management and Civil Protection Act**.

- Continuous liaison between the PEOC and the REOC will be necessary.
- Through the PEOC, Emergency Management Ontario (EMO) will co-ordinate the provincial response to an influenza pandemic emergency.
- EMO will provide advice and assistance to communities.
- The provincial guideline states that the RECG may be tasked with implementation of orders received.

1.8.3 DEPARTMENT/SERVICE SUPPORT – EMERGENCY PLANS

Within the Regional Municipality of Niagara exist numerous Department/Service-specific Emergency Plans. These Plans detail the explicit operations to be conducted by that Department/Service in response to the specific emergency event.

1.8.3.1 Department/Services Emergency Management and Support

Any of the Department/Service Emergency Plans may be activated in support of a pandemic emergency. These Plans may be activated by their respective Department Commissioner/Incident Commander as required to support the response of the Public Health Department as Lead Agency. These Plans may be co-ordinated from within their respective Department Emergency Command Centre or the Regional Emergency Operations Centre. The plans include the following:

- Regional Crisis Communications Plan.

- Community Services Emergency Plan.
- Public Works Department Emergency Plans (Road Closure Action Plan [RCAP]/Water Waste Water).
- Niagara Regional Police Service Emergency Plans (Public Order).
- Cross-border Contingency Plan.
- Regional Fire Mutual Aid Plan.
- Any other specific Emergency Plan.

1.8.3.2 Department/Service Business Continuity

The Department/Service-Specific Business Continuity Plans serve as the operational guideline for each department/service to maintain essential service provisions to the public during a pandemic emergency, and to describe provisions for reallocation of Department staff to assist with Public Health Emergency Operations as required.

1.8.4 LOCAL MUNICIPAL – EMERGENCY MANAGEMENT

Any of the 12 Local Area Municipalities within the Niagara Region may activate their Local Emergency Management Structure(s)/Plan(s) in response to a pandemic emergency to co-ordinate local municipal support to the Regional Emergency Management Structure and/or to the Public Health Department as Lead Agency.

1.8.4.1 Local Municipal Emergency Operations

Once activated, the Local Municipal – Community Control Group (CCG) will assemble at the Local Municipal - Emergency Operations Centre (EOC) and work in support of the Regional Emergency Control Group (RECG) working at the Regional Emergency Operations Centre (REOC). Communications/information sharing between/among the EOCs will be essential during joint pandemic emergency operations. Communications between/among centres may be structured in several ways, depending upon need as the pandemic emergency progresses. Communication methods include, but are not limited to, the following:

- Community Emergency Management Co-ordination conference calls.
- Use of Liaison Officers.
- Joint Operational Update Meetings (Regional Council Chambers).
- Sharing of electronic information (e-mails/faxes/etc.).

Local Municipal Emergency Operations Cycle Meetings:

Given that the role of the Local Municipal CCG is primarily to support the Public Health Department response, CCG operations cycle meetings should be aligned with HMT and RECG meetings for reasons previously stated.

1.8.4.2 Local Municipal Business Continuity

Local Municipal Business Continuity Plans (where applicable) serve as the operational guideline for the municipality to maintain essential service provisions to the public during a Pandemic Emergency and to describe provisions for critical services, and reallocation of staff and resources as required.

1.9 PANDEMIC EMERGENCY OPERATIONS

Pandemic emergency operations will be structured according to the Incident Management System (IMS) in support of the Public Health Department as Lead Agency. The Incident Management System is a best practice model for managing response and recovery to any large-scale emergency situation.

The IMS is modular, scalable, adaptable, and function-specific, as illustrated in Figure 1.

1.9.1 IMS FUNCTIONALITY FOR INFLUENZA PANDEMIC

During an influenza pandemic emergency, incident management response and support functions will be co-ordinated among all levels of government. To ensure effective response co-ordination, all functional plans must be integrated.

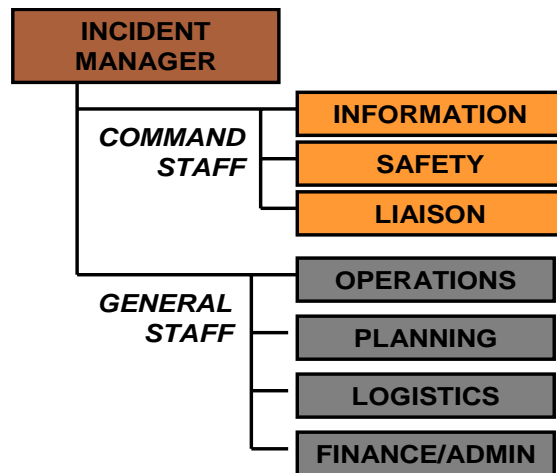


Figure 1

To accomplish the above, the Niagara Region Emergency Management Organization will apply the IMS model to its existing model of Regional Emergency Operations, as explained in greater detail below.

It is also essential that the Emergency Operations models of Niagara’s 12 Local Area Municipalities adopt a similar IMS structure to ensure that proper alignment/linkages exist between the Local Emergency Operations structures and the Regional Emergency Operations structure, in support of the Public Health Department as Lead Agency.

The function-specific roles and responsibilities of the Niagara Region Emergency Management Organization and the Local Municipal Emergency Management Organizations are as follows.

1.9.2 NIAGARA REGION PANDEMIC INCIDENT MANAGEMENT

The following is based upon the Provincial Influenza Pandemic Guidelines for Municipal Emergency Management Programs (Emergency Management Ontario), as illustrated in Figure 2.

Because the Province of Ontario recommends adaptation of the Incident Management System for Pandemic Emergency response, and because the Provincial Incident Management System (PIMS) model has yet to be applied to Municipal Emergency management Programs, Niagara Region Emergency Management - Pandemic Emergency Operations will be structured using a combination of the current regional structure (Emergency Administration, Emergency Response, and Emergency Support functionality) and the above Incident Management model as illustrated.

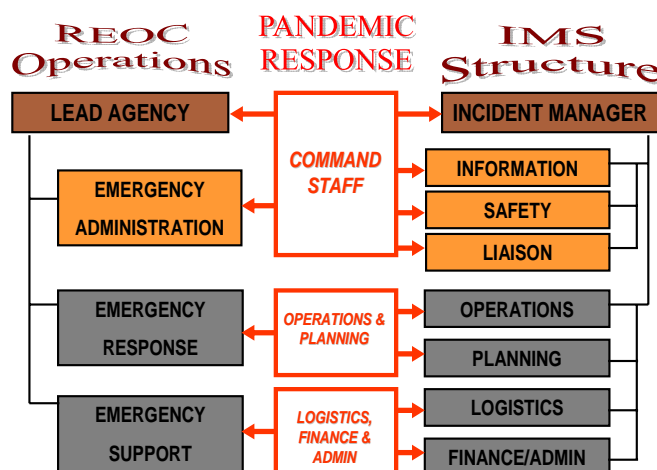


Figure 2

1.9.3 NIAGARA REGION IMS FUNCTIONAL ROLES AND RESPONSIBILITIES

Acting as Lead Regional Spokespersons for the delivery of pandemic emergency information through the mass media are the following:

- Medical Officer of Health – messaging regarding the pandemic emergency.
- Regional Chair – messaging regarding emergency management.
- Regional CAO – messaging regarding issues relevant to Regional Corporation/Staff/ Services issues.

1.9.4 COMMAND STAFF/EMERGENCY ADMINISTRATION

Command Staff are responsible for the overall co-ordination of pandemic response operations within the REOC and consist of the following positions acting collectively:

- Medical Officer of Health - Incident Manager (2.5.3).

- Regional Chair (2.4.1).
- Regional Chief Administrative Officer (2.4.2).
- Program Manager, Emergency Management (2.4.3).
- Corporate Communications Strategist (2.4.4).

NOTE: The reference number in brackets following the Command Staff titles refers to the corresponding roles and responsibilities section as outlined in the Regional Emergency Management Plan.

The responsibilities of the Command Staff in response to a pandemic emergency include, but are not limited to, the following:

- Activating the Emergency Management Plan on the recommendation of the Medical Officer of Health.
- Leading discussions of all RECG Operations Cycle meetings.
- Identifying issues/actions/needs and assignment of tasks in support of the pandemic response being led by the Public Health Department.
- Implementing powers granted to the Regional Chair and the Medical Officer of Health by the **Emergency Management and Civil Protection Act** and the **Health Protection and Promotion Act**, as required.
- Communicating with the Provincial Government (Ministry of Health and Long-Term Care/Emergency Management Ontario) to ensure appropriate linkages, direction and alignment of support.
- Determining (in co-operation with the RECG Members) the appropriate Corporate Business Continuity/Continuity of Operations measures to be undertaken to ensure essential service provisions to the public, support to essential regional service providers, and to assist essential local municipal services providers.
- Delivering public emergency information through Corporate Communications by Public Health Department Communications staff.

1.9.5 GENERAL STAFF OPERATIONS AND PLANNING/EMERGENCY RESPONSE

Operations and Planning Staff are responsible for implementing pandemic emergency response strategies such as the following:

- Supporting delivery of Public Health Services.

- Supporting delivery/enforcement of Public Health Measures.
- Other response activities as required to support the Public Health Department.

Operations and Planning Staff within the Region's Emergency Management structure consist of the following positions acting collectively:

- Chief of Police (2.5.1).
- Regional Fire Co-ordinator (2.5.2).
- Director of Emergency Services Division, Public Health Department (2.5.4).
- Commissioner of Community Services (2.5.5).
- Commissioner of Public Works (2.5.6).

The responsibilities of the Operations and Planning Staff in response to a pandemic emergency include, but are not limited to, the following:

- Activating Department/Service-specific Emergency Plans/Procedures in support of pandemic operations/the Public Health Department.
- Activating Department/Service Business Continuity/Continuity of Operations Plans to ensure essential service provisions and staff support measures.
- Implementing appropriate infection control measures within their department/service at direction of the Public Health Department.
- Directing the response of Department/Service staff in response to community need as determined by the RECG, at the direction of Medical Officer of Health.
- Participating in all RECG Operations Cycle meetings according to the schedule set by the Regional CAO.
- Assigning Corporate Communications staff to assist with dissemination of Pandemic Emergency Information.
- Assigning duties between Operations Cycle meetings.
- Communicating with Department/Service Senior Staff/Local Municipal counterparts/Private Sector Stakeholders, or any others as required to assist them/the Region in implementing pandemic emergency response operations.

Other Strategic Planning functions as identified within the Provincial Guideline document include the following:

- Assessing/supporting ongoing impacts of the following :
 - Mortality and morbidity.
 - Pandemic phase and attack rates.
 - Administration and implementation of antivirals.
 - Surge capacity and issues impacting on the health care sector.
 - Impacts on staffing and essential services.
 - Issues management, demands and requests for support.
- Addressing short-term impacts on the Regional Local Area Municipalities in planning for the provision of services and resources considering the following factors:
 - Likely duration of current pandemic phase.
 - Response to new directives from EMO.
 - Need for reception centres for travellers.
 - Need for alternate care facilities.
 - Protection of identified critical infrastructure.
 - Support to emergency service providers.
 - Continuity of government for critical services.
 - Impacts on vulnerable populations.
 - Need for volunteers/support agency assistance.
- Addressing long-term consequences on municipality:
 - Forecasting and timelines for pandemic impacts/health sector estimates.
 - Planning to address the needs of persons/families impacted by death and/or illness.
 - Financial assistance to businesses.
 - Operation of critical infrastructure impacted by supply chain issues.
 - Support of emergency services, including personnel and/or equipment.

- Recovery of essential government services.

1.9.6 LOGISTICS, FINANCE, AND ADMINISTRATION/EMERGENCY SUPPORT

Logistics, Finance, and Administration Staff are responsible for supporting the implementation of pandemic emergency response strategies (as covered above) and supporting the operations of the RECG/REOC.

Logistics, Finance, and Administration Staff within the Region's Emergency Management structure consist of the following positions acting collectively:

- Commissioner of Corporate Services (2.6.1).
- Commissioner of Human Resources (2.6.2).
- Commissioner of Planning and Development (2.6.3).
- Regional Clerk (2.6.4).

The responsibilities of the Logistics, Finance, and Administration Staff in response to a pandemic emergency include, but are not limited to, the following:

- Activating Department plan.
- Identifying availability of supplies and support.
- Monitoring levels of supplies, support, and rates of consumption.
- Advising Command and Operations sections of expected/anticipated shortages.
- Providing support in the form of services and/or supplies that could be:
 - Within the municipality (own operations).
 - Within the municipality to lead agency in multi-jurisdictional response.
 - To external municipalities and/or other parts of the province.
- Co-ordinating with the PEOC and/or PERT for supplies/services/assistance when local resources exhausted.
- Providing expenditure tracking:
 - Staff services.
 - Resources.

- Supplies.
- Equipment.
- Temporary services, rentals/purchases, private sector support.
- Compensation for service provided externally.
- Financial assistance from senior levels of government.

Chapter 2 Planning Approach

2.0 INTRODUCTION

The Niagara Region Public Health Department (NRPHD) recognizes that this first version of the plan is simply a starting point and that ongoing input from stakeholder sectors is needed. The plan will be continuously revised and updated as new information becomes available.

NRPHD initiated pandemic influenza planning in 2000, and reconvened in June 2005. In order to effectively plan for an emergency response, NRPHD 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 which are essential for an emergency response in the Niagara Region.

An ethical framework for local decision-making and references to relevant legislative authority are also presented in Chapter 2.

2.0.1 PURPOSE AND SCOPE

The Niagara Region Influenza Pandemic Plan (NRIPP) is to be utilized as a guide for responding to, and recovering from, a pandemic influenza emergency at a local level. The NRIPP has been designed for use by Regional, Municipal, and community stakeholders for various planning purposes.

Examples include the following:

- Health sector, including:
 - Board of Health.
 - Niagara Health System.
 - Community and physicians.
 - Pharmacists.
- Community health sector, laboratories.
- Mortuary professionals.
- Homeless service providers.
- Community service providers.
- Business sector.

- Faith-based organizations and agencies.
- Educational institutions (public, separate and private).
- Day nurseries.
- Non-government, volunteer community service providers.
- Public safety and correctional services.

NRPHD is the lead agency for the Region of Niagara influenza pandemic planning preparedness and response. Although local planning must be based on the federal and provincial plans, local contingency plans are required for surveillance, vaccines and antivirals administration and distribution, public health measures, health services, emergency response, and communications.

At the beginning of the planning period, the Niagara Region Influenza Pandemic Steering Committee and subsequent work groups identified specific goals and planning assumptions for each of the six sub-committees (see section 2.2). The plan will be updated continually and revised as new information, directions, or recommendations are made available. Planning gaps and next steps for all levels of government are identified throughout the plan.

Version 1 of this plan has been placed on the NRPHD web page (www.regional.niagara.on.ca/pandemic) and will be updated regularly as new information becomes available (updates will be indicated by version number). NRPHD will continue to develop and improve the plan in collaboration with other governments and local stakeholders. The release of this first version marks an important step in moving forward.

2.0.2 GOALS OF PANDEMIC PLANNING

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

1. Minimize serious illness and overall deaths through appropriate management of Niagara's health care system, and
2. Minimize societal disruption in Niagara as a result of an influenza pandemic.

2.0.3 OBJECTIVES

The following objectives were developed for the Niagara Region Influenza Pandemic Plan (NRIPP) and the planning approach:

1. Co-ordinate the Region of Niagara's response to pandemic influenza.

2. Define and recommend preparedness activities that should be undertaken before a pandemic occurs that will enhance the effectiveness of a pandemic response.
3. Make recommendations on interventions that should be implemented as components of an effective pandemic influenza response.
4. Develop a plan that can be adapted for other public health emergencies (e.g. smallpox).
5. Develop community linkages and effective working partnerships with key stakeholders that will improve the Region's preparedness for any public health emergency.
6. Work collaboratively with the provincial and federal levels in pandemic influenza planning and clarify roles, responsibilities and actions.
7. Support provincial and federal planning initiatives by being represented on planning work groups and steering committees.

2.0.4 IMPLICATIONS AND ASSUMPTIONS

Although there is alignment with the planning assumptions of the Federal and Provincial plans, the NRIPP has adapted the following general assumptions:

- The Niagara Region Influenza Pandemic Plan will be an evolving document. Niagara Region Public Health Department will continue to revise and build the Plan as local, provincial, and federal planning proceeds.
- Influenza pandemic simultaneously will affect the Region of Niagara and the Province of Ontario and other jurisdictions. Therefore, mutual aid will not be feasible.
- Influenza pandemic will be caused by a new or novel subtype of influenza A virus; therefore, the following is assumed:
 - Niagara Region likely will have very little lead time between when the World Health Organization (WHO) declares pandemic phase 6 and when the novel influenza pandemic strain is identified in Niagara.¹
 - The impact of illness upon the residents of Niagara will be significant.
 - There will be a cumulative attack rate of 15 - 35% during the first wave.
 - There will be multiple waves of influenza pandemic activity.
 - More severe illness and mortality than the usual seasonal influenza is likely in all population groups.

¹ Pandemic Phase 6 means increased and sustained transmission in the general population.

- The specific pandemic epidemiology (incidence, distribution, and control of disease in the population) will not be known until the pandemic virus emerges.
- Children and otherwise healthy adults may be at greater risk because elderly adults may have some residual immunity from exposure to a similar virus earlier in their lives if the pandemic is caused by a recycled influenza strain.
- The psychological impact on the public likely will be significant.
- Social gatherings may need to be curtailed or cancelled to prevent further spread of the infection.
- Supply chains of resources from every sector likely will be disrupted.
- The Region of Niagara will implement the Incident Management System in pandemic alert phase 5.

2.1 STEERING COMMITTEE MEMBERSHIP

The Niagara Region Influenza Pandemic Steering Committee consists of the Health Management Team of the NRPHD:

- Commissioner of Public Health Department/Medical Officer of Health.
- Associate Medical Officers of Health.
- Associate Commissioner of the Public Health Department.
- Director of Clinical Services Division.
- Director of Chronic Disease Prevention Division.
- Director of Population Health Division.
- Director of Health Protection and Promotion Division.
- Epidemiologist.
- Community Development Manager.

2.1.1 GOAL OF THE STEERING COMMITTEE

- Provide expertise and direction for the development of an influenza pandemic plan for the Region of Niagara.

2.1.2 OBJECTIVES OF THE STEERING COMMITTEE

1. Provide expert advice and liaise with work groups to ensure readiness for an influenza pandemic.
2. Ensure that a plan is created and kept up to date through liaison with those necessary to carry out the overall plan.
3. Liaise with appropriate external agencies (neighbouring health units, and cross-border, provincial, and federal governments) to co-ordinate activities.
4. Detail the decision-making process for various functions for each influenza pandemic phase.

2.2 SUB-COMMITTEES

Six sub-committees were formed with multiple stakeholder representatives to support planning for surveillance, vaccine and antiviral medications, public health measures, health services, emergency response, and communications. Each subcommittee developed planning goals at the outset of the process. Some of the goals have been achieved, while others will require development in the next steps of the planning process.

2.2.1 SURVEILLANCE SUB-COMMITTEE

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

2.2.1.1 Planning Objectives

1. Detect the pandemic strain early in Niagara Region.
2. Track the occurrence, severity, and progression of the pandemic, based on the World Health Organization (WHO) pandemic phases.
3. Monitor influenza-like illness (ILI) activity in order to do the following:
 - a) Detect unusual events (new strains, including epizootic strains, antigenic drift/shift, unusual outcomes/syndromes, unusual severity, unusual distribution).
 - b) Compare new strains with vaccine composition and recommendations.
 - c) Estimate the impact of ILI in terms of attack rate, out-patient visits, hospitalizations, and case fatality rate.

- d) Describe the affected population(s) in order to identify high-risk groups, modes of transmission, and risk and protective factors.
4. Share surveillance information with responders to help identify disease, guide prevention, control, and research; and evaluate treatment, prophylaxis, and education.

2.2.2 VACCINE/ANTIVIRAL SUB-COMMITTEE

Vaccines are the primary means to prevent disease and death from influenza during an epidemic or pandemic. Antivirals are effective for both influenza treatment and prophylaxis and may provide an adjunctive management strategy during a pandemic – particularly during the period when vaccine is not available.

2.2.2.1 Planning Objectives

1. Develop a mass immunization clinic plan – clinic sites, resources required.
2. Identify locations to store immunization supplies.
3. Develop a strategy for antiviral distribution.
4. Identify the numbers of essential service workers.
5. Develop a plan for staff immunization, education/training for delivery of immunization services, and related activities.
6. Develop a stakeholder communication plan for distribution of antivirals/vaccines (e.g. physicians/hospitals/pharmacies/clinics/workplaces, etc.).

2.2.3 PUBLIC HEALTH MEASURES SUB-COMMITTEE

Public health measures are non-medical interventions, such as contact tracing, closing of schools and limiting of public gatherings, travel restriction, and screening of people entering the country, used to reduce the spread of disease. The type of public health measures used and their timing 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).

2.2.3.1 Planning Objectives

1. Implement federal and provincial directives regionally to reduce spread of disease across Niagara.

2. Prepare and disseminate culturally appropriate resources and information to the residents of Niagara regarding self-care activities, treatment, prevention, and impact on local activities.
3. Provide support and guidance to health care workers in all Niagara settings towards a clear co-ordinated response.
4. Provide consultation services, education, and advice to other organizations, institutions, and businesses across Niagara, in response to the impact of implemented measures.
5. Identify the supports available to Niagara's vulnerable and high-risk groups towards meeting their physical, financial, and cultural needs.

2.2.4 HEALTH SERVICES SUB-COMMITTEE

The demand for influenza-related services will increase significantly, and health care settings will have to reduce or curtail other services in order to meet the population's health needs.

Health services include laboratory services, public health services, community-based agencies (e.g. physician services, home care, long-term care homes, pharmacies), emergency services, and hospital or acute care services.

2.2.4.1 Planning Objectives

1. Assure the development and implementation of appropriate health and safety precautions across the health services sector, especially the consistent and appropriate use of personal protective equipment (PPE), and establish mechanisms to assure timely distribution of equipment and supplies necessary for these purposes.
2. Establish mechanisms to assure that febrile respiratory illness (FRI) screening and response are consistently carried out across the health services sector.
3. Develop communication plans and processes such that health services sector members are kept up to date regarding epidemiology of evolving pandemic, system status and stresses, health human resources capacity, etc.
4. Develop clinical diagnosis and treatment guidelines and protocols consistent with those of the federal and provincial pandemic plans.
5. Establish systems to distribute and monitor the usage of antiviral medications (both treatment and prophylactic uses), antibiotics, and influenza vaccines across the health services sector.

6. Assure that health care services and programs across the health services sector are prioritized, such that there is a consistent and appropriate reduction and/or cancellation of non-essential programs in the face of community-wide pandemic activity.
7. Develop human resources plans, especially skills-based surge capacity, to address expected reductions in staff willing/able to work across the health services sector.
8. Develop and designate isolation facilities, especially hospital and long-term care facility options, for the care of seriously ill influenza patients.
9. Designate and plan for alternate care facilities outside of the existing hospital and long-term care facilities if needed, as a result of community burden-of-illness that exceeds present health care system capacity.
10. Assure appropriate co-ordination and use of regional laboratory capacity. Assure the development and implementation of appropriate health and safety precautions across the health services sector, especially the consistent and appropriate use of PPE, and establish mechanisms to assure timely distribution of equipment and supplies necessary for these purposes.

2.2.5 EMERGENCY RESPONSE SUB-COMMITTEE

Emergency response is the broad range of activities required to respond to any emergency. It includes measures to prepare for emergencies, such as developing and testing plans and establishing communication systems. It also includes the services provided by emergency responders, such as police and firefighters, and by workers who provide necessary community services, such as utility and telecommunications workers, and social service providers.

2.2.5.1 Planning Objectives

1. Establish a collaborative structure to facilitate effective communications and co-ordination of service delivery between emergency response personnel and the Public Health Department.
2. Identify and establish structural and functional linkages between emergency services and the Public Health Department Emergency Response Plan.
3. Identify and establish the composition of Influenza Pandemic Emergency Response Planning Working Groups including other pandemic functionaries, external stakeholders and agencies.
4. Provide leadership and directional guidance in order to facilitate emergency response planning activities (i.e. the identification of essential services, roles and responsibilities, including the development and implementation of processes and procedures by Pandemic Phase).

2.2.6 COMMUNICATIONS SUB-COMMITTEE

Effective internal and external communications provide the backbone for a co-ordinated 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 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 locally and within workplaces.

2.2.6.1 Planning Objectives

1. Ensure that the Niagara Region, with Ministry of Health and Long-Term Care support, is prepared to respond to community communication needs (i.e. general public, health care sector, and service providers).
2. Provide consistent, co-ordinated, effective, and ongoing public and provider communications regarding the pandemic plan and in the event of a pandemic outbreak.
3. Identify the communication activities that should occur during each phase of the pandemic.
4. Ensure that health care providers have access to transparent, accessible, accurate, real time information that will help them respond to challenges during each phase of the pandemic.
5. Develop a plan to meet sustained intense media demands during the course of the influenza pandemic, and ensure that the materials and means to meet those demands are established, available, and identified.
6. Encourage and assist the steering committee with effective collaboration and communication across pandemic planning sub-committees.

2.3 ETHICAL FRAMEWORK FOR INFLUENZA PANDEMIC PLANNING, RESPONSE, AND RECOVERY²

All levels of government will have to make difficult decisions based on an ethical framework. Ethical considerations include honesty and transparency, with clear reasons provided for decisions related to the allocation or prioritization of scarce resources, e.g. access to vaccine

² Adapted from: Gibson, J. et al. Ethics in a Pandemic Influenza Crisis. Framework for Decision Making. Joint Centre for Bioethics. University of Toronto 2005.

and antiviral medications. An ethical framework ensures stakeholder involvement in the decision-making process, with accurate communication.

The following outlines how the Niagara Region Influenza Pandemic Plan has adopted the Ethical Framework for Decision-Making as outlined in the Ontario Health Plan for an Influenza Pandemic.

2.3.1 Decision-Making Principles

Open and transparent - The process by which decisions are made must be open to scrutiny and the basis should be explained. The influenza pandemic plan for the Region of Niagara was developed by the Niagara Region Influenza Pandemic Steering Committee and the following sub-committees:

- Surveillance.
- Vaccine and Antivirals.
- Public Health Measures.
- Health Services.
- Emergency Response.
- Communications.

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

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

Planning decisions made were based on input from the following:

- Steering Committee members.
- Work group members.
- Other sector-specific stakeholders.
- Infectious disease/infection control experts.
- Current literature.

- Medical Officer of Health and Associate Medical Officers of Health.

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

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

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

Niagara's response to an influenza pandemic will be based on the following core ethical values as outlined in the OHPIP:

2.3.2 CORE ETHICAL VALUES

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

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

Protection of the Public from Harm – Public measures may be implemented to protect the public from harm.

Protective measures will include the following:

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

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

Proportionality – Restrictions on individual liberty and measures taken should not exceed the minimum required to address the level of risk or community needs.

Niagara will do the following:

- Use the least restrictive or coercive measure possible when limiting or restricting liberties or entitlements.
- Use more coercive measures only in circumstances where less restrictive means have failed to achieve appropriate public health ends.

Privacy – Individuals have a right to privacy, including the privacy of their health information.

Niagara will do the following:

- Determine whether the good intended is significant enough to justify the potential harm of suspending privacy rights (e.g. potential stigmatization of individuals and communities).
- Require private information only if there are no less intrusive means to protect health.
- Limit any disclosure to only that information required to achieve legitimate public health goals.
- Take steps to prevent stigmatization (e.g. public education to correct misperceptions about disease transmission).

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

Niagara will do the following:

- Strive to preserve as much equity as possible between the needs of influenza patients and patients who need urgent treatment for other diseases.
- Establish fair decision-making processes/criteria.
- Identify diversity and respect and, wherever possible, ethno-cultural faith practice.

Duty to Provide Care – Health care workers have an ethical duty to provide care and respond to suffering. During a pandemic, demands for care may overwhelm health care workers and their institutions and create challenges related to resources, practice, liability, and workplace

safety. Health care workers may have to weigh their duty to provide care against competing obligations (i.e. to their own health, family and friends). When providers cannot provide appropriate care because of constraints caused by the pandemic, they may be faced with moral dilemmas. To support providers in their efforts to discharge their duty to provide care, Ontario and/or Niagara will:

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

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

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

Solidarity – An influenza pandemic will require solidarity among community, health care institutions, public health units, and government. Solidarity requires good communication and open collaboration within and between these stakeholders to share information and to co-ordinate health care delivery.

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

2.4 LEGAL/LEGISLATIVE FRAMEWORK

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

- Health Promotion and Protection Act R.S.O. 1990 c. H. 7 (HPPA).
- Emergency Management and Civil Protection Act R.S. O. 1990, c. E. 9.
- Personal Health Information Protection Act, 2004 S.O. 2004, c. 3 Sched. A (PHIPA).
- Quarantine Act R.S.C. 1985, c. Q-1.
- Coroners Act R.S.O. 1990 c. C.37.
- Occupational Health and Safety Act R.S.O. 1990 c.O.1.
- Niagara Region Emergency Management Plan 2006 Schedule A to By-Law 33-2004.
- The Ambulance Act.

2.4.1 HEALTH PROMOTION AND PROTECTION ACT

In Ontario, the Health Protection and Promotion Act 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. Regulations published under the authority to the HPPA assist to control the spread of communicable and reportable diseases. Regulation 569, Reports, establishes the parameters within which those who are required to report communicable and reportable diseases to the 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 or identified group to isolate himself/herself or themselves, to place himself/herself or themselves under the care and treatment of a physician (if the disease is a virulent disease, as defined in

the HPPA), or to submit to an examination by a physician. 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.

http://www.e-laws.gov.on.ca/DBLaws/Regs/English/900569_e.htm

2.4.2 EMERGENCY MANAGEMENT AND CIVIL PROTECTION ACT

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

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

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

2.4.3 PERSONAL HEALTH INFORMATION PROTECTION ACT, 2004 (PHIPA)

PHIPA regulates the collection, use, and disclosure of personal health information by health information custodians (a defined term in the Act) and includes physicians, hospitals, long-term care facilities, 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 the 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.

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

2.4.4 QUARANTINE ACT

The purpose of the federal Quarantine Act is to prevent the introduction and spread of communicable diseases in Canada. It is applicable to persons and conveyances arriving in, or in the process of departing from, Canada. It includes a number of measures to prevent the spread of dangerous, infectious and contagious diseases including the authority to screen, examine, and detain arriving and departing individuals, conveyances, and their goods and

cargo, which may be a public health risk to Canadians and those beyond Canadian borders. Bill C-12, the new Quarantine Act, received Royal Assent on May 12, 2005. The new Act came into force December 2006. The new legislation updates and expands the existing legislation to include contemporary public health measures including referral to public health authorities, detention, treatment, and disinfestation. It also includes measures for collecting and disclosing personal information if it is necessary to prevent the spread of a communicable disease.

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

2.4.5 CORONERS ACT

When 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.

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

2.4.6 OCCUPATIONAL HEALTH AND SAFETY ACT

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

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

2.4.7 OTHER LEGISLATIVE REFERENCES

Ambulance Act, 1990.

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

Public Hospitals Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90p40_e.htm

Private Hospitals Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90p24_e.htm

Nursing Homes Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90n07_e.htm

Charitable Institutions Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90c09_e.htm

Homes for the Aged and Rest Homes Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90h13_e.htm

Health Facilities Special Orders Act, 1990.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90h05_e.htm

Long-Term Care Act, 1994.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/94l26_e.htm

Community Care Access Corporations Act, 2001.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/01c33_e.htm

Regulated Health Professions Act, 1991 (RHPA).

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91r18_e.htm

Medicine Act, 1991.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91m30_e.htm

Nursing Act, 1991.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91n32_e.htm

Medical Laboratory Technology Act, 1991.

http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/91m28_e.htm

Health Care and Residential Facilities Regulation

http://www.e-laws.gov.on.ca/DBLaws/Regs/English/930067_e.htm

Chapter 3 Influenza Pandemic – General Information

3.0 INTRODUCTION

Influenza is a common virus that is present in our community primarily on a seasonal basis. A pandemic is a world-wide 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.

Chapter 3 provides an overview of information about influenza, pandemics, and the current concern regarding 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 Region of Niagara.

3.1 WHAT IS 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 subtyped according to two proteins on the surface of the virus: hemagglutinin (H) and neuraminidase (N). Sixteen different H subtypes and nine different N subtypes 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 by direct contact. Droplet spread refers to spray with relatively large, short-range droplets produced by sneezing, coughing, talking, or singing. These droplets may spray up to one metre (about three feet) and can land directly in 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. (Please see chapter 8 for more information on influenza modes of transmission.)

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 1-3 days. Humans are the primary source for human infections. However, birds and mammals such as swine can provide sources of new human subtypes of influenza virus.

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

- Sudden onset of fever, headache, chills, and 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. Specifically, they are at increased risk for developing complications, such as pneumonia, which can be fatal.

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 world-wide disease surveillance.

3.2 WHAT IS AN INFLUENZA PANDEMIC?

An influenza pandemic 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 (reassortment) 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 the following:

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

Since people have little or no immunity to this new strain, it can spread quickly causing outbreaks in one or more countries or world-wide. 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.

3.3 HOW OFTEN DO INFLUENZA PANDEMICS OCCUR?

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 world-wide, 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.

3.4 WHAT IS THE DIFFERENCE BETWEEN SEASONAL INFLUENZA AND INFLUENZA PANDEMIC?

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

Seasonal flu	Pandemic flu
Occurs every year (October to April).	Occurred 3 times in the 20th century.
Occurs during the winter.	Occurs at any time of the year.
For most people it is an unpleasant but not life-threatening infection.	It is typically a more serious infection for everyone.
Most people recover within one or two weeks without requiring medical treatment.	Some people will not recover even with medical treatment. Due to the higher severity of illness, there is greater risk of death.
The very young, the very old, and people with chronic illness are most at risk of serious illness.	People of every age may be at risk of serious illness.
Vaccine is available in advance.	Vaccine will not be available in advance.
Annual vaccination is recommended especially for those at risk of serious illness.	The whole population will be vaccinated when vaccine becomes available.
Antiviral drugs are available to treat those at special risk.	Antiviral drugs are likely to be in limited supply and will be used to best effect according to how the disease develops.

*

*Adapted from:

Department of Health (England) "Pandemic Flu: Frequently Asked Questions" October 19 2005 <http://www.dh.gov.uk>

Ministry of Health and Long-term Care "Differences between seasonal or 'annual' influenza and the influenza pandemic" Fact Sheet.

3.5 WHAT IS 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 cause 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. 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/en/index.html

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

3.6 WORLD HEALTH ORGANIZATION ALERT PHASES

The backbone of pandemic planning is the World Health Organization (WHO) Classification System, developed in 1999 and revised in April 2005. The WHO phases are meant to guide planning efforts and are incorporated into the Canadian, Ontario, and Niagara plans. The WHO will identify which phase is currently occurring internationally and will declare the beginning of a pandemic. The Public Health Agency of Canada (PHAC) and the Ministry of Health and Long-Term Care will declare the beginning of the pandemic period in Canada and Ontario, respectively.

The following table identifies the WHO Pandemic Phase Model:

World Health Organization Pandemic Phases

Interpandemic Period*	<p>Phase 1 No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.</p> <p>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.</p>
Pandemic Alert Period **	<p>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.</p> <p>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.</p> <p>Phase 5 Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).</p>
Pandemic Period	<p>Phase 6 Pandemic phase: increased and sustained transmission in general population.</p>
Postpandemic Period	Return to Interpandemic period

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

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

3.7 POTENTIAL HEALTH IMPACT OF INFLUENZA PANDEMIC ON THE REGION OF NIAGARA

Unlike Severe Acute Respiratory Syndrome (SARS), where disease transmission was primarily confined to hospitals and close household contacts, an influenza pandemic will spread quickly throughout the general community.

According to the Canadian Pandemic Influenza Plan (CPIP), during a 'normal' influenza epidemic (occurring every winter in North America), an average of 5% to 20% of the public

becomes ill. The highest rates of infection and clinical illness occur in children but serious complications and death occur mainly in the elderly. Influenza pandemic can lead to as many as 15% to 35% of the population becoming ill. According to the CPIP, previous influenza pandemics have observed multiple waves. The duration of each influenza pandemic wave is likely to be six to eight weeks in length.

Planning for influenza pandemic uses estimates of morbidity and mortality based on 15% to 35% attack rates. When a pandemic begins, epidemiological data will provide more specific information and the impact on Niagara Region may be different.

Estimated Direct Health
Cumulative (2 – 4 Months) Impact
of Influenza Pandemic on the Region of Niagara

Description	Based on 15% Attack Rate	Based on 35% Attack Rate
Outpatient visits	34,425	80,323
Require hospitalization	829	1,934
Deaths	203	475

Based on The Estimated Impact of Influenza Pandemic in Ontario by Public Health Unit, Ontario Health Plan for Influenza Pandemic:

http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/ohpip/app_1.pdf

Chapter 4 Surveillance

4.0 INTRODUCTION

Surveillance is the ongoing and systematic collection, analysis, interpretation, and timely dissemination of health-related information required by public health decision-makers. Its ultimate purpose is to facilitate and inform planning and action by public health authorities in order to minimize the morbidity and mortality resulting from an influenza pandemic.

4.1 GOAL OF INFLUENZA PANDEMIC SURVEILLANCE

The goal of influenza pandemic surveillance is to provide timely, accurate, and relevant statistical data and information to facilitate stakeholder decision-making in the Niagara Region and the Province during an influenza pandemic.

4.2 OBJECTIVES OF PANDEMIC SURVEILLANCE (ADAPTED FROM OHPIP)

- Detect the pandemic strain in the Niagara Region as early as possible.
- Track the occurrence, severity, and progression of the pandemic, based on the Ontario Health Plan for an Influenza Pandemic (OHP/IP)/World Health Organization (WHO) pandemic phases.
- Monitor influenza-like illness (ILI) activity in order to:
 - Detect unusual events (new strains, unusual outcomes or syndromes, and unusual severity or distribution of ILI).
 - Estimate the impact of ILI in terms of attack rate, outpatient visits, hospitalizations, and case fatality rate.
 - Describe the affected population(s) in order to identify high risk groups, modes of transmission, and risk and protective factors.
- Share surveillance information with key Niagara stakeholders to help identify disease, guide prevention, control, research, and evaluate treatment, prophylaxis, and education.

4.3 MONITORING THE NATIONAL AND INTERNATIONAL INFLUENZA SITUATION

On an ongoing basis, the international influenza situation is closely monitored by WHO, Health Canada, and Public Health Agency of Canada (PHAC), etc. (as listed below). Information from these sources is used to monitor the spread of avian influenza outbreaks, the extent of human disease, and any evidence of human-to-human transmission. In the event of a pandemic,

these sources will be used to better understand the outbreak and the extent of world-wide transmission. Some of the sources of this information are as follows:

World Health Organization (WHO): The WHO provides updates on the world-wide situation in humans based on official reports. As well, the WHO publishes documents that guide in pandemic influenza planning.

http://www.who.int/csr/disease/avian_influenza/en/

World Organization for Animal Health (OIE): The OIE monitors, analyzes and disseminates information regarding animal health based on official reports and provides veterinary expertise on an international basis.

http://www.oie.int/eng/en_index.htm

Public Health Agency of Canada (PHAC): The PHAC is the Canadian source of pandemic information and advice to travellers. PHAC publishes a weekly bulletin called FluWatch that provides information regarding the influenza situation in Canada, and elsewhere in the world. FluWatch contains information on laboratory-based influenza virus identification; influenza-like illness reporting by sentinel physicians across the country; and reporting of influenza activity by provincial and territorial epidemiologists.

<http://www.phac-aspc.gc.ca/fluwatch/index.html>

Canadian Network of Public Health Intelligence (CNPHI): CNPHI is a secure web-based site designed to assist public health professionals in co-ordinating their response to communicable disease issues. It contains information posted by public health authorities across Canada on the outbreaks they are managing. CNPHI is run by the Public Health Agency of Canada. For access to this site, a request must be made via e-mail to cnphi_admin@phac-aspc.gc.ca

Centers for Disease Control and Prevention (CDC): The CDC is the American source of pandemic information and advice to travellers.

<http://www.cdc.gov/flu/>

ProMED: ProMED is an e-mail distribution list that monitors media reports and official reports. ProMED also receives reports from local observers and readers. Reports are reviewed by experts and then posted via e-mail to over 300,000 subscribers in 150 countries.

<http://www.promedmail.org/pls/promed/>

Ministry of Health and Long-Term Care (MOHLTC): The Public Health Division of the Ministry of Health and Long-Term Care publishes a weekly influenza bulletin. This bulletin contains information on the level of influenza activity in each health unit area in Ontario, and the number of long-term care facilities experiencing outbreaks.

http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_mn.html

In addition to these official sources, monitoring is occurring behind the scenes for influenza and other communicable diseases. Sources of behind-the-scenes monitoring include the following:

Global Public Health Intelligence Network (GPHIN): GPHIN monitors reports from news wires and websites to obtain information regarding world-wide communicable diseases. It monitors for this information in 7 languages, 24 hours a day. The information is filtered by an automated process and then analyzed by officials at the Public Health Agency of Canada. Relevant information is rapidly forwarded to end users via the internet.

http://www.phac-aspc.gc.ca/media/nr-rp/2004/2004_gphin-rmispbk_e.html

Center for Infectious Disease Research and Policy (CIDRAP), University of Minnesota: CIDRAP conducts and interprets epidemiologic research and translates it into real-world applications and solutions. They have been monitoring ProMED and media reports to keep statistics on what is occurring in the current avian influenza situation.

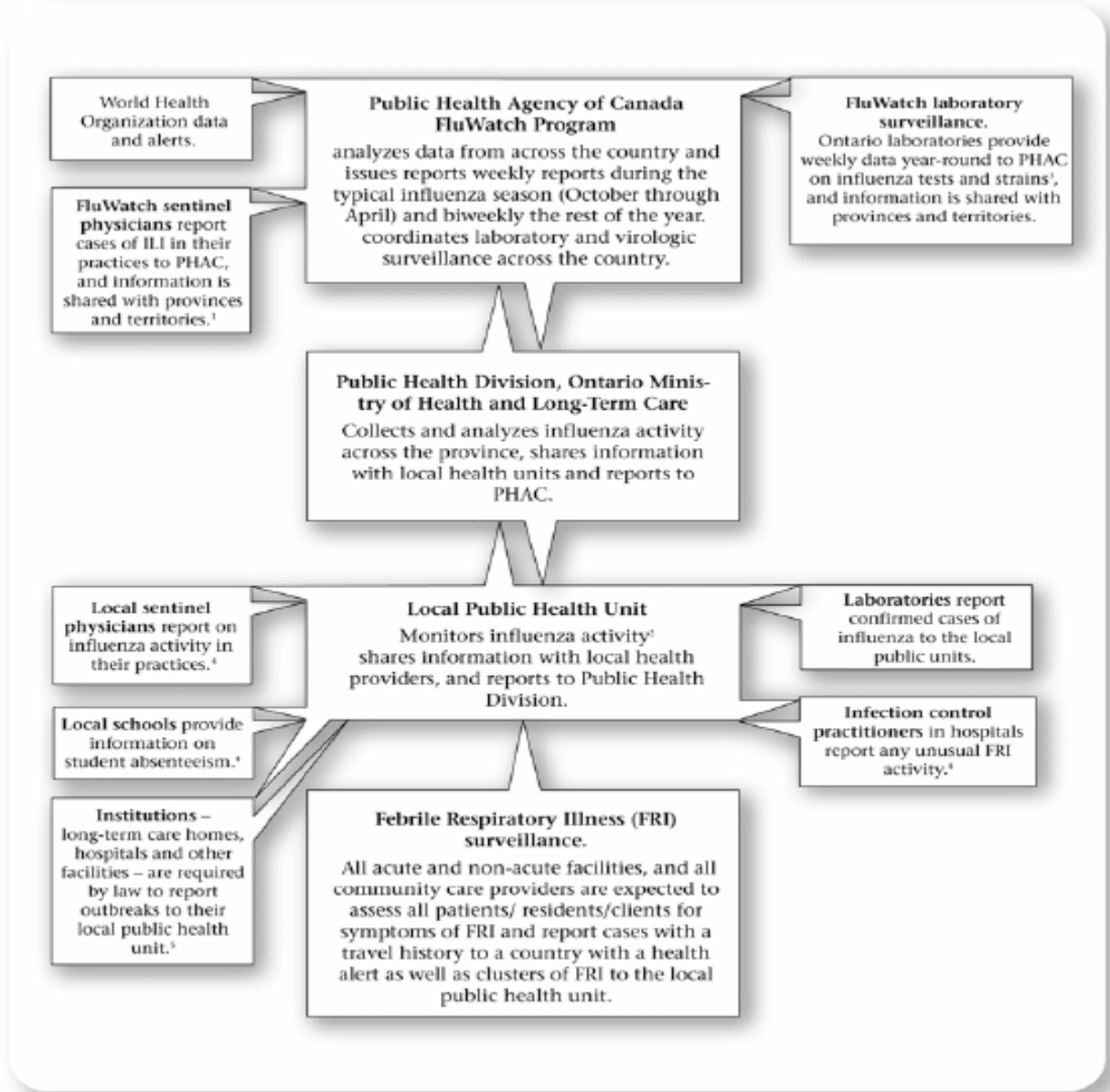
<http://www.cidrap.umn.edu/cidrap/center/mission/index.html>

Increasingly, monitoring of influenza activity in animals is becoming part of surveillance mechanisms. A recent report by the Canadian Co-operative Wildlife Health Centre, in collaboration with federal and provincial partners, has identified the normal types of influenza carried by migratory birds in 7 Canadian provinces.

4.4 SURVEILLANCE ACTIVITIES

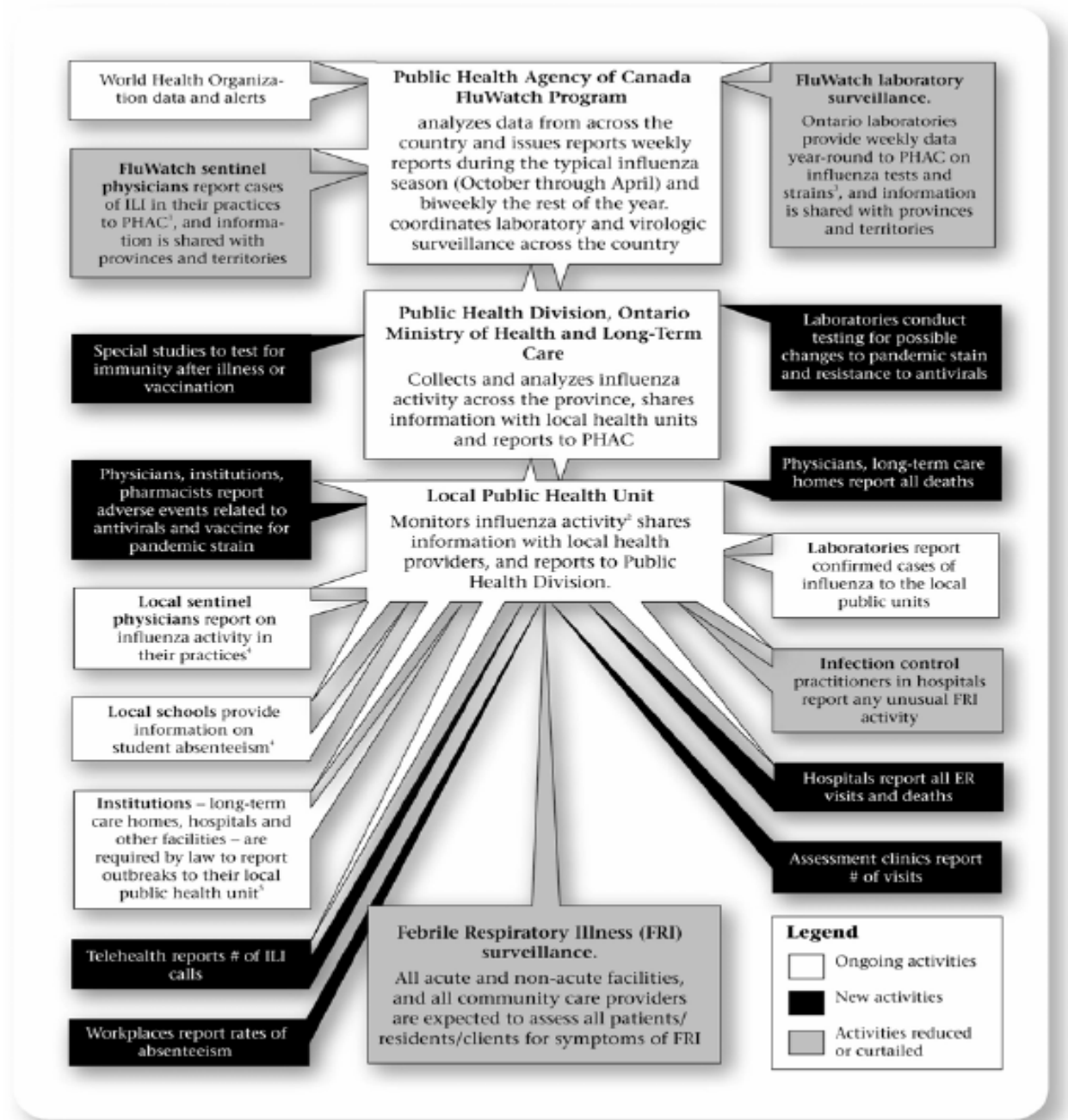
The Ontario Health Plan for an Influenza Pandemic (OHP/IP) outlines a variety of surveillance activities that will be co-ordinated at the provincial level in the event of an influenza pandemic. Some of these activities are relevant at the local level and will generate responsibilities within the Niagara Region. Figures 1 and 2 illustrate surveillance activities that will need to occur in the Interpandemic and Pandemic Alert Periods (WHO Pandemic Phases 1 through 5), as well as in the Pandemic Period (Phase 6) at the federal, provincial, and local levels.

Figure 1: Surveillance Activities During the Interpandemic and Pandemic Alert Periods



Ontario Health Plan for an Influenza Pandemic, September 2006

Figure 2: Proposed Surveillance Activities During the Pandemic Period



Ontario Health Plan for an Influenza Pandemic, September 2006

4.5 NIAGARA REGION SURVEILLANCE ACTIVITIES BY PANDEMIC PHASES

Pandemic Phase	Surveillance Activities
<p>Phase 1: No new influenza virus subtypes have been detected in humans.</p>	<ul style="list-style-type: none"> • Maintain directory of current contact information for all local health-care providers. • Febrile respiratory illness (FRI) surveillance according to MOHLTC guidelines and reporting to Public Health Department (Appendix 4-A). • Institutional reporting of respiratory outbreaks to NRPHD (Appendix 4-B & 4-C). • Reporting of unusual FRI/enteric/pneumonia activity to NRPHD. • Laboratory reporting of confirmed cases of influenza to NRPHD. • Reporting of student absenteeism to NRPHD (Appendix 4-D). • Reporting of influenza (FRI) activity in physicians' practices to NRPHD (Appendix 4-E). • Monitoring of local influenza activity. • Sharing of information with local health providers Report to MOHLTC Public Health Division, e.g. outbreak faxing, FluWatch (Appendix 4-F).
<p>Phase 2: A circulating animal influenza virus subtype poses a substantial risk of human disease.</p>	<ul style="list-style-type: none"> • Continue all Phase 1 activities. • Disseminate alerts and pertinent information through NRPHD Communications Sub-committee. • Receive notification of any positive results for local domestic and wildlife species.
<p>Phase 3: Human infection(s) with a new subtype, but no human-to-human transmission or</p>	<ul style="list-style-type: none"> • Continue with all Phase 1 and 2 activities. • Share surveillance information with stakeholders, such as strain typing, locale, and current phase.

Pandemic Phase	Surveillance Activities
<p>spread to a close contact only.</p>	<ul style="list-style-type: none"> • Ensure that surveillance data is being collected and forwarded to MOHLTC. • Maintain vigilance in FRI screening and ensure reporting to NRPHD. • Confirm that surveillance tools and protocols required for later phases (e.g. investigating clusters, detecting entry of the pandemic strain) are available and up to date (Appendix 4-G). • Comply with standards and protocols for collecting, storing, and transporting specimens (Appendix 4-H & 4-I).
<p>Phase 4: Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that virus is not well adapted to humans.</p>	<ul style="list-style-type: none"> • Continue with all Phase 1, 2, and 3 activities. • Identify surveillance/information needs based on MOHLTC tools should pandemic progress to next phase. • Disseminate alerts and information about the progress of the pandemic to increase awareness and inform both the Public Health Department and clinical decision-makers via the NRPHD Communications Sub-committee.
<p>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.</p>	<ul style="list-style-type: none"> • Continue with all Phase 1, 2, 3, and 4 activities. • Increase current surveillance activities. • Implement any new or updated febrile respiratory illness (FRI)/severe respiratory illness (SRI) surveillance tools from MOHLTC or internally created (Appendix 4-J, 4-K & 4-L). • Review and revise surveillance information required for a potential progression to Phase 6 (pandemic).
<p>Phase 6a: Increased and sustained transmission in</p>	<ul style="list-style-type: none"> • Continue with all Phase 1, 2, 3, 4, and 5 activities.

Pandemic Phase	Surveillance Activities
<p>general population.</p>	<ul style="list-style-type: none"> • Implement investigation protocol for clusters (Appendix 4-M). • Utilize active surveillance protocols to detect entry of cases of pandemic strain in Niagara Region (Appendix 4-N). • Evaluate current epidemiology of pandemic to direct priorities to high-risk groups based on MOHLTC criteria for high risk (Appendix 4-O). • Adopt and implement revised MOHLTC case definitions as necessary (Appendix 4-P). • Provide timely data and report to Province. • Participate in special studies and establish dedicated teams to activate the studies, in collaboration with other public health authorities. • Implement laboratory testing protocol (Appendix 4-H). • Distribute pandemic data collection forms and protocols for electronic transmission of data to appropriate pandemic stakeholders (e.g. hospitals, LTC facilities). • Continue with heightened surveillance until no longer sustainable/needed to collect information on affected populations or priority groups. • Disseminate pandemic alerts and information as identified through Communications Sub-committee.
<p>Phase 6b: Regional and multi-regional epidemics</p>	<ul style="list-style-type: none"> • Distribute and utilize MOHLTC pandemic reporting tools (e.g. mortality, morbidity, ILI activity). • Modify definitions, activities, processes, and tools as required, based on direction from the

Pandemic Phase	Surveillance Activities
Phase 6c: Pandemic subsiding	<p>Province.</p> <ul style="list-style-type: none"> • Disseminate epidemiological summaries to key stakeholders to characterize outbreaks and impacts. • Continue to provide timely regional data and analysis for regional and provincial analysis. • Maintain ongoing surveillance to detect second or later waves. • Monitor vaccine and antiviral efficacy, adverse reactions, and coverage, once vaccine available in conjunction with the Vaccines and Antivirals Sub-committee. • Work with MOHLTC to estimate burden of disease during outbreak period and develop epidemiological summaries to describe the impact of pandemic waves in Ontario. • Scale down enhanced surveillance as appropriate and resume inter-pandemic response. • Review and adopt case definition, and evaluate the current definition. • Work with MOHLTC to estimate burden of disease during outbreak period and develop epidemiological summaries to describe the impact of pandemic waves in Ontario. • Scale down enhanced surveillance as appropriate and resume inter-pandemic response. • Review and adopt case definition, and evaluate the current definition.

* Contact information can be obtained through the NRPHD Outbreak Emergency Measures database.

APPENDIX 4-A: MOHLTC FRI SURVEILLANCE AND REPORTING GUIDELINES

The MOHLTC, Provincial Infectious Diseases Advisory Committee (PIDAC), Preventing Febrile Respiratory Illnesses is available on the following website:

http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_fri_092805.pdf

APPENDIX 4-B: ONTARIO PRELIMINARY REPORT OF AN INSTITUTIONAL RESPIRATORY OUTBREAK

(note that Appendix D below refers to the MOHLTC Appendix in the OHPIP)

Please FAX preliminary report to the Ministry of Health and Long-Term Care, Public Health Division, Call Centre at (416) 326-0694 within 24 Hours of receiving notification of an outbreak. Please RE-FAX if new information is added, check mark update box and write update number, e.g. Update #1.

**Appendix D 2005/2006
Ontario Preliminary Report of an Institutional Respiratory Outbreak**

<input type="checkbox"/> Initial Notification		<input type="checkbox"/> Update# _____	For MOHLTC use only _____
Health Unit Information		Institution Information	
Outbreak #:		Institution Master #:	
Health Unit Name:		Institution Name:	
Investigator Name:		Institution Address:	
Contact Phone #:		City/Town of Institution:	
Email (optional):		Postal Code of Institution:	
Date Outbreak Reported to Health Unit (yyyy/mm/dd):		Date of onset of illness in first case (yyyy/mm/dd):	
Institution Type			
LTCH: <input type="checkbox"/> Nursing Home <input type="checkbox"/> Public Home for Aged <input type="checkbox"/> Charitable Home for Aged <input type="checkbox"/> Other (specify) _____		Hospital: Operates under <i>Public Hospitals Act</i> ? <input type="checkbox"/> Yes <input type="checkbox"/> No Type: <input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Psychiatric	
Other: <input type="checkbox"/> Retirement Home (with more than 10 residents) <input type="checkbox"/> Children's Residence		<input type="checkbox"/> Facilities operating under the <i>Developmental Services Act</i> <input type="checkbox"/> Other (specify) _____	
Outbreak Description		Symptoms	
	Residents or Patients	Staff*	Please specify by check boxes OR free text below: <input type="checkbox"/> Abnormal Temp. (≥37.5°C or ≤35.5°C or temp. known to be abnormal for that person) <input type="checkbox"/> Cough <input type="checkbox"/> Nasal Congestion/Sneezing <input type="checkbox"/> Sore throat/Hoarseness/Difficulty swallowing <input type="checkbox"/> Tiredness (malaise) <input type="checkbox"/> Muscle aches (myalgia) <input type="checkbox"/> Loss of appetite <input type="checkbox"/> Headache <input type="checkbox"/> Chills <input type="checkbox"/> Swollen/Tender glands in neck (cervical lymphadenopathy) Other Symptoms: _____ _____
Total # in Institution			
Total # in affected area/unit			
Total # in institution* vaccinated prior to outbreak•			
Total # cases			
# Cases admitted to hospital			
# Cases with pneumonia (CXR+)			
# Deaths among cases			
Laboratory Data			
Lab Confirmation: <input type="checkbox"/> Yes (check causative organism(s)) <input type="checkbox"/> Pending <input type="checkbox"/> Specimens NOT submitted			
<input type="checkbox"/> Influenza A	<input type="checkbox"/> Influenza B	<input type="checkbox"/> RSV	<input type="checkbox"/> Rhinovirus
<input type="checkbox"/> Parainfluenza (type if available) _____		<input type="checkbox"/> Adenovirus	
<input type="checkbox"/> Enterovirus (specify if available) _____		<input type="checkbox"/> Other (specify) _____	
Comments: _____ _____			

* If this information is not available, especially for large institutions, i.e. acute care hospitals, the total # of individuals that were vaccinated in the affected unit/area can be reported.
 • Staff: All persons who carry on activities in the facility including employees, nurses, students, medical house staff, physicians, contract workers and volunteers.
 • Prior to outbreak: Any time during the current influenza and respiratory infection season but at least 2 weeks before the onset of the current outbreak.

APPENDIX 4-D: REPORTING OF STUDENT ABSENTEEISM TO NRPHD

Niagara Region
PUBLIC HEALTH

DR. ROBIN WILLIAMS
Medical Officer of Health

Main Office
30 Hamover Drive
St. Catharines, ON L2W 1A3
Phone: 905-688-3762
1-800-263-7248
Fax: 905-688-3001

Branch Offices

Niagara Falls
5710 Kitchener Street
Niagara Falls, ON L2S 1C1
Phone: 905-356-1536
Fax: 905-356-7377

Sexual Health Centre
Phone: 905-356-3036
Fax: 905-358-2717

Welland
540 King Street
Welland, ON L3B 3L1
Phone: 905-735-5987
Fax: 905-735-4895

Sexual Health Centre
Phone: 905-734-1214
Fax: 905-734-1770

Fort Erie
43 Hagar Street
Fort Erie, ON L2A 1W4
Phone: 905-871-6513
Fax: 905-871-3020

Sexual Health Centre
Phone: 905-871-6513
Fax: 905-871-3020

St. Catharines Sexual Health Centre
277 Welland Avenue
St. Catharines, ON L2R 2P7
Phone: 905-688-3817
1-800-263-8787
Fax: 905-688-6063

Population Health Division
Phone: 905-641-2118
Fax: 905-688-6100

Emergency Services Division
Phone: 905-641-2216
Fax: 905-688-5079

509 Glenvale Avenue East
Niagara on the Lake, ON L0S 1J0

www.niagara.on.ca
An Accredited
Public Health Department

Dear Principal/Secretary:

2005 – 2006 SCHOOL ABSENTEEISM SURVEILLANCE

As you may know, we are now entering influenza season. Each year the Ministry of Health requests that Public Health Departments participate in Influenza surveillance programs, one of which includes schools.

This program includes surveillance in ELEMENTARY SCHOOLS from November to April. We are asking for your assistance with this program again this year. This program is a valuable tool to detect early influenza activity in our community. The symptoms most associated with influenza are – fever, cough, sore throat, muscular pain, malaise and/or fatigue.

We are requesting that all elementary schools call or fax the attached form to the Public Health Department **if you notice a significant rise in absenteeism or you have more than 10% of your school population away with symptoms consistent of influenza.** Please call immediately to (905) 688-3762 or 1-800-263-7248 at extension 7330.

Thank you in advance for your help with this year's surveillance program. Your participation is essential to early identification and introduction of local control measures.

Yours truly,

Lois Lacroix, RN, BScN
Manager, Infectious Disease Program

Building Community. Building Lives.
Dedicated to achieving a healthier Niagara

Niagara Region
PUBLIC HEALTH

DR. ROBIN WILLIAMS
Medical Officer of Health

Main Office
30 Hamover Drive
St. Catharines, ON L2W 1A3
Phone: 905-688-3762
1-800-263-7248
Fax: 905-688-3001

Branch Offices

Niagara Falls
5710 Kitchener Street
Niagara Falls, ON L2S 1C1
Phone: 905-356-1536
Fax: 905-356-7377

Sexual Health Centre
Phone: 905-356-3036
Fax: 905-358-2717

Welland
540 King Street
Welland, ON L3B 3L1
Phone: 905-735-5987
Fax: 905-735-4895

Sexual Health Centre
Phone: 905-734-1214
Fax: 905-734-1770

Fort Erie
43 Hagar Street
Fort Erie, ON L2A 1W4
Phone: 905-871-6513
Fax: 905-871-3020

Sexual Health Centre
Phone: 905-871-6513
Fax: 905-871-3020

St. Catharines Sexual Health Centre
277 Welland Avenue
St. Catharines, ON L2R 2P7
Phone: 905-688-3817
1-800-263-8787
Fax: 905-688-6063

Population Health Division
Phone: 905-641-2118
Fax: 905-688-6100

Emergency Services Division
Phone: 905-641-2216
Fax: 905-688-5079

509 Glenvale Avenue East
Niagara on the Lake, ON L0S 1J0

www.niagara.on.ca
An Accredited
Public Health Department

Dear Principal/Secretary:

2005 – 2006 SCHOOL ABSENTEEISM SURVEILLANCE

As you may know, we are now entering influenza season. Each year the Ministry of Health requests that Public Health Departments participate in Influenza surveillance programs, one of which includes schools.

This program includes surveillance in SECONDARY SCHOOLS from November to April. We are asking for your assistance with this program again this year. This program is a valuable tool to detect early influenza activity in our community. The symptoms most associated with influenza are – fever, cough, sore throat, muscular pain, malaise and/or fatigue.

We are requesting that all secondary schools call or fax the attached form to the Public Health Department **if you notice a significant rise in absenteeism or you have more than 10% of your school population away with symptoms consistent of influenza.** Please call immediately to (905) 688-3762 or 1-800-263-7248 at extension 7330.

Thank you in advance for your help with this year's surveillance program. Your participation is essential to early identification and introduction of local control measures.

Yours truly,

Lois Lacroix, RN, BScN
Manager, Infectious Disease Program

Building Community. Building Lives.
Dedicated to achieving a healthier Niagara

Niagara Region
PUBLIC HEALTH

SCHOOL ABSENTEEISM REPORT
2005 – 2006 SEASON

Name of School	Total Population of school (students only)	Students Absent	
		Number	Percent

Please circle the most common symptoms (if known):


Fever Runny Nose
Headache Sore Throat
Muscle ache Cough
Fatigue Others (Specify) _____

Please fax the completed form to (905) 682-6470 to the Infectious Disease Program, Niagara Region Public Health Department if you notice a significant rise in absenteeism or you have more than 10% of your school population away with symptoms consistent of influenza. If you should require any further information, please call (905) 688-3762, extension 7330 or 1-800-263-7248.

APPENDIX 4-E: REPORTING OF INFLUENZA (FRI) ACTIVITY IN PHYSICIANS' PRACTICES TO NRPHD

Under development.

APPENDIX 4-F: EXAMPLE OF OUTBREAK FAX SENT TO LOCAL HEALTH PROVIDERS



Niagara Region
PUBLIC HEALTH

CONFIDENTIAL

OUTBREAK INFORMATION FAX

TO: **INFECTION CONTROL OFFICERS – LTCF/HOMES FOR THE AGED**

FROM: Heather Hague, MEd, BA, RN, CIC
 Manager, Infectious Disease Program
 Niagara Region Public Health Department
 30 Hannover Drive
 St. Catharines, ON L2W 1A3
 Telephone: (905) 688-3762 or 1-800-263-7248 Fax: (905) 682-6470
 E-mail address: heather.hague@regional.niagara.on.ca

DATE:

PAGES: 2

NEW OUTBREAK

NAME	ONSET DATE	DATE DECLARED	OUTBREAK TYPE

ONGOING OUTBREAK

NAME	ONSET DATE	DATE DECLARED	OUTBREAK TYPE

OUTBREAK OVER

NAME	DATE DECLARED OVER	OUTBREAK TYPE

Please take the necessary precautions to prevent disease transmission in your facility. If your facility has cases of illness with similar symptoms, please notify the Health Department. If you require additional information contact the Infectious Disease Program at the Niagara Regional Public Health Department (905) 688-3762 ext. 7330 or 1-800-263-7248.

PG - 2 -

****Note 1:** Staff should only work in ONE Institution during a respiratory/enteric outbreak. The only exception is the case of an Influenza A or B outbreak – Asymptomatic staff immunized with Influenza vaccine at least 2 weeks prior to the outbreak may work between 2 institutions.



****Note 2:** The Provincial Infectious Diseases Advisory Committee (PIDAC) recently released a best practices document (September 2005) “Preventing Febrile Respiratory Illnesses” for all Ontario Health Care Settings. This document can be found on the MOHLTC website:
http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_092805.pdf

Please download this version for your facility if you have not done so already.

APPENDIX 4-G: SURVEILLANCE TOOLS AND PROTOCOLS

These tools and protocols will be developed from MOHLTC recommendations.
Under development.

APPENDIX 4-H: MOHLTC CRITERIA FOR ACCEPTANCE OF PATIENT SPECIMENS SUBMITTED TO THE ONTARIO PUBLIC HEALTH LABORATORIES (OPHLs)



Public Health Laboratories Ontario

October 1, 2004

Criteria for Acceptance of Patient Specimens submitted to the Ontario Public Health Laboratories (OPHLs)

Dear Client,

As part of OPHL policy to adhere to accreditation and regulatory guidelines we are asking our client's cooperation to comply with the following Ontario Laboratory Pre-analytical Accreditation requirements V.C.2.3 and V.2.4, which deal with the documentation that should accompany laboratory specimens.

A completed Public Health Laboratory requisition form **MUST** accompany all specimens submitted to a Public Health Laboratory **NB. FOR PRENATAL TESTING, DIAGNOSTIC HIV TESTING, NEWBORN SCREENING OR FOOD / WATER TESTING, PLEASE USE SPECIFIC REQUISITION FORM.**

The following is a list of requirements for the completion of Patient Requisition Forms and Labeling of Specimens. This information assists the Laboratory in ensuring optimal turn around time for results reporting. Failure to comply with the following requirements may result in specimen rejection or significant delays in test results reporting.

PHL REQUISITION (REQUIRED ELEMENTS)

Patient – *Full Name / date of birth / sex / *OHIP # or HIN #
Physician Name / complete return address / tel. # / secure fax #
Specimen information – type of specimen e.g. NP swab, vag. smear / blood or serum
Clinical information – date collected / date submitted / indicate if STAT, routine, test of cure, follow up / symptomatic / asymptomatic / diagnostic / immunity / include other relevant clinical information.
(time collected / submitted required for newborn screening TSH / PKU)
* Optional for anonymous HIV testing.

SPECIMEN CONTAINER LABELING (REQUIRED ELEMENTS)

Specimen container – labeled with patient's full name or specific identifier, must be identical to the name or identifier on the PHL requisition. Date of collection is also required.

Smears / slides – due to space limitations, smears / slides must have patient's initials or specific identifier on the frosted part of the slide.


Unlabeled or mis-matched specimens will not be processed.

TRANSPORTING SAMPLES TO THE LABORATORY

Approved shipping containers must be used when transporting specimens to a Public Health Laboratory. The packaging type and transportation of all diagnostic specimens, cultures or biological products must comply with the Transportation of Dangerous Goods Regulation (TDG) in accordance with the National Standards of Canada CAN/CGSB-43.125-2003. It is the client's responsibility to ensure that all specimen containers are secured and sealed prior to forwarding to the laboratory. Leakage of material during transport could endanger employee or public safety.

Leaking specimens will not be processed.
OUTBREAKS will be handled as per instructions from Health Units / Medical Officer of Health.

The above shall be fully implemented on **December 1, 2004**.
For detailed information please refer to the Specimen Collection Guide or consult our website: www.health.gov.on.ca
HELPLINE: 1-800-640-7221



The MOHLTC, Laboratories Branch, Specimen Collection Guide is available on the following website:

<http://www.health.gov.on.ca/english/providers/pub/labs/specimen.pdf>

APPENDIX 4-J: MOHLTC DAILY HOSPITAL REPORTING FORM

To be completed daily by all acute care hospitals in Ontario when a Pandemic has been declared in Ontario. This form is to be faxed daily to your local health unit.

Daily Hospital Reporting Form		For MOHLTC use only _____
Health Unit Information	Hospital Information	
Health Unit Name:	Reporting date: (yyyy/mm/dd, 0001h-2400h)	
Contact Phone #:	Hospital Master #:	
Hospital Data		
Total number of persons presenting to emergency department (all cause):	Hospital Name:	
Total number of deaths in hospital (all cause):	Hospital Address:	
	City/Town of Hospital:	
	Postal Code of Hospital:	

APPENDIX 4-K: MOHLTC PANDEMIC DATA COLLECTION FORM FOR INSTITUTIONS (PRELIMINARY AND WEEKLY REPORT)

In order to track the occurrence, severity and progression of the pandemic, surveillance data from institutional respiratory infection outbreaks during the pandemic must be collected. This information is usually collected by the institutions' infection control practitioner or designate. The data is sent to the facility's local health unit who in turn forward the information to the Ministry of Health and Long-Term Care. Local and provincial surveillance information will be disseminated to stakeholders.

Pandemic Data Collection Form for Institutions Preliminary and Weekly Report

Public health units: please FAX preliminary and updated reports to the Ministry of Health and Long-Term Care at [to be determined] within 24 hours of receiving notification of a respiratory infection outbreak. If new information is added, checkmark update box and write update number, e.g. Update #1 and indicate reporting period

<input type="checkbox"/> Initial Notification <input type="checkbox"/> Update # _____		For MOHLTC use only _____
Health Unit Information		Institution Information
For updates, reporting time period covered: (yyyy/mm/dd) to (yyyy/mm/dd):		Institution Master #:
Outbreak #:		Institution Name:
Health Unit Name:		Institution Address:
Investigator Name:		City/Town of Institution:
Contact Phone #:		Postal Code of Institution:
Date Outbreak Reported to Health Unit (yyyy/mm/dd):		Date of onset of illness in first case (yyyy/mm/dd):
Institution Type		
<input type="checkbox"/> Long-Term Care Home <input type="checkbox"/> Retirement Home (with more than 10 residents) <input type="checkbox"/> Children's Residence <input type="checkbox"/> Facilities operating under the <i>Developmental Services Act</i>		Hospital: Operates under <i>Public Hospitals Act</i> ? <input type="checkbox"/> Yes <input type="checkbox"/> No Type: <input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Psychiatric <input type="checkbox"/> Rehab <input type="checkbox"/> Other (please specify) _____
Outbreak Description		Symptoms observed related to outbreak
	Residents or Patients	Staff *
	New Cases ▲	New Cases ▲
	Cumulative Number §	Cumulative Number §
Total # cases		
# Cases admitted to hospital attributed to O/B		
# Cases with clinically or XR confirmed pneumonia		
# Deaths among cases attributed to outbreak		
	Residents or Patients	Staff *
Total # in institution		
Please specify by check boxes OR free text below:		
<input type="checkbox"/> Abnormal Temp. (≥37.5°C or ≤35.5°C or temp. known to be abnormal for that person)		
<input type="checkbox"/> Cough		
<input type="checkbox"/> Nasal Congestion/Sneezing		
<input type="checkbox"/> Runny nose (coryza)		
<input type="checkbox"/> Sore throat/Hoarseness/Difficulty swallowing		
<input type="checkbox"/> Tiredness (malaise)		
<input type="checkbox"/> Muscle aches (myalgia)		
<input type="checkbox"/> Loss of appetite		
<input type="checkbox"/> Headache		
<input type="checkbox"/> Chills		
<input type="checkbox"/> Swollen/Tender glands in neck (cervical lymphadenopathy)		
Other Symptoms: _____		
Laboratory Data		
Lab Confirmation: <input type="checkbox"/> Yes (check causative organism(s)) <input type="checkbox"/> Pending <input type="checkbox"/> Specimens NOT submitted		
<input type="checkbox"/> Influenza A	<input type="checkbox"/> Influenza B	<input type="checkbox"/> RSV
<input type="checkbox"/> Rhinovirus	<input type="checkbox"/> Parainfluenza	<input type="checkbox"/> Adenovirus
<input type="checkbox"/> Enterovirus	<input type="checkbox"/> Other (specify) _____	
* Staff: All persons who carry on activities in the facility including employees, nurses, students, medical house staff, physicians, contract workers and volunteers.		
▲ Initial Report: indicate the total number of cases		
▲ Update: indicate the number of new cases since last update		
§ Update/s: indicate the cumulative number of cases.		
Pandemic Data Collection Form for Institutions Preliminary		

APPENDIX 4-L: MOHLTC PANDEMIC DATA COLLECTION FORM FOR INSTITUTIONS (FINAL REPORT)

**Pandemic Data Collection Form for Institutions
Final Report**

Please FAX final report to the Ministry of Health and Long-Term Care at: **(to be determined)** For MOHLTC use only _____

Health Unit Information		Institution Information	
Outbreak #:		Institution Master #:	
Health Unit Name:		Institution Name:	
Investigator Name:		Institution Address:	
Contact Phone #:		City/Town of Institution:	
Date Outbreak Reported to Health Unit (yyyy/mm/dd):		Postal Code of Institution:	
Date Outbreak Declared Over (yyyy/mm/dd):		Date of onset of illness in first case (yyyy/mm/dd):	
Date form submitted (yyyy/mm/dd):			
Institution Type			
<input type="checkbox"/> LTCH		<input type="checkbox"/> Hospital: Operates under Public Hospitals Act? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Retirement Home (with more than 10 residents)		Type: <input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Psychiatric <input type="checkbox"/> Rehab	
<input type="checkbox"/> Children's Residence			
<input type="checkbox"/> Facilities operating under the Developmental Services Act		<input type="checkbox"/> Other (please specify): _____	
Outbreak Description		Symptoms observed related to outbreak	
	Residents or Patients	Staff	
Total # in institution			Please specify by check boxes OR free text below: <input type="checkbox"/> Abnormal Temp. (>37.8°C or <35.0°C or temp. known to be abnormal for that person) <input type="checkbox"/> Cough <input type="checkbox"/> Nasal Congestion/Sneezing <input type="checkbox"/> Runny nose (rhinorrhea) <input type="checkbox"/> Sore throat/hoarseness/Difficulty swallowing <input type="checkbox"/> Tiredness (malaise) <input type="checkbox"/> Muscle aches (myalgia) <input type="checkbox"/> Loss of appetite <input type="checkbox"/> Headache <input type="checkbox"/> Chills <input type="checkbox"/> Swollen/Tender glands in neck (cervical lymphadenopathy) Other Symptoms: _____
Total # cases			
# cases in facility admitted to hospital attributed to outbreak			
# cases in facility with clinically or X-Ray confirmed pneumonia			
# deaths among cases attributed to outbreak			
Laboratory Data			
Lab Confirmation: <input type="checkbox"/> Yes (check causative organism's) <input type="checkbox"/> No (no organisms identified) <input type="checkbox"/> Specimens NOT submitted			
<input type="checkbox"/> Influenza A	<input type="checkbox"/> Influenza B	<input type="checkbox"/> RSV	
<input type="checkbox"/> Rhinovirus	<input type="checkbox"/> Parainfluenza	<input type="checkbox"/> Adenovirus	
<input type="checkbox"/> Enterovirus	<input type="checkbox"/> Other (specify): _____		

*Staff: All persons who carry on activities in the facility including employees, nurses, students, medical house staff, physicians, contract workers and volunteers.

Pandemic Influenza Data Collection Form for Health Care Institutions

ANTIVIRAL USE

If an antiviral medication was prescribed during the outbreak, please complete the chart below:

Antiviral Used	Residents/Patients		Staff	
	Oseltamivir	Other (Please specify)	Oseltamivir	Other (Please specify)
1. What is the number of individuals for whom a prophylactic dose of antiviral was given				
2. Range of length of prophylaxis (in days)				
3. What is the number of individuals for whom a treatment dose of antiviral was given				
4. If anyone contracted ILI while on prophylactic antiviral medication for over 72 hours, please indicate the number of individuals who contracted ILI				
5. For those who contracted ILI as per #4 above, how many had lab-confirmed influenza				
6. If applicable, please indicate the # of individuals who developed side effects to antiviral medication				

If side effects to oseltamivir (Tamiflu®) were observed, please indicate the most common side effects:

- Nausea
- Diarrhea
- Vomiting
- Headache
- Fatigue
- Cough
- Insomnia
- Dizziness
- Rash
- Abdominal discomfort
- Loss of appetite

Other (Please describe): _____

APPENDIX 4-M: INVESTIGATION PROTOCOL FOR CLUSTERS

These investigation protocols will be developed by the MOHLTC.
Under development.

APPENDIX 4-N: MOHLTC SURVEILLANCE PROTOCOLS

These surveillance protocols will be developed by the MOHLTC.
Under development.

APPENDIX 4-O: MOHLTC HIGH-RISK GROUPS

This list will be developed by the MOHLTC.
Under development.

APPENDIX 4-P: MOHLTC CASE DEFINITIONS

These case definitions will be developed by the MOHLTC.
Under development.

Chapter 5 Antivirals and Vaccine

5.0 INTRODUCTION

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

The possible roles of antiviral drugs and the feasibility for their widespread use as part of the response to pandemic influenza will depend on a number of issues:

- The availability to the population (production, distribution, stability, potential for stockpiling, cost).
- Extent of effectiveness for prophylaxis or treatment (or both).
- Individual's contraindications to antivirals.
- Possible emergence of drug resistance.

As it is likely that the supply of both antiviral medications and vaccine will be limited during a pandemic, the MOHLTC will control the distribution of both. Use of antivirals for prophylaxis use is currently under development by the federal and provincial governments.

If antiviral medications are approved for prophylactic use, the role of the Niagara Region Public Health Department will be to co-ordinate the storage, handling, and distribution of antivirals among health care organizations and local target groups that have been identified by the MOHLTC.

The Niagara Region Public Health Department will also serve as the primary co-ordinator for the distribution and administration of vaccine in the Niagara region. A vaccine will not be available for at least 4 - 6 months after the pandemic strain is identified and likely will not be available for the first wave. Once vaccine becomes available, there will be a shortage necessitating the use of priority groups based on the Canadian Pandemic Influenza Plan (CPIP) recommendations. When vaccine becomes more readily available, the Public Health Department will organize mass vaccination clinics for the general public.

5.1 GOALS

Minimize serious illness, societal disruptions and overall deaths through the appropriate distribution of antiviral medications, for prophylactic or treatment use, and vaccine, based on the Provincial recommendations for influenza pandemic.

5.2 OBJECTIVES

- Develop a mass immunization clinic plan to include clinic locations, storage, and security of supplies and required resources.
- Develop an efficient plan for antiviral medication distribution and administration.
- Develop a plan for staff education/training for delivery of immunization services and antiviral medication.
- Monitor safety and effectiveness of vaccine programs and antiviral medication use.
- Monitor vaccine and antiviral uptake.

5.3 NIAGARA REGION ANTIVIRAL/VACCINE ACTIVITIES BY PANDEMIC PHASES

Pandemic Phase	Antiviral/Vaccine Activities
<p>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.</p>	<ul style="list-style-type: none"> • Continue to actively promote annual universal influenza immunization. • Promote pneumococcal vaccination of the National Advisory Committee on Immunization (NACI) for those aged 65 years and older, and high-risk groups. • Increase annual influenza vaccine coverage among health care workers (HCW) and emergency services workers. • Maintain updated plans to acquire, store, and distribute vaccine and antivirals. • Work with stakeholders to develop plans to redeploy staff to administer vaccine/ antivirals and to provide training.

Pandemic Phase	Antiviral/Vaccine Activities
<p>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.</p> <p>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.</p> <p>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.</p> <p>Phase 5: Larger cluster(s) but human-to-human spread still localized, suggesting that the</p>	<ul style="list-style-type: none"> • Maintain antiviral treatment and prophylaxis recommended in “A guide to the control of respiratory infection outbreaks in LTC homes” (MOHLTC, 2004). • Continue Phase 1 activities. • Confirm that security issues with storing and distributing vaccines and antivirals have been addressed. • Distribute priority group enumeration tools to health care organizations to provide estimates of demand for antivirals and vaccines. • Submit estimates to MOHLTC. • Confirm distribution point for vaccination location in each area. • Ensure that list of currently qualified and potential vaccinators is up to date. • Review mass vaccination program and address any problematic issues. • Review/update educational materials on administering vaccines. • Assess current supply of antivirals/vaccines. • Confirm plans for distributing antivirals/ vaccines. • Actively promote annual influenza vaccination.

Pandemic Phase	Antiviral/Vaccine Activities
virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	<ul style="list-style-type: none"> • Review plans for storing, distributing, and administering vaccine/antivirals. • Review estimates of number of people in each priority group for vaccine/antivirals. • Ensure that training of staff and infrastructure is in place to: <ul style="list-style-type: none"> - record a two-dose immunization program - track who receives antivirals for treatment or prophylaxis. • Work with health organizations to train non-traditional vaccinators.

5.4 ANTIVIRALS

5.4.1 ANTIVIRAL MEDICATIONS

There are three drugs available to prevent and treat influenza: Amantadine, Oseltamivir, and Zanamivir. Oseltamivir (Tamiflu® - Roche Pharma) and Zanamivir (Relenza® - GlaxoSmithKline) belong to a class of antiviral drugs called neuraminidase inhibitors. Neuraminidase inhibitors can be used to treat or prevent influenza. When used to treat influenza, they must be started within 48 hours of onset of symptoms. These drugs do not kill the influenza virus, but rather decrease the virus' ability to continue to grow in the body. By doing this, the neuraminidase inhibitors result in an improvement in symptoms 1 – 1 ½ days earlier than if the drug were not used. There is some evidence that neuraminidase inhibitors also decrease the risk of influenza complications when used for treatment.

Prophylaxis Use:

The neuraminidase inhibitors can also be used to prevent influenza symptoms. In order to prevent influenza, they must be taken on a daily basis during the time when influenza is circulating. Taking the neuraminidase inhibitor for prevention does not prevent the virus from entering the body but allows the body to develop an immune response to the virus. Instead, the neuraminidase inhibitor prevents the virus from growing in the body, and thereby prevents the development of influenza symptoms and decreases the chances that the virus will spread to others.

Prophylaxis with antivirals may play a key role in maintaining critical services (i.e. preventing infection in, and providing reassurance to, people caring for individuals with influenza as well as workers in critical industries) until a vaccine becomes available.

Neuraminidase inhibitors can also be used for prevention after an exposure (called “post exposure prophylaxis”). An example of its use in this way would be to provide the drug to the remainder of the family, when a family member is diagnosed with influenza. This has been shown to decrease the risk of illness in exposed family members who do not yet have symptoms.

i) Amantadine

Amantadine is an older drug that has troublesome side-effects and is complicated to use. Amantadine is effective for influenza A only, whereas neuraminidase inhibitors are effective for both influenza A and B viruses. The influenza virus also has demonstrated the ability to become easily resistant to Amantadine. The recent outbreak of avian influenza (H5N1) has been shown to be resistant to Amantadine in the lab. Amantadine is, however, significantly less expensive than the newer neuraminidase inhibitors.

ii) Oseltamivir (Tamiflu)

Oseltamivir can be used for treatment if given within 48 hours after onset of symptoms and possibly even later. It decreases the severity of the illness; and may also decrease complications such as pneumonia, hospitalization, and death. Treatment with Oseltamivir will also decrease the ability of the ill person to spread influenza to others. For treatment of seasonal influenza, Oseltamivir is given as 75 mg twice daily for five days. Oseltamivir is taken by mouth and comes as a capsule or liquid. It is safe, effective, and easy to use. It does not interact with the vast majority of other drugs. Some adjustment of the dose is required for individuals known to have kidney disease. In Canada, it is licensed for treatment for ages one and older. For prevention, it is licensed for those 13 years of age and older. Unfortunately, Oseltamivir is relatively costly, and is only made by one manufacturer (Roche Pharma), located in Switzerland.

A few instances of the influenza virus developing resistance to Oseltamivir have been documented. Because of its mechanism of binding to the influenza virus, the development of resistance to Zanamivir is felt to be more unlikely than the development of resistance to Oseltamivir. The development of resistance to the neuraminidase inhibitors is being closely monitored, but still appears to occur infrequently.

Prophylaxis Use:

For prevention, Oseltamivir can be used for a prolonged period of time (up to eight weeks in some studies) and will provide up to 90% protection against influenza illness while the drug is being taken. Oseltamivir can also be given as post-exposure prophylaxis and will provide good protection as long as the drug is being taken. For prevention, 75 mg of Oseltamivir is taken once daily for as long as influenza infection is a risk.

iii) Zanamivir (Relenza)

Zanamivir is produced by GlaxoSmithKline. It has been less popular than Oseltamivir because it is taken by inhalation using a Diskinhaler device. This method of delivery poses a problem for some elderly individuals (particularly in long-term care facilities) who are not able to coordinate the use of the inhaler. Zanamivir should not be used in individuals with asthma or with chronic lung disease as it may worsen these conditions. It is only approved in Canada for treatment and only for individuals 12 years of age and older. For treatment, two puffs twice a day for five days are currently recommended. It must be started within 48 hours of onset of symptoms and will decrease the duration of symptoms by 1 – 1 ½ days. It may also decrease the development of complications from influenza. Health Canada has recently approved Zanamivir for prophylaxis of contacts of cases.

iv) Monitoring Adverse Reactions

The Ontario Health Plan for an Influenza Pandemic (OHPIP) Committee is responsible for setting standards and acceptable rates for adverse antiviral drug reactions. The PHAC and the MOHLTC are responsible for developing, maintaining, and enhancing routine and national surveillance activities for adverse antiviral drug reactions.

5.4.2 ALLOCATION PLANS

Although antiviral agents are effective for the treatment and prophylaxis of influenza, the primary and preferred means of influenza prophylaxis during a pandemic will be vaccines.

Under the present circumstances, the supply of antiviral drugs would be well below the anticipated demand during an influenza pandemic.

Oseltamivir (Tamiflu) is the drug of choice for both treatment and prophylaxis. It is estimated that up to 25% of the Canadian population may be infected, which is equivalent to 20 million doses of Oseltamivir for the Province of Ontario. The goal of the PHAC is to stockpile enough Oseltamivir to provide treatment to those infected with the pandemic virus. It is estimated that by January 2008, the MOHLTC hopes to meet the goal of stockpiling 24 million doses set aside for treatment of pandemic influenza cases in Ontario. Based on the 25% attack rate for the Province of Ontario and Niagara Region's population of approximately 430,000, it is assumed that the Region will receive enough antiviral medications to treat 107,500 Niagara residents. Since one individual requires 10 doses for treatment purposes, the number of treatment doses required in Niagara would be 1,075,000.

Since the first priority is to stockpile enough doses for treatment purposes, there will not be enough antivirals to stockpile for prophylaxis use for everyone. CPIP guidelines for use of antivirals for prophylaxis use are presently under development. In the event a decision is made to stockpile antivirals for prophylaxis use, the PHAC and the MOHLTC will identify and prioritize target groups of people who are to receive antiviral drugs for prophylaxis. That process must consider the impact the drugs will have on maintaining essential health care services, and critical infrastructure.

5.5 NIAGARA REGION HEALTHCARE/ESSENTIAL SERVICE WORKERS

As directed by the MOHLTC in the Fall of 2005, each Public Health Department collected enumeration data of health care and essential service workers in their local region. Based on the enumeration survey conducted in Niagara, it has been estimated that approximately 15,000 health care and essential service workers have been identified from the following groups:

- Emergency Responders (Fire, Police).
- Emergency Responders (EMS).
- Public Health Department.
- Acute Care hospitals.
- Long-term Care Facilities.
- Physicians/Clinics.
- Community Agencies.

There are other critical infrastructure services that have not yet been enumerated which include, but are not limited to, the following:

- Food and Water.
- Electricity.
- Gas and Oil.
- Transportation.
- Telecommunications.
- Financial Institutions.
- Public Safety and Security.
- Continuity of Government.

This data may be useful for administering vaccine and/or antiviral medication for both treatment and prophylaxis purposes for priority target groups identified by the PHAC.

5.6 PERSONAL AND CORPORATE STOCKPILES

Due to limited supplies of antiviral medication, many services will need to rely on public health measures to prevent influenza until a vaccine becomes available. This has led some individuals and workplaces to consider stockpiling antiviral drugs. The shelf life of Oseltamivir is currently four years.

i) Personal Stockpiles

Personal stockpiles pose concerns for several reasons outlined below:

- Antivirals may be obtained on the internet without a prescription.
- It may be difficult for an individual, without consultation from a health care provider, to determine when they are experiencing influenza and therefore when to take the drug for treatment.
- Stockpiling is costly.
- Inappropriate use of Oseltamivir may promote the development of drug resistance.
- The demand for drugs in the private market may hinder governments from stockpiling the drugs as part of their pandemic planning process.
- Since some people will be able to afford the drug and others will not, stockpiling creates inequities in access to health care.

ii) Corporate Stockpiles

Depending on the upcoming CPIP guidelines regarding antivirals for prophylaxis use, some workplaces may be eligible for publicly provided antiviral medications because of the nature of their work. Since Roche Pharma currently has the patent on Oseltamivir until 2016, there are ongoing discussions on how to meet the increasing demands for the drug with only one world-wide supplier.

The PHAC and the MOHLTC have the right to retrieve corporate Oseltamivir stockpiles from one business to provide it to another workplace that has been identified as an essential service. In the event businesses have stockpiled Oseltamivir through non-government funding and have had their stockpile retrieved, they likely will be compensated for their cost.

5.7 DISTRIBUTION PLANS

It is anticipated that the Niagara Region Public Health Department will receive the allocation of antiviral medications and vaccine for the Niagara Region. Antiviral medications may then be distributed to dispensing sites in the community, based on OHPIP directives and the local need.

A Public Health Department medical directive has been developed to address the use of Oseltamivir for treatment and prophylactic use. A medical directive has also been developed for use of Influenza vaccine during a pandemic, once available.

The Niagara PHD currently utilizes the BIOS database system to monitor the vaccine inventory and distribution in the Niagara Region. A similar database could be used to monitor the inventory and distribution of antiviral medication. An inventory of immunization clinic supplies currently exist.

Clerical staff from the Vaccine Preventable Program will be responsible for monitoring, ordering, and stocking supplies required for mass vaccination clinics.

Security of supplies will be essential. A secure on-site location for storage of supplies has been designated in the Public Health Department.

The Public Health Department will arrange for transportation and security of antiviral medication to dispensing sites and of supplies to immunization clinic sites. Transportation and security have yet to be determined.

5.8 ANTIVIRAL MEDICATION DISTRIBUTION

i) Treatment

For influenza treatment purposes, antivirals must be started within 48 hours of the onset of symptoms to be effective. To provide timely treatment, Niagara Region must have an effective distribution system for antivirals. Designated Community Assessment/ Treatment Centres will be the source of antiviral treatment for outpatients who suspect they may have influenza. Organization of clinic plans for Community Assessment/ Treatment Centres is being developed.

Should a pandemic occur before Ontario's stockpile is complete, antivirals for treatment will be distributed according to the available epidemiological evidence (e.g. priority may be given to those likely to develop complications from influenza) and in accordance with the OHPIP ethical framework for decision-making.

ii) Prophylaxis

Issue in utilizing antiviral medications for prophylaxis use is currently being re-addressed. OHPIP will develop a provincial policy on the use of antivirals for prophylaxis, based on the national policy which is currently under development. The Niagara Region has not made plans for distribution of antivirals for prophylaxis use. Once federal and provincial policies are developed regarding prophylactic antivirals, the Niagara Region will develop antiviral medication distribution plans based on OHPIP directives.

iii) Antiviral Medication Eligibility

In order to distribute antiviral medications, mechanisms to ensure that they are given only to individuals who are eligible to receive antiviral medication for treatment or prophylactic use will need to be developed. In the event the PHAC and MOHLTC support the use of antiviral medication for prophylaxis use, target groups of essential services and health care services will be identified and antivirals will be distributed for prophylactic use in order of priority.

Each employer of an essential service organization identified in the priority groups will then be given a designated number of eligibility forms. The employer will distribute these forms to eligible employees within their organization who will then bring the forms to a designated community distribution centres. These forms will have unique identifiers in order to ensure that they are being used appropriately, and an inventory system will be established to track the distribution and return of these forms.

This process will only be implemented with PHAC and MOHLTC approval in using antiviral medication for prophylaxis purposes.

iv) Antiviral Prophylaxis Distribution Centres

In the event the PHAC and the MOHLTC develop a policy for prophylactic use of antiviral medication, local community distribution centres will be developed and operated in a manner similar to vaccination clinics.

An Oseltamivir fact sheet will be given to every client who will receive this antiviral medication.

The number of Clinics, locations, and hours of operation will be determined based on the needs of the people who will be picking up antiviral medications. The following factors must be taken into consideration:

- Infection control measures will be required since some individuals picking up antiviral medications may be ill and infectious.
- Support of pharmacists at these centres will also be necessary to assist in the provision of counselling and drug information. A pharmacist available for consultation during the hours of operations of the distribution centres will therefore be required.
- Security personnel will also be necessary with clear protocols in the event that non-eligible individuals seek to obtain antiviral medication.

Details for Clinic operations in distributing prophylactic antiviral medications will only be developed if the PHAC and the MOHLTC develop a policy supporting the use of antivirals for prophylaxis.

5.9 VACCINES

To immunize the entire province, Ontario would require 24 million doses based on two doses per person, over approximately four months. The Niagara Region has developed a mass vaccination plan in order to implement this goal.

5.10 NEXT STEPS

The following are topics currently being developed:

- Add post-vaccination care instruction sheet to the appendix.
- Compare the Niagara Region Public Health Antiviral/Vaccine Pandemic plan with the newly released December 2006 PHAC plan.
- Explore the potential role of pharmacist in preparing standard labels for dispensing antiviral medication and their role in antiviral drug distribution further.
- Security of supplies, medications, and vaccines at storage sites, immunization clinic sites, and antiviral dispensing sites.
- Secure transportation of supplies, medications and vaccines.
- Database to keep track of eligibility forms, and secure inventory management and distribution system of supplies, vaccines, and antivirals.
- Update enumeration data of essential services and health care services as directed by OHPIP.
- Develop policy for antiviral medication use for prophylaxis based on PHAC and MOHLTC recommendations.
- Medical directives, documentation protocols, policies and procedures, and Clinic locations and operations, need to be developed for antiviral medication distribution centres.
- Monitor and disseminate information to community stakeholders from the PHAC and MOHLTC regarding eligibility for antivirals and vaccines and regarding antiviral medication stockpiling for personal and corporate use.

Chapter 6 Public Health Measures

6.0 INTRODUCTION

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, conducting case and contact management, community-based disease control strategies (i.e. social distancing, school closures and restriction/cancellation of large public gatherings), and travel restrictions and screening travellers. 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 jurisdictions. The severity of the pandemic strain and the stage of the pandemic, as it unfolds globally, would be considered when making this determination.

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 groups.

Objectives:

- 1) Decrease the number of individuals exposed to the novel virus and potentially slow the progress of the pandemic.
- 2) Slow disease spread and gain time for implementing medical measures (e.g. vaccine).
- 3) Reduce the morbidity and mortality caused by the pandemic.

6.1 PUBLIC HEALTH MEASURES OVERVIEW:

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

- **Community public health measures**, such as cancelling public gatherings and closing schools.

6.2 PUBLIC EDUCATION OVERVIEW

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 Niagara Region. Public education must exist during all of the pandemic phases.

The goal of public education is to do the following:

- 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 influenza pandemic during the Interpandemic Period.
- Establish Niagara Region Public Health as an accurate, reliable, and trusted source of information on influenza pandemic through a well co-ordinated 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. The Niagara Region Public Health Department Pandemic Hotline is open Monday to Friday 08:30 hours through 16:30 hours to address questions and issues from the general public. It can be accessed at 905-688-3762 or 1-800-263-7248, ext. 7765. During a pandemic, the hours of operation may be expanded as needed. The Niagara Regional Website will provide up-to-date pandemic information and can be accessed at www.regional.niagara.on.ca/pandemic.

Information will continue to be shared with the public using a variety of communication channels. For additional information, please refer to the Niagara Region Pandemic Communications Plan which provides information about the role of communications and outlines communication plans and activities. The Niagara Region Public Health Department will provide timely, accurate, and credible information to its staff, public, provincial, and federal governments, hospitals, and other responding agencies.

6.3 CASE MANAGEMENT

Individuals reported to Niagara Region Public Health 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/icfri.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 in Niagara Region 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 that is reducing the demand for health care services from a short intensive outbreak to a more manageable level of demand over a longer period. This could also help reduce societal disruption and potentially buy time for vaccine manufacture and 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 Niagara Region. Ongoing evaluation of the epidemiological data from individual cases and comparisons with information from other affected countries may help focus control efforts.

6.3.1 THE GOAL OF CASE MANAGEMENT

- Cases will have knowledge about how to reduce disease transmission.
- Reduced opportunity for transmission of the pandemic virus.
- Possible containment of an inefficiently spread virus or delay of 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.
- Ensured access to appropriate treatment.

6.4 QUARANTINE

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

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

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

6.5 ACTIVE SURVEILLANCE

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

Once transmission occurs in the community, active surveillance will no longer be effective to slow or contain transmission. The Niagara Region Public Health Department will then provide guidance on how to self-monitor for symptoms of influenza-like illness and provide instructions on the need to self-isolate or when to seek medical attention. An appendix on Self-Care is under development.

6.6 COMMUNITY-BASED DISEASE CONTAINMENT STRATEGIES

Important decisions will be made about community-based disease control strategies aimed at minimizing the transmission of influenza in the community. The Niagara Region Public Health Department's 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 likely will 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.

Individuals who are ill with influenza-like illnesses will be asked to stay home from work, school/day nursery, and public events. The key message will be to self-isolate at home. Adults will be suggested to self-isolate for a minimum of 5 days after onset of symptoms (7 days for young children) or until symptoms have resolved, whichever is longer. Infection control measures should be implemented if ill individuals must leave their homes to visit a health care provider (e.g. phone ahead, wear a mask).

6.6.1 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 (CPIP) outlines advantages and disadvantages of this public health measure (see http://www.phac-aspc.gc.ca/cpip-pclcpi/ann-m_e.html). 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 authority (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.

Note: The Niagara Region Public Health Department awaits the provincial public health measures work group to further develop criteria and triggers for the implementation of this measure. This will help ensure a consistent response across the province. Discussions will need to be made with the local school officials.

6.6.2 LARGE GATHERING RESTRICTIONS/CANCELLATIONS

Consideration will need to be given to the benefit of cancelling 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 and the Provincial and Federal Public Health Measures work groups.

Due to the unknown effectiveness and difficulty with sustainability of cancelling or restricting large indoor public gatherings, this is not recommended as a broad public health measure.

If epidemiology of the pandemic virus 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.

6.6.3 SOCIAL DISTANCING

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

- Minimize visitors to your home.
- Cancel or postpone family gatherings, outings or trips.
- Avoid shaking hands, hugging, or kissing people as greetings.

- 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 influenza pandemic. Individuals should always have enough water and food to last seventy-two hours aside from a pandemic.
- Avoid peak shopping times and consider stores that are open twenty-four hours to stagger shopping times.
- Order groceries online or over the telephone for delivery.
- Arrange to pay bills at ATMs, online, or over the telephone.
- 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, e-mails, or fax; and if you need to meet with people, stay at least one metre apart (three feet). (See Appendix 6-G.)
- Consider alternatives to public transit such as walking, driving, or riding a bike.

6.7 NIAGARA REGION PUBLIC HEALTH MEASURES ACTIVITIES BY PANDEMIC PHASES

The effectiveness of public health measures depends primarily on the following:

- Epidemiology of the pandemic strain because influenza is highly contagious, the opportunity to avert or contain a pandemic will end once efficient, and sustained human-to-human transmission is established.
- Ability to implement public health measures, which will be affected by the phase of the pandemic, the human and financial resources available, the associated costs, and the public's acceptance of the measures.

During the Interpandemic Period, the Ministry of Health and Long-Term Care will do the following:

- Establish protocols for case management and contact tracing at different phases and stages of the pandemic.
- Establish guidelines for the use of measures to increase social distance (e.g. closing schools or day nurseries, discouraging public gatherings).

- Establish, in conjunction with Public Health Agency of Canada (PHAC), guidelines for travel restrictions.
- Develop educational materials on influenza and personal protective practices.
- Develop guidelines for public health staff on how to implement public health measures.
- Review, revise, and disseminate infection control guidelines.

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

Ontario will encourage aggressive follow-up of confirmed and suspected cases. During the pandemic period, when a significant number of people are infected, the focus of public health measures will be on community containment strategies, such as measures to increase social distance (e.g. closing schools, discouraging public gatherings) and provision of general messages about how to avoid getting or spreading influenza including the following:

- Stay home from day nursery, school, work, and public events if sick.
- Reduce non-essential travel.
- Avoid crowds.
- Wash hands frequently and appropriately (see Appendix 6-C & 6-D on Handwashing Techniques).
- Practice respiratory etiquette (see Appendix 6-F Cover Your Cough, aka Respiratory Etiquette).
- Increase fresh air in buildings (i.e. open windows).
- Enhance cleaning and disinfecting of environmental surfaces.
- Seek when, where, and how to receive medical attention in a way that minimizes exposure to influenza.

6.7.1 PUBLIC EDUCATION RECOMMENDATIONS

Phase 1 and 2

Goal: Promote personal protective measures that reduce the risk of acquiring seasonal influenza.

OHPIP Recommendations

Promote practices that reduce the risk of acquiring influenza (e.g. hand hygiene, staying home when ill, covering your cough) and development of education materials for the general public and health care workers regarding reducing one's chances of acquiring influenza.

Develop and disseminate surveillance/infection control practices related to influenza (e.g. FRI guidelines).

- Review/update educational materials for health care professionals.
- Reinforce existing recommendations for management of patients presenting with febrile respiratory illness (FRI), including providing masks for coughing patients.

Niagara Region Public Health

Educational Materials

Promote/disseminate practices that reduce the risk of acquiring influenza (e.g. hand hygiene, staying home when ill, covering your cough). Disseminate information/education materials to the general public and to health care workers.

Anticipate the unique needs of the community (e.g. translation requirements) and target seasonal influenza information for various stakeholders including schools, daycares, and community groups.

Follow routine (Interpandemic) protocols for follow-up of confirmed/suspect cases and their contacts, and respiratory infection outbreak management.

- FAQ sheet for influenza: Question and Answer (Appendix 6-A & 6-B)
- Hand washing sign (Appendix 6-D)
- Hand sanitizer sign (under development)
- Emergency Preparedness Guide (Appendix 6-E)
- Respiratory Etiquette Sign (Appendix 6-F)

Educational Materials

The following Planning Guides:

- Hospital checklist, i.e. FRI
- Long-Term Care Homes checklist
- Community Health Care Centres (references the PIDAC Document)

OHPIP Recommendations

Anticipate special educational and resource needs, such as:

- Translation requirements and targeted packages for more specific groups like physician offices, school boards, day nursery operations, businesses, etc.
- Business continuity planning that is appropriate for the unique challenges that would be presented by an influenza pandemic.
- Strategies for school boards regarding continuity of education in the event that school facilities are closed.

- Appropriate linkages with communication staff within the public health organization.
- Determination of roles, responsibilities, and information flow in the event of a pandemic.
- Information to Public Health Department regarding a designated pandemic telephone line with standardized message.
- A toll-free telephone information line or ready to be rapidly implemented with transcripts prepared for telephone-line staff.
- Components of the information dissemination process, including web-based postings as well as print material.

Develop templates for specific purposes such as the following:

- Consent for immunization.
- Public education regarding antiviral drug therapy availability.
- Prioritization system.
- Flu consent.

Niagara Region Public Health

- PHAC tear sheets in French and English
- Ministry of Health and Long-Term Care pamphlets sent to physicians' offices
- Business Continuity planning tool

Pandemic Influenza Response

- Development of a communication sub-committee
- Public Health Department business continuity plan
- IMS model
- Internal/External
- Communication Vehicles
- Hotline
- Internet and intranet sites

Templates include:

- Enumeration Package/Tool
- Absenteeism Report on Acute Care Facilities Initial Respiratory Outbreak
- Respiratory Outbreak Line Listing
- Health Protection and Promotion Act Section 22 Orders 4

OHPIP Recommendations

Niagara Region Public Health

- Flu consents
- Personal protection measures

Phase 2

Goal: Develop public health measures (PHM) and communication materials related to public health measures, to be used during a Pandemic Alert and Pandemic Periods.

OHPIP Recommendations

Niagara Region Public Health

- Continue with Phase 1 activities.
- Assist with the development of national recommendation on PHMs to be implemented during a pandemic.
- Develop provincial recommendation on PHMs to be implemented in Ontario in the event of a pandemic (including individual and community-based measures).
- Identify research opportunities (e.g. methods to evaluate effectiveness of PHMs).
- Develop education materials about public health measures that may be used during a pandemic (e.g. self-isolation, school closures, and social distancing) and general information regarding risk reduction to introduce pandemic concepts to the general public.
- Develop and disseminate information about personal protective measures to be used by cases and their contacts (e.g. hand and respiratory hygiene).

- Continue Phase 1 activities.
- Community measures: Assist in the development, adoption, and dissemination of provincial recommendations on PHMs to be implemented during a pandemic.
- Anticipate the unique needs of the community (e.g. translation requirements) and target pandemic information for various stakeholders (e.g. schools, day-cares, and community groups).
- Adopt education materials about public health measures that may be used during a pandemic (e.g. self-isolation, school closures, and social distancing) and general information regarding risk reduction to introduce pandemic concepts to the general public.
- Adopt information about personal protective measures to be used by cases and their contacts:
 - Fact Sheet on Active Surveillance (under development).
 - Fact Sheet on Isolation (under development).

OHPIP Recommendations

Niagara Region Public Health

- Fact Sheet on Quarantine (under development).

Phase 3

Goal: Mitigate the effects of a novel strain should one be detected in Ontario.

OHPIP Recommendations

- Continue Phase 2 activities.
- Review epidemiology of novel strain and revise PHMs as needed.
- Disseminate educational materials for health care workers during a pandemic.
- Ensure appropriate and timely dissemination of travel advisory/travel warning updates.
- Co-ordinate teleconferences between/among affected health units, PHAC, provincial agencies, and other relevant stakeholders, should lab-confirmed case be identified in Ontario.
- Develop protocol for teleconferences to ensure organized flow of relevant information.
- Report community compliance with PHM to PHAC.

Niagara Region Public Health

- Continue with Phase 2 activities.

Community measures when novel virus activity is occurring outside of Ontario:

- Adopt revised provincial PHMs.
- Disseminate educational materials for health care workers during a pandemic.
- Identify and train additional staff in case management and contact tracing to ensure that expertise and resources are available for business continuity and pandemic management.
- Ensure infrastructure for information hotline in place.

Individual-based measures when novel virus activity is occurring within Ontario:

- Isolate individuals suspected/confirmed to be ill with

OHPIP Recommendations

Niagara Region Public Health

the novel strain in hospital with highest priority for those for whom hospital treatment is clinically indicated.

- Isolate at home if there is no hospital capacity for less clinically severe cases. Adults recommended for self-isolation at home should stay there for a minimum of 5 days after the onset of symptoms or until symptoms have resolved, whichever is longer.
- Advise contacts of cases to restrict contact with others for 3 days (or duration of incubation period of novel strain).
- Definition of contact: An individual who had face-to-face contact (within 1 metre) of a suspect or confirmed case.
- Implement quarantine and active surveillance for contacts of cases for symptoms of illness for 3 days or duration of incubation period of novel virus, whichever is longer. Consider asking contacts to defer travel for duration of surveillance period.
- Educate cases who are isolated at home and their contacts about methods to reduce disease transmission (e.g. frequent and thorough hand hygiene, respiratory hygiene, and what to do if illness progresses (cases) or develops (contacts)).

OHPIP Recommendations

**Niagara Region Public Health
Community measures when novel
virus activity is occurring within
Ontario:**

- Attend teleconferences between affected health units/PHAC and other relevant stakeholders, should lab-confirmed cases be identified in Ontario.
- Monitor/track compliance with public health/containment measures until no longer sustainable; report compliance to MOHLTC.
- Resources: Identify time place and person for establishing teleconference.
- Link with communications and surveillance committee members.

**Individual-based measures when
novel virus activity is occurring
outside Ontario:**

- Disseminate educational materials for health care workers during a pandemic.
- Follow routine (Interpandemic) protocols for follow-up of confirmed/suspect cases and their contacts, and respiratory infection outbreak management.
- Resources: FRI document, and those identified in Phases 1 and 2.

Phase 4

Goal: Mitigate the effects of a novel strain should one be detected in Ontario; focus on novel virus containment.

OHPIP Recommendations

- Continue with Phase 3 activities.
- Facilitate local implementation of community-based disease control measures.
- Collaborate with PHAC and local health authorities to implement exit screening, if required.

Niagara Region Public Health

- Continue Phase 3 activities

Individual-based measure when novel virus activity is occurring outside of Ontario:

- As per Phase 3: Disseminate educational materials for health care workers during a pandemic.
- Follow routine (Interpandemic) protocols for follow-up of confirmed/suspect cases and their contacts, and respiratory infection outbreak management.
- Resources: FRI document, and those identified in Phases 1 and 2

Community measures when novel virus activity is occurring outside of Ontario:

- Advise MOHLTC what particular business continuity plans/strategies are if situation escalates.

Individual-based measures when novel virus activity is occurring within Ontario:

- Implement measures as identified above:
- Isolate individuals suspected/confirmed to be ill with the novel strain in hospital with highest priority for those for whom hospital treatment is clinically indicated.

OHPIP Recommendations

Niagara Region Public Health

- Isolate at home if there is no hospital capacity for less clinically severe cases. Adults recommended for self-isolation at home should stay there for a minimum of 5 days after the onset of symptoms or until symptoms have resolved, whichever is longer.
- Advise contacts of cases to restrict contact with others for 3 days (or duration of incubation period of novel strain).
- Definition of contact: An individual who had face-to-face contact (within 1 metre) of a suspect or confirmed case.
- Implement quarantine and active surveillance for contacts of cases for symptoms of illness for 3 days or duration of incubation period of novel virus, whichever is longer.
- Consider asking contacts to defer travel for duration of surveillance period.
- Educate cases who are isolated at home, and their contacts, about methods to reduce disease transmission (e.g. frequent and thorough hand hygiene, respiratory hygiene, and what to do if illness progresses (cases) or develops (contacts)).
- Discussion with MOH/MOHLTC to decide if individual case and contact management by local public health authorities should continue in the event that the local health unit is heavily impacted during Alert Periods.

OHPIP Recommendations

Niagara Region Public Health

Community measures when novel virus activity is occurring within Ontario:

Collaborate with PHAC and MOHLTC to implement exit screening if required.

Phase 5

Goal: Mitigate the effects of a novel strain should one be detected in Ontario; focus on novel virus containment.

OHPIP Recommendations

- Continue Phase 4 activities.
- Adopt national PHM recommendations.
- Review and, if required, modify provincial recommendations for public health measures.
- Provide updates on situation via Important Health Notice and cyclical teleconference/videoconference.

Niagara Region Public Health

- Continue Phase 4 activities.
- Review/update local plans for public health measures based on national/provincial guidelines and unique needs of community (e.g. rural vs. urban).

Individual-based measures when novel virus activity is occurring within Ontario:

- Continue to implement measures as identified in Phase 3 and 4.
- Recommend contacts defer travel for the duration of the surveillance period.

Community measures when novel virus activity is occurring outside of Ontario:

- Continue with Phase 4 activities.
- Activate local information line.

OHPIP Recommendations

Niagara Region Public Health

Community measures when novel virus activity is occurring outside of Ontario:

- Activate local information line.

Phase 6

Goal: Develop communications that reinforce risk reduction strategies.

OHPIP Recommendations

- Activate pandemic plan.
- Activate Public Health Desk in Ministry Operations Centre.
- Revise PHM recommendations as necessary.
- Update educational materials for health care workers as the pandemic evolves.
- Facilitate local implementation of community-based disease control measures (e.g. by collaborating with Ministry of Education).

Niagara Region Public Health

Individual-based measures:

- Individual case management by local public health authorities likely will not be sustainable.
- Isolate individuals suspected to be ill with the novel strain in hospital if clinically indicated; otherwise, isolate at home.
- Contacts of cases to self-monitor for symptoms for 3 days after last exposure to case or for duration of incubation period, whichever is longer.
- Provide contacts with information about how to report symptoms of influenza-like illness (ILI) when isolation is indicated and when to seek medical care.

Community Measures:

- Implement provincial pandemic PHMs, as conventional measures may no longer be sustainable due to

OHPIP Recommendations

Niagara Region Public Health

spread of virus (i.e. individual case and contact management).

- Consider implementation of community-based PHMs based on epidemiology of novel strain (e.g. affected age group, severity of illness, risk of virus acquisition, and unique characteristics of jurisdiction).
- Communicate about issues pertaining to individual preparedness/protection and curtailment of other public health services.
- Disseminate public education messages designed to heighten awareness of personal protective measures, self-care, and illness reporting.

6.8 ONTARIO HEALTH PLAN FOR AN INFLUENZA PANDEMIC (OHPIP) RECOMMENDATIONS FOR TRAVEL AND BORDER RELATED MEASURES:

Please refer to the Canadian Pandemic Influenza Plan. To date, the provincial plan identifies travel and border-related issues as an area for further consideration.

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 travellers from affected areas, with the exception of geographically isolated infection-free areas (e.g. islands), where it is considered to be potentially more feasible.

APPENDIX 6-A FACTS ABOUT PANDEMIC INFLUENZA



Understanding Pandemic Influenza

Most of us have heard about the flu (or “influenza”). But what is bird flu and how is a flu pandemic different from seasonal flu? The following information helps to explain the difference between seasonal, avian and pandemic flu.

	Avian (Bird) Flu	Seasonal (Human) Flu	Pandemic Flu
What is it?	A disease caused by influenza viruses carried and spread among birds.	An infection caused by influenza viruses carried and spread among humans.	A new strain of influenza virus that spreads quickly worldwide. <ul style="list-style-type: none"> • It is carried and spread among humans; and • humans have little or no immunity against it.
How does it spread?	<ul style="list-style-type: none"> • Wild birds are the main carriers. • Domestic birds (like chickens and turkeys) get the virus from wild birds and may become seriously ill. • Humans do not easily contract bird flu viruses. • Humans can only get bird flu by handling infected birds or coming into contact with contaminated feces. • There is no evidence that bird flu is passed by eating cooked poultry products. 	<ul style="list-style-type: none"> • Breathing droplets that have been sneezed or coughed into the air by someone with the flu, or having the droplets land on the surface of your eye. • Shaking hands with an infected person or touching a contaminated surface, and then touching your own eyes, nose or mouth. 	<ul style="list-style-type: none"> • Spread the same way as seasonal flu.
What is the connection?	<p>What is the connection between bird flu, human flu and pandemic flu?</p> <p>Bird flu + Human flu can = Pandemic flu</p> <p>One way pandemic flu can occur is if bird flu mixes with human flu and creates a new strain of flu virus that can spread easily from human to human.</p>		

Notes

For additional information, visit us at www.pandemicinfluenza.gc.ca or call our toll-free number: | 800 454-8302

APPENDIX 6-B FAQ: WHAT YOU SHOULD KNOW ABOUT A FLU PANDEMIC

What you should know about a flu pandemic.

An influenza (flu) pandemic spreads easily and rapidly through many countries and regions of the world.

Talk of an influenza pandemic has occupied the media of late. During the 20th century, the world faced three flu pandemics. The most deadly, the “Spanish Flu” in 1918 and 1919 killed over 20 million people.

Public health experts tell us that another flu pandemic could happen anytime. They also tell us that if we are prepared, we can reduce the number of people who become infected and the number who die.

And since pandemic flu spreads the same way as seasonal flu – through droplets contained in sneezes and coughs and by hand contact, basic precautions can greatly reduce its spread.

1. What is a pandemic?

A pandemic is distinguished by its scope. It becomes a worldwide epidemic, or *pandemic*, when a disease spreads easily and rapidly through many countries and regions of the world and affects a large percentage of the population where it spreads.

2. How does a flu pandemic start?

The viruses that cause flu are constantly changing. A pandemic starts when a new strain of flu virus emerges that is different from common strains of flu. Because people have no immunity to the new virus, it can spread quickly and infect hundreds of thousands of people. Pandemic flu strains often develop when an animal or bird virus mixes with a human virus to form a new virus.

3. What is the contagious period?

Flu can be contagious for 24 to 48 hours before any symptoms arise and for five days after the onset of symptoms. This means you could spread the virus without knowing you are infected.

4. What is the difference between ordinary flu and pandemic flu?

A pandemic flu can appear very similar to seasonal flu. Because people have little or no immunity to a pandemic flu virus, the spread of the disease can occur more quickly than with an ordinary flu.

The symptoms are the same: fever, headache, aches and pains, tiredness, stuffy nose, sneezing, sore throat and cough. However, they can be much more severe with a pandemic flu and affect people who do not normally suffer as much from seasonal flu – such as younger, healthy adults. For example, in the 1918 and 1919 pandemic, the death rate was highest among healthy adults.

Both ordinary flu and a pandemic flu are spread in the same way. The flu virus is spread when someone with the flu coughs or sneezes, and droplets containing the virus come in contact with another person’s nose, mouth or eyes. It can also be spread when people with the flu cough or sneeze into their hands and contaminate things they touch, such as a door handle. Other people can become infected if they touch the same object and then touch their face.

Up to 35% of Ontarians may get pandemic flu.



Here is what you should know about a flu pandemic.

Ordinary flu	Pandemic flu
Ordinary flu happens every year.	Pandemic flu happens only two or three times a century.
Ordinary flu is usually around from November to April – and then stops.	Pandemic flu usually comes in two or three waves several months apart. Each wave lasts about two to three months.
About 10% of Ontarians get ordinary flu each year.	About 35% of Ontarians may get pandemic flu over the course of an outbreak.
Most people who get ordinary flu will get sick, but they usually recover within a couple of weeks.	About half of the people who get pandemic flu will become ill. Most will recover, but it may take a long time. And some people will die.
Ordinary flu is hardest on people who don't have a strong immune system: the very young, the very old, and people with certain chronic illnesses.	People of any age may become seriously ill with pandemic flu, depending on the virus.
In a normal flu season, up to 2,000 Ontarians die of complications from the flu, such as pneumonia.	During a flu pandemic, Ontario would see many more people infected and possibly many more deaths.
There are annual flu shots that will protect people from ordinary flu.	There is no existing vaccine for pandemic flu. It will take four to five months after the pandemic starts to develop a vaccine.
There are drugs that people can take to treat ordinary flu.	These same drugs may also help people with pandemic flu but we may not have a large enough supply for everyone and we will not know their effectiveness until the virus is identified.

5. Will Ontario be affected?

Yes. With all the air travel between countries, a flu pandemic is likely to spread into all parts of the world, including Ontario.

The World Health Organization and public health experts around the world are watching carefully for the first signs of a flu pandemic so they can take steps to slow down its spread.

6. What will happen if a flu pandemic hits Ontario?

Once a pandemic flu virus arrives in Ontario, it will likely spread quickly. Many people will become ill, and there will be a lot of pressure on our health care services.

Depending on how widespread the flu pandemic is, our daily routines may be disrupted. For example, companies may have to close down some of their operations. Cities may decide to provide essential services only. Public health officials may cancel public gatherings, such as concerts and sporting events, where the flu virus can spread easily. They may close schools.

We cannot predict just how Ontario will be affected until we know how strong the virus is.

Flu pandemics can attack and kill healthy young adults.

7. Who is most at risk?

We are all at risk of getting a pandemic flu virus. Pandemic flu will spread more quickly than ordinary flu because very few Ontarians will be immune. Some groups of people – such as the very young or very old – may be more at risk than others of getting seriously ill or dying.

But everyone must be careful and aware. The 1918 and 1919 flu pandemic infected and killed mainly healthy young adults in their 20s and 30s.

We won't know for sure who is most at risk until we know more about the virus.

8. How many people will fall ill? What kind of care will they need?

- Of the 35% estimated to get pandemic flu, roughly half will require a visit with their family doctor or nurse practitioner. The other half will need information and advice to help them take care of themselves at home.
- Depending on the severity of the symptoms, others may need to be admitted to hospital for care.

9. When will there be a treatment for pandemic flu?

There are drugs known as antivirals that can treat flu, but for them to be effective people have to start taking them very soon after they start to get sick – in some cases before the symptoms start.

Right now, Ontario has a stockpile of antiviral drugs for the province.

In the case of a flu pandemic, we will only know if Ontario's supply of antiviral drugs works when we know more about the specific strain. The number of people we'll be able to treat will depend on our supply of drugs at that time.

10. When will there be a vaccine for pandemic flu?

Once scientists analyze the pandemic flu virus we can begin to produce a vaccine that can treat Ontarians.

The faster we learn about a specific strain of the flu virus, the faster we can produce a vaccine that can help to prevent the spread of the flu. It's important to remember that it will take time to do this, but our best defence is being prepared for a pandemic in the first place.

Good hand hygiene is the best way to prevent the spread of all flu viruses.

11. How can I protect myself and my family from a flu pandemic?

If a flu pandemic spreads to Ontario, you can reduce your risk by doing the same things you do to protect yourself and your family from ordinary flu:

- Get your flu shot every year – the flu shot will not protect you from a pandemic flu virus, but it will protect you from getting ordinary flu, which could weaken your immune system or resistance to the pandemic flu.
- Wash your hands with soap thoroughly and often – good hand hygiene is the best way to prevent the spread of all flu viruses.
- Keep an alcohol-based sanitizer (gel or wipes) handy at work, home and in the car.
- Cover your mouth and nose with a tissue when you cough or sneeze.
- Stay home when you are sick.
- Avoid large crowds of people where viruses can spread easily.
- Reduce non-essential travel.
- Follow any instructions given by public health officials.

APPENDIX 6-C HANDWASHING TECHNIQUE












Handwashing

To wash hands properly, rub all parts of the hands and wrists with soap and water or an alcohol-based hand sanitizer. Wash hands for at least 15 seconds or more. Pay special attention to the areas of the hand most frequently soiled.









- * Keep nails short.
- * Avoid wearing rings.
- * Avoid artificial nails or nail varnish.
- * Remove watches and bracelets.
- * Wash wrists and forearms if they are likely to have been contaminated.
- * Make sure that sleeves are rolled up and do not get wet during washing.

If you have any questions regarding cuts, sores, allergies or pre-existing skin conditions, call Telehealth Ontario at 1-866-797-0000, TTY 1-866-797-0007.

Handwashing with soap and water

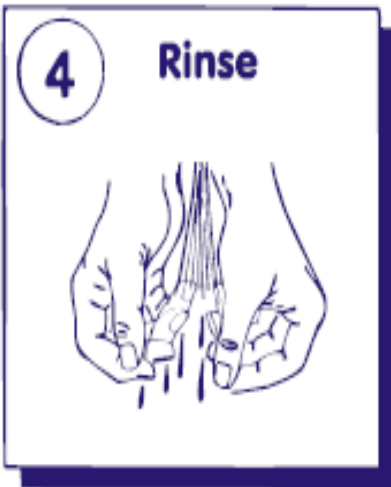
-  Wet hands and wrists.
-  Use a sufficient amount of soap.
-  Lather soap and scrub hands well, palm to palm.
-  Scrub in between and around fingers.
-  Scrub back of each hand with palm of other hand.
-  Scrub fingertips of each hand in opposite palm.
-  Scrub each thumb clasped in opposite hand.
-  Scrub each wrist clasped in opposite hand.
-  Rinse thoroughly under running water.
-  Wipe and dry hands well with paper towel.
-  Turn off water using paper towel.

Cleaning with alcohol sanitizers

-  Apply enough sanitizer to open palms.
-  Rub hands together, palm to palm.
-  Rub in between and around fingers.
-  Rub back of each hand with palm of other hand.
-  Rub fingertips of each hand in opposite palm.
-  Rub each thumb clasped in opposite hand.
-  Rub each wrist clasped in opposite hand.
-  Keep rubbing until hands are dry. Paper towels are not needed.

APPENDIX 6-D HANDWASHING SIGN

6 Step Method of Handwashing



APPENDIX 6-E EMERGENCY PREPAREDNESS

P ublic Health

Emergency Preparedness

Pandemic Planning
Guide
for
Individuals and
Families

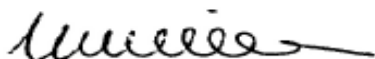


The Niagara Region Public Health Department is pleased to present this resource to help families and individuals get prepared for all emergencies. In recent years, we have seen the difficulty individuals and communities have experienced during unexpected events. It makes good sense to be prepared in a way that is specific to your needs and your family.

When we think about being prepared, we quickly realize that it is not possible to store everything we may ever want if our usual activities and habits have to be altered by, for example, an ice storm or a tornado. However, we can all (and we all should) take some general measures to be reasonably prepared with the essentials. This will help us stay healthy physically as well as mentally—being prepared can help you and your family remain safe, remain together, and diminish anxiety.

We are hearing a lot lately about “pandemic flu” and the “bird flu.” We have no way of knowing when and if it will happen or how severe or mild it will be, but it is important that we are ready. To that end, this guide provides some information on public health emergencies with a focus on pandemic influenza. An accompanying guide called “72 Hours... Are you prepared?” from Public Safety and Emergency Preparedness Canada helps you plan and make emergency kits for you and your family.

We are working with various organizations at the regional, provincial, and federal level to be able to respond to any emergency and protect the health of the community. We encourage all Niagara residents to develop an emergency plan and practice it. With preparation and practice, the Niagara Region can face any challenge.



Dr. Robin Williams
Medical Officer of Health
Niagara Region Public Health Department

What is a Public Health Emergency?

Events such as infectious disease outbreaks, natural disasters such as severe weather, and environmental accidents can result in a public health emergency. A public health emergency can occur at any time.

PUBLIC HEALTH EMERGENCIES CAN BE DUE TO:

Infectious Disease Outbreak – Increase in cases of a disease caused by a virus, bacteria, or parasite such as influenza or salmonella that becomes severe and affects a large part of the population.

Bioterrorism – Deliberate release of bacteria, viruses, or toxins that cause illness or death in humans or animals .

Natural Disasters – Floods, wildfires and extreme hot or cold weather can lead to disruptions such as power outages and mass evacuations.

Chemical Disaster – Chemicals are released that have the potential to harm people. These can be released unintentionally (e.g. industrial accidents) or intentionally (due to terrorism). Examples of harmful chemicals are chlorine, ammonia and benzene, while chemical terrorism may use nerve agents, mustards and choking agents.

Radiation Disaster – Nuclear power plant accidents or terrorism where people are exposed to radiation.



Prevention for yourself & your family

You can play an active role in staying healthy and preventing the spread of influenza, whether it's the seasonal flu that circulates each winter or pandemic influenza. Follow these guidelines:

Get an annual flu shot:

Make sure your family members get a flu shot too! The flu shot might not protect you from a pandemic flu virus, but will help protect you from getting the seasonal flu.

If you are sick, stay home!

If you go out when you're sick, you may spread your illness to co-workers, classmates, neighbours or others. It may take you longer to get better if you are not well-rested. Wait until you no longer have a fever and practice the steps below.

Wash your hands frequently:

Remember to wash before and after eating, after using the bathroom, after coughing or sneezing, and after touching surfaces that may have been contaminated by other people.



Cover up when you cough or sneeze:

Use a tissue, or raise your arm up to your face to cough or sneeze into your sleeve. If you use a tissue, dispose of it as soon as possible and wash your hands immediately or use an alcohol-based hand sanitizer.

Keep shared surface areas clean:

Doorknobs, light switches, telephones, keyboards and other surfaces can become contaminated with bacteria and viruses. Regular cleaning and disinfecting of these surfaces can help decrease contact with these bacteria and viruses.

Be a good role model and talk about staying healthy:

Encourage others to follow these simple guidelines. If you have children, be a good role model. Teach them to count to 20 while washing their hands and show them how to cover up when they cough or sneeze.

Adapted from the Public Health Agency of Canada, Flu Prevention Checklist, March 2006

Food Safety

Knowing safe food handling practices is an important part of preparedness. Properly storing and preparing foods can prevent foodborne illnesses in the event of all types of emergencies. Remember, it is always important to thoroughly cook foods like meat and eggs.

During a power outage, carefully inspect all food items and do not eat any food you think may be unsafe. Remember, when in doubt, throw it out.

- A freezer should keep food frozen for about 24 hours during a power failure, if the freezer is kept closed.
- A refrigerator will keep food cool for four to six hours. Put ice, if available, in the refrigerator to maintain temperature.

Discard any thawed food that has remained at room temperature for two or more hours and any food that has an obviously strange colour or odour. Remember that food contaminated with bacteria does not necessarily smell or appear spoiled.

Adapted from the Canadian Food Inspection Agency

Get Prepared!

Public Safety and Emergency Preparedness Canada has developed an extensive preparation guide for all emergencies (natural, technological and human-made) called "72 Hours...Are you prepared?" This guide is available from the Niagara Region Headquarters; can be downloaded from: <http://www.regional.niagara.on.ca>; or call: **1-800 O-Canada** (1-800-622-6232) or TTY: 1-800-926-9105 for a free copy.

The following provides important telephone numbers specific to the Niagara Region to assist you in your emergency planning.

For emergencies 911

- **Information Niagara: 211**
- **Niagara Region Public Health Department**
905-688-3762 or 1-800-263-7248
- **Niagara Region Public Health Department Pandemic Planning Information Line:**
905-688-8248 or 1-888-505-6074, ext. 7765
- **Public Health Agency of Canada Pandemic Influenza Information Line:**
1-800-454-8302

The back cover of this booklet provides a list of web resources available on personal preparedness and pandemic planning.

NON-EMERGENCY Phone Numbers Fire and Police Departments in Niagara Region

Municipality	Fire	Police
Fort Erie	905-871-1600, ext. 266	905-871-2300
Grimsby	905-945-2113	905-945-2211
Lincoln	905-563-8205, ext. 261	905-945-2211
Niagara Falls	905-356-1321	905-688-4111
Niagara-on-the-Lake	905-468-3266	905-688-4111
Pelham	905-892-3943	905-735-7811
Port Colborne	905-834-4512	905-735-7811
St. Catharines	905-684-4311	905-688-4111
Thorold	905-227-6412	905-688-4111
Wainfleet	905-834-4512	905-735-7811
Welland	905-735-9922	905-735-7811
West Lincoln	905-957-3361	905-945-2211
Callers with a TTY		905-688-1466

Niagara Health System Central Phone Number: 905-378-4647

Hospital Locations:

Douglas Memorial Hospital Site: 230 Bertie Street, Fort Erie
 Greater Niagara General Site: 5546 Portage Rd, Niagara Falls
 Niagara-on-the-Lake Hospital Site: 176 Wellington, NOTL
 Ontario Street Site: 155 Ontario Street, St. Catharines
 Port Colborne General Site: 260 Sugarloaf Street, Port Colborne
 St. Catharines General Site: 142 Queenston Street, St. Catharines
 Welland Hospital Site: Third Street, Welland

West Lincoln Memorial Hospital, 169 Main St., Grimsby 905-945-2253

Niagara peninsula Radio Stations:

FM 91.7 GIANT FM	105.1 CFLZ The River	AM 610 CKTB
97.7 HTZ-FM	105.7 CHRE Light	710 CJRN
101.1 CKEY Wild		1220 CHSC NewsTalk

Website Resources for Personal Emergency Preparedness and Pandemic Planning

Niagara Region Public Health Department Pandemic Planning
<http://www.regional.niagara.on.ca> (link to pandemic planning on home page)

**Niagara Region Public Health Department
Emergency Services Division**
<http://www.regional.niagara.on.ca/government/health/emo/default.aspx>

Canadian Government Official Website for Pandemic Planning
<http://www.influenza.gc.ca/>

Public Health Agency of Canada FluWatch
<http://www.phac-aspc.gc.ca/fluwatch/index.html>

Ministry of Health and Long-Term Care Pandemic Planning
<http://www.health.gov.on.ca/index.html> (link to pandemic influenza on home page)

Emergency Management Ontario
http://www.mpss.jus.gov.on.ca/english/pub_security/emo/about_emo.html

U.S. Government Official Website for Pandemic Planning
<http://www.pandemicflu.gov>

World Health Organization Website for Avian Influenza
http://www.who.int/csr/disease/avian_influenza/en/

Canadian Red Cross
<http://www.redcross.ca>

New York State Emergency Management
<http://www.semo.state.ny.us>

Download a free copy of this booklet:

<http://www.regional.niagara.on.ca>

Visit the link to *Pandemic Planning* on the home page for additional information, or call the Infectious Disease Program:
905-688-8248, ext. 7341 or 1-888-505-6074, ext. 7341

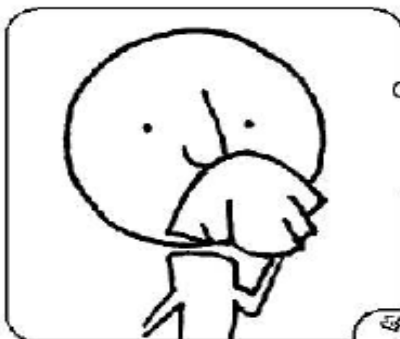
September 2006



APPENDIX 6-F RESPIRATORY ETIQUETTE SIGN (COVER YOUR COUGH)

Stop the spread of germs that make you and others sick!

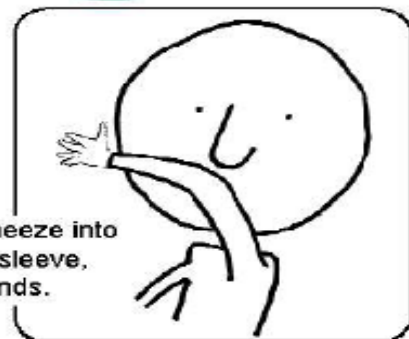
Cover your Cough



Cover your mouth and nose with a tissue when you cough or sneeze

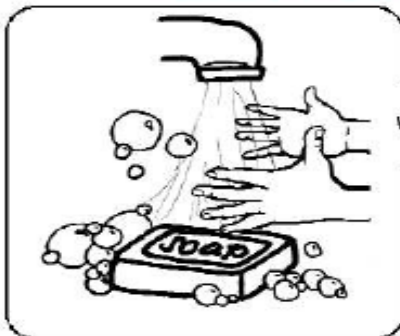
or cough or sneeze into your upper sleeve, not your hands.

Put your used tissue in the waste basket.



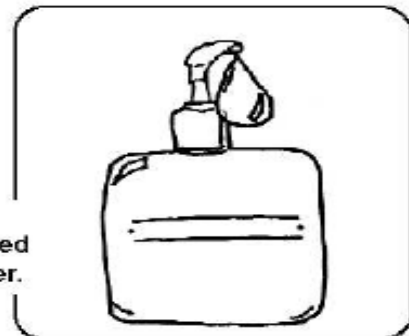
Clean your Hands

after coughing or sneezing.



Wash hands with soap and warm water

or clean with alcohol-based hand cleaner.



APPENDIX 6-G HOW TO STOP GERMS AT WORK



INFLUENZA (FLU)

How to Stop Germs at Work

How Germs Spread

Illnesses-like the flu (influenza) and colds are caused by viruses that infect the nose, throat, and lungs. The flu and colds usually spread from person to person when an infected person coughs or sneezes and touches a doorknob or countertop.

How to Help Stop the Spread of Germs

Take care to:

- Practice proper respiratory etiquette.
- Clean your hands often.
- Avoid touching your eyes, nose or mouth.
- Clean the workplace.
- Stay home when you are sick and check with a health care provider when needed.
- Practice other good health habits.

Respiratory Etiquette

Cover your mouth and nose when you sneeze or cough using a tissue, or cough and sneeze into your upper sleeve, not your hands. Put your used tissue in the wastebasket.

Clean your hands every time after you cough or sneeze.

Hand washing

When warm water and soap are available, wash hands:

- 1) Wet your hands and wrists.

- 2) Use a sufficient amount of soap.
- 3) Lather and rub hands vigorously together to ensure you have scrubbed all surfaces – for at least 15 seconds or more.
- 4) Rinse under running warm water.
- 5) Towel dry using a paper towel.
- 6) Turn taps off with towelled hand and dispose of towel.

When water and soap are not available, use an alcohol-based hand sanitizer,

- 1) Apply a dime-size of sanitizer to open palms.
 - 2) Rub hands together palm to palm, in between fingers, back of each hand, the fingertips and thumbs, and wrists.
 - 3) Keep rubbing until hands are dry; paper towels are not needed.
- Keep nails short.
 - Avoid wearing rings.
 - Avoid artificial nails or nail varnish.
 - Remove watches and bracelets.
 - Wash wrists and forearms if they are likely to have been contaminated.
 - Make sure that sleeves are rolled up and do not get wet during washing.

Avoid touching your eyes, nose, or mouth.

Germs are often spread when a person touches something that is contaminated with germs and then touches his/her eyes, nose, or mouth.

The flu virus can live on unwashed hands for 5 minutes; on clothing/tissue for 8 – 10 hours; and on hard objects (i.e. doorknobs, countertops) for 1 – 2 days.

Workplace cleaning is good practice:

- Inspect and replace filters of air conditioning systems regularly. If filters must be reused, clean with a disinfectant in the concentration that the manufacturer recommends.

- Clean telephone sets for each phone, especially in common areas, after each shift.
- Clean computer keyboards daily using alcohol wipes.
- Regularly clean all common areas, counters, desk tops, door handles, railings, sinks, washroom utilities, etc., daily or more frequently as necessary.
- For standard workplace settings, such as office facilities, cleaning can be accomplished with water, detergent and mechanical action (such as scrubbing) with a sufficient amount of contact time. This will reduce or eliminate reservoirs of potential pathogenic organisms.
- Although detergents are adequate for most work environments, some facilities may require enhanced cleaning practices.

Stay home when you are sick and check with a health care provider when needed.

When you are sick or have flu symptoms, stay home, get plenty of rest, and check with a physician as needed.

SYMPTOMS	COLD	FLU
Sudden Onset		✓
Fever (over 38 °C)		✓
Body Aches		✓
Extreme Fatigue		✓
Headache		✓
Chills		✓
Sore Throat	✓	✓
Stuffy Nose	✓	✓
Sneezing	✓	✓
Coughing	✓	✓

Remember, keeping your distance from others may protect them from getting sick.

Practice other good health habits

Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food. Practising healthy habits will help you stay healthy during flu season and all year long.

Chapter 7 Health Services

7.0 INTRODUCTION

The delivery of health care services in the Region of Niagara during a pandemic will be extremely challenging. Niagara is already designated an under-serviced area in terms of availability of health care practitioners, and both community-based and hospital-based systems will be further stressed by employee absenteeism and the increased volume of patients seeking care.

Due to the sheer size of the numbers involved, care for influenza patients must be largely community-based care and, in many cases, home-based care. In spite of this, increased numbers of patients will require emergency and in-patient care. While all health care providers will be impacted by influenza pandemic, the following groups will absorb the greatest shock: primary care physicians and nurse practitioners, ER doctors, internists and paediatricians, and all nursing personnel in ER.

Optimal management of influenza in the Niagara Region will depend on 1) successfully supporting the efforts of community-based health care workers, 2) effectively utilizing scarce manpower and equipment resources in hospital and long-term care facility settings, and 3) strategically implementing alternative methods of health care delivery that are responsive, efficient, and needs based. The NRPHD pandemic plan for health services aims to facilitate the above by providing vision, education, leadership, communication tools, and limited manpower.

7.1 PRINCIPLES

Ethically Based

The following ethical substantive values guide decisions concerning health services delivery during influenza pandemic: the health care worker's duty to provide care, priority setting (including the allocation of scarce resources, such as ventilators, vaccines and antivirals), reciprocity, trust, and solidarity. In addressing these issues, and in the preparation of this plan, we adhere to the ethical procedural values that our decisions should be reasonable, transparent, inclusive, responsive, and accountable. (Stand on Guard for Thee)³

Scientifically Sound

Niagara Region Public Health Department will provide evidence-based and scientifically sound health information related to influenza pandemic. NRPHD will link to, and liaise with, the

³ Adapted from: Gibson, J. et al. Ethics in a Pandemic Influenza Crisis. Framework for Decision Making. Joint Centre for Bioethics. University of Toronto 2005.

Ministry of Health and Long-Term Care (MOHLTC), Canada Public Health Agency, World Health Organization, and regional networks, to ensure that our advice is current and consistent.

Responsive

NRPHD activities will vary with, and respond to, the pandemic phases as described by Health Canada and as declared by the provincial Chief Medical Officer of Health (CMOH). In this plan, the numbers at the end of a sentence indicate the pandemic phase(s) to which the actions described therein apply.

7.2 COMMUNITY-BASED HEALTH CARE

Numerous physicians and nurse practitioners work within the Niagara Region in a variety of practice settings, with variable methods of remuneration and serving patients in both official languages. To address the concerns documented by the College of Family Physicians of Canada that family physicians do not feel prepared or supported in the face of influenza pandemic, the NRPHD has surveyed all Niagara Region primary care physicians and ascertained their preferred methods of communication with respect to influenza pandemic [pandemic Phases 1-4]. Important information can be faxed or e-mailed to all members of this group within four hours [pandemic Phases 5-6].

A detailed, user friendly, Preparedness Plan for Niagara Physicians' Offices has been created (Appendix 7-A) to be used in conjunction with provincial and national materials, such as the MOHLTC emergency personal protective kit, MOHLTC educational materials, CPHA patient hand-outs, and others as they are produced [pandemic Phases 1-4].

Small group Continuing Medical Education (CME) accredited educational sessions have been, and will continue to be, organized for family physicians and their staff in each municipality, in order to disseminate the Preparedness Plans and receive local physician input on the usefulness of the presented materials [pandemic Phases 1-4].

NRPHD will remain up to date on all provincial directives and developments and report pertinent decisions to the primary care physicians. This includes but is not limited to the following: infection control practices (Appendix 7-B), the Patient Assessment Record (Appendix 7-C), triage criteria for transfer to acute care settings or discharge home (Appendix 7-D), establishment of Alternate Care Sites (Appendix 7-E), and distribution of vaccines and antiviral medications [pandemic Phases 1-6].

NRPHD will establish a call-in hotline and e-mail address for community physicians to address their questions and concerns [pandemic Phases 5-6].

NRPHD and NHS will work to keep abreast of progress made by the OMA, ONA, CPSO, and other professional bodies on these and related issues.

7.3 ALTERNATE CARE SITES

Niagara will need to have innovative solutions in place to support ill individuals when local health organizations become overwhelmed. Alternate Care Sites (ACSs) are one option for augmenting the provision of medical care during a pandemic. ACSs may be established as “satellite sites” of an existing facility or as “free-standing” sites.

To ensure that ACSs suit the needs of Niagara, a multidisciplinary team approach engaging Public Health Department staff, NHS staff, Hotel Dieu – Shaver, EMS, LTC, West Lincoln Memorial Hospital, and community health providers has been established. This team will address criteria for opening the site, site selection, insurance, equipment, command structure, staff requirements, staff recruitment, training, infection prevention and control, and clinical management [pandemic Phases 1-5]. In response to established criteria and observed influx of patients to established health care settings, the Alternate Care Site will be declared open [pandemic Phases 5 and 6] and closed [post pandemic Phase] by the pre-determined designated commander.

A second multi-disciplinary team, comprising staff from the Coroner’s office, Niagara Funeral Services, NHS, and NRPD will develop a body-disposal protocol.

7.4 SPECIAL GROUPS

The Niagara Region is home to one university, one college, and private schools with resident student populations. Because of the close living situations of students in residence and the absence of some of the usual supports found in a home, these groups will require special consideration. Representatives from Brock University, Niagara College, and the private schools will be encouraged in pandemic planning at their own institutions and will be invited to participate on NRPD pandemic planning committees.

Other special groups in Niagara with less ready access to health care include the homeless, the mentally challenged, and seasonal farm workers. Existing social agencies who serve these populations must be provided with information about influenza pandemic and be apprised of the availability of Alternate Care Sites when applicable.

7.5 ACUTE CARE FACILITIES

The Niagara Health System, through its eight sites, is responsible for the delivery of all acute hospital care in the Niagara Region. This integration can allow for a more co-ordinated response in the event of influenza pandemic. An AMOH of the NRPD heads the infection control committee at the largest hospital site and joint pandemic planning meetings have been held between the NHS and the NRPD. Focus of these meetings has been on the education of, and engagement of, health care personnel, assessment of surge capacity, criteria for admission and discharge, patient assessment records, personal protection of health care workers, and establishment of Alternate Care Sites [pandemic Phases 1-4]. Hospitals will be made aware of issues surrounding scarcity of resources and supply chain difficulties

[pandemic Phases 5 and 6] and be encouraged to develop their own emergency stockpile of medical supplies [pandemic phases 1-4].

NRPHD, through community physician leadership, will co-ordinate with the NHS to bring pandemic-related continuing medical education to hospitalists, internists, paediatricians, ER doctors, and critical care RNs.

It is likely that hospital ERs will be involved in surveillance tools developed for pandemic influenza [pandemic Phases 4 – 5 and post pandemic]. NRPHD will have a lead role in initiating and co-ordinating this.

Additional efforts will be made to forge useful links with the NHS and to support their pandemic planning efforts.

7.6 LONG-TERM CARE FACILITIES

There are Long-Term Care homes in Niagara Region. Long-term care facilities will need to address many of the same issues that will face acute care facilities, e.g. supply chain disruption; health care provider absenteeism; lack of volunteers; and use of personal protective equipment and other infection control measures [pandemic Phases 1-4].

Niagara's long-term care facilities will need to be made aware of provincial criteria regarding interfacility transfer of ill residents (to be developed by the Provincial Transfer Authorization Centre) [pandemic Phases 1-5]. However, there will be a need for long-term care homes to manage more of their residents in-house even as they develop more serious illness [pandemic Phases 5-6].

NRPHD has been providing education and support to our long-term care partners. A febrile respiratory screening tool is in place and respiratory outbreaks are reported to the NRPHD. These activities will continue in all pandemic phases.

7.7 Alternative Health Practitioners (e.g. Chiropractors, naturopaths, etc.)

NRPHD needs to develop ways to build bridges with this group, centering around our common goal of optimizing the health of the people of Niagara during pandemic influenza. Alternative health care providers can be allies in promoting good infection control practices, personal preparedness, no smoking policies, sound nutritional habits, and public health measures.

7.8 COMMUNITY Health Centres

Niagara has only one community health centre and it services the francophone population of Welland. Its resources are small. NRPHD will support this office as it would any other physician's office and will disseminate pandemic educational materials in the French language when available [pandemic phase 1-4].

APPENDIX 7-A PREPAREDNESS PLAN FOR NIAGARA PHYSICIANS' OFFICES STRUCTURE AND COMMUNICATION

- Assign responsibility for surveillance and detection advisories (regional, provincial, college).
Regional hotline: 905-688-8248, ext. 7765
www.health.gov.on.ca/english/public/program/pubhealth/flu
www.oma.ca
 - Monitor and review influenza activity in your practice (i.e. weekly or daily number of patients calling or presenting with influenza-like illness [ILI]).
 - All physicians office need to routinely undertake Febrile Respiratory Illness (FRI) screening according to the PIDAC lower case guidelines
<http://health.gov.on.ca/english/providers/program/infectious/diseases/icfri.html>
 - Report number of office staff who are ill with ILI.
 - Have a list of home and alternate phone numbers of all staff. Maintain a list in the office and distribute to each staff member to keep at home.
 - Create a list of health care entities and their points of contacts with whom your office anticipates it will be necessary to maintain communications and co-ordination of care during a pandemic.
 - Create database of patients with regularly scheduled visits who may need to be contacted during a pandemic for purposes of rescheduling office visits or assigning them to another point of care.

EDUCATION

Provide an education program for staff to ensure that all personnel understand the implications of, and control measures for, influenza pandemic.

- Circulate information sheets endorsed by the Public Health Department.
- Attend information/education sessions provided by PHD.
- Identify, obtain, and circulate informational materials for patients that are language and reading level appropriate:
- Review Pandemic Influenza “Flu Prevention Checklist” PHAC.
- Review Pandemic Influenza “Understanding Pandemic Influenza” PHAC.

TRIAGE AND INTAKE

When planning for triage and management of patients during a pandemic, it is recognized that much will rest on provincial directives and legal decisions regarding such issues as provision of Alternate Care Sites, reimbursement and malpractice coverage for telephone care, and reimbursement for provision of care at Alternate Care Sites, etc. However, physicians are encouraged to consider the following and adapt, where feasible, to your individual situations:

- Have a system for telephone triage of patients to determine who requires a medical evaluation, to limit office visits to those that are medically necessary.
- Display self-administered influenza-like illness (ILI) screening tool prominently on the front door to identify patients with ILI.
- Develop plans to manage patients at the height of the pandemic including these possibilities.
 - Temporarily cancel non-essential medical visits (e.g. annual physicals, wart treatments).
 - Designate separate blocks of time for non-influenza and influenza-related patient care.
 - Redirect influenza patients to alternate care sites.
 - Keep abreast of triage criteria for hospital-based care.

INFECTION CONTROL

An infection control plan, based on droplet precautions and one-metre distancing, and which includes protection of reception personnel at the initial point of encounter, is in place and includes the following:

- Where possible, a specific waiting room area for patients with symptoms of influenza pandemic. If not possible, put greater emphasis on use of masks as noted below.
- Hand hygiene stations near the entrance, reception area, and exam rooms. Instruct all entering persons to wash hands before approaching reception. Note: Alcohol-based hand rub is highly flammable and dispensers of this product should not be left in non-monitored areas. Provide individual hand sanitizers and lotion to all staff and encourage frequent use.
- Signage prominently posted about Respiratory Hygiene/Cough Etiquette, i.e. the following:
 - Use tissues or sleeve to cover cough or sneeze.
 - If coughing or sneezing, don a mask before approaching reception.
 - Wash hands after covering cough or sneeze.

- Provision of materials – masks for symptomatic patients (adult and paediatric sizes), facial tissues, and receptacles for their disposal.
- Practice of the above when seasonal influenza and other respiratory viruses are circulating.
- Designation of separate exam rooms for evaluation of patients with symptoms of influenza pandemic.
- Use of Standard and Droplet precautions (i.e. mask plus eye shield and gown) for close nursing or MD contact with symptomatic patients. (see Appendix 7-B “Infection Control”).

MANAGEMENT

Family physicians are the cornerstone of preventive health measures and patient education around the theme of staying healthy.

- In pre-pandemic phase, continue ongoing efforts around smoking cessation, obesity counselling, nutrition, and exercise.
- Promote seasonal flu vaccination.
- Follow Ministry and local guidelines for triage of patients to Alternate Care Sites, home self-care, or hospital-based care.
- Follow public health guidelines regarding distribution of antivirals and vaccine when available. These guidelines will be sent to physician offices via fax and e-mail and will be available on our website at www.regional.niagara.on.ca

BUSINESS CONTINUITY

An occupational health plan has been developed and includes the following:

- Instructions to staff to stay home when ill with influenza.
- Sick leave policy for personnel who have symptoms of illness during influenza pandemic.
- A policy for personnel who need to care for their ill family members.
- A statement about when to return to work after being ill.
- Education around fears related to working during influenza pandemic.
- Mental health and faith-based resources for counselling.

Planning for surge capacity has occurred and includes the following:

- Establishing possible sources of alternate personnel.
- Encouraging staff to develop alternate family care plans.
- Establishing minimum number of staff to keep office open.
- Anticipating consumable resources (masks, gloves, tissues, hand hygiene products, etc.) and keep an extra two-week supply on hand above usual requirements. Note: The Emergency Infection Control Kit contains supplies for a 7-10 day period only.

APPENDIX 7-B INFECTION CONTROL - NIAGARA PHYSICIANS OFFICE INFECTION CONTROL

Most influenza outbreaks amongst humans and animal studies suggest that virus-laden large droplets (particles >5µm in diameter) generated when infectious persons cough or sneeze are the predominant mechanism of influenza virus transmission (Emerging Infectious Diseases. www.cdc.gov/eid.Vol.12, No.1, January 2006). Transmission of influenza viruses by contaminated hands or other surfaces has not been well documented but the virus exists in diminishing titre on the surfaces of hands for 5 minutes, nonporous surfaces for 24 hours, and surfaces such as cloth and paper for 8-12 hours. The incubation period is 1-4 days and viral excretion peaks early in illness and exists prior to the development of symptoms.

Most of the information that follows is abstracted from the excellent publication *Infection Control in the Physician's Office* from the CPSO. Physicians are encouraged to read that document for a more in-depth treatment of other forms of infection control in the office.

Droplet Precautions

Droplet transmission refers to large droplets generated from the respiratory tract that are inoculated or directly deposited onto the mucous membranes of the eyes, nose, or mouth of the new host. These droplets can be propelled through the air a short distance (< 1 metre) during coughing or sneezing or during procedures that could generate aerosolization of respiratory secretions, e.g. taking a nasopharyngeal swab.

Compliance with droplet precautions in the primary care setting involves several steps.

Visual Alerts

Post visual alerts in appropriate languages at the entrance to outpatient facilities instructing patients with influenza-like illness, and those who accompany them, to practice hand hygiene and cough etiquette and to don a mask on entering the office. This will alert health care and reception personnel.

Prominently display the *Cover Your Cough* poster and provide an adequate supply of tissues and receptacles.

Hand Hygiene

There is evidence that alcohol-based hand sanitizers are at least as good as and possibly superior to soap and water, except in cases where hands are visibly soiled or contaminated. Since the contents are highly flammable, do not install these in unmonitored areas.

In areas with sink access, self-contained disposable liquid soap containers, as opposed to bar soap, should be used wherever possible to minimize contamination. If soap containers are reusable, never refill by topping up. Instead, wash, rinse, and dry the soap container

thoroughly, and then refill. When washing with soap, wet hands thoroughly and achieve a lather; rub vigorously for 10-15 seconds, covering all surfaces of hands and fingers, including nails; rinse and dry well with disposable paper towel; and turn off taps with towel and discard in a bin.

Encourage reception staff to wash their hands after registering each patient; and provide individual pump-type, alcohol-based, hand sanitizer dispensers and individual hand lotion bottles to prevent chapping of skin. Apply hand sanitizer to the palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry.

Masking and Separation of Persons with Respiratory Symptoms

Procedure masks (i.e. with ear loops) or surgical masks (with ties) are adequate to contain respiratory secretions. N-95 masks are not required for general patient and personnel use. If possible, create separate waiting areas for persons with respiratory symptoms or encourage one-metre spacing of chairs.

Personal Protective Equipment

Reception and health care personnel should wear a mask and eye protection when in direct contact with a patient suspected of having influenza. Health care personnel should also wear a mask (type of mask to be determined) plus gown (gown must be removed after each patient contact) and glove when doing procedures involving close contact with patients and during which increased exposure may occur, e.g. taking nasopharyngeal swab. If caring for children, wear gowns and gloves at all times, as contamination of the environment is much more likely.

Masks which are moist no longer provide protection against droplet transmission and should be changed.

Gloves must be used only once and then discarded. Hands should be sanitized after glove removal. Non-latex, powder-free gloves are recommended.

Eye protection can be in the form of safety glasses, goggles, splash guards, or facial shields. Eyeglasses do not provide adequate protection.

Physical Environment

At the end of the office visit, wipe with a detergent solution all horizontal surfaces in the examining room that have been in contact with the patient, as well as equipment used to examine the patient.

APPENDIX 7-C - PATIENT ASSESSMENT OR PATIENT CARE RECORD

Under development.

APPENDIX 7-D – MOHLTC TRIAGE CRITERIA

Triage criteria for transfer to acute care facility.
Triage criteria for antiviral medication.
Triage criteria for discharge for Alternate Care Site.

Under development.

Chapter 8 Infection Control

8.0 INTRODUCTION

This chapter outlines the basic principles of infection control related to influenza. General information on influenza is presented, including modes of transmission, communicability, incubation period, and symptoms. Infection control practices are outlined for the general public. In addition, infection control references for health care and community settings are provided. Adherence to infection control practices is essential to minimize the transmission of influenza. Frequent and careful hand-washing is emphasized as a key infection control strategy and may be the only significant preventive measure available, particularly early in a pandemic. If the pandemic virus behaves differently (e.g. different routes of transmission, longer incubation period, or period of communicability), infection control practices will be adjusted accordingly.

8.1 GENERAL INFORMATION ON INFLUENZA

8.1.1 INFLUENZA

Influenza, the flu, is a highly contagious and common respiratory illness caused by a virus. Understanding how influenza is spread can help people take precautions to prevent or minimize its transmission. (See Chapter 3 for more information about influenza.)

8.1.2 MODES OF TRANSMISSION

Influenza spreads when the infected respiratory secretions from the mouth or nose of one person come into contact with the mucous membranes (eyes, mouth or nose) of another person. The vast majority of influenza is spread from person to person by droplet spread or direct contact. Outside the body, the influenza virus may persist for some time, especially in conditions of low relative humidity and cooler temperatures. Specifically, the influenza virus can survive for 1-2 days on hard surfaces, 8-12 hours on soft surfaces, and 5 minutes on hands, resulting in some spread by indirect contact.

Droplet spread refers to spray with relatively large, short-range droplets produced by sneezing, coughing, talking, or singing. These droplets may spray a distance of up to one metre (about three feet) before dropping to the ground.

Direct contact occurs when there is immediate transfer of the virus through skin-to-skin contact or kissing. For example, an infected person may cough into his/her hand and then shake hands with another person who may then rub his/her eyes.

Indirect contact occurs when the virus is transmitted from an infected person to an inanimate object and then on to another person. For example, an infected person may blow his/her

nose, then touch an elevator button and then another person touches the same elevator button and touches his/her eyes. There is controversy over the role of airborne transmission in spreading influenza. Airborne transmission occurs when aerosolized, infected droplets of a small size (< 5 µm in diameter) remain suspended in air for long periods of times.

8.1.3 COMMUNICABILITY

Communicability refers to the time period during which the influenza virus can be spread from an infected person to another person. Most adults infected with influenza can transmit the virus from 1 day before and up to 3-5 days after the onset of symptoms. This period may be longer (7 or more days) in children and some adults.

8.1.4 INCUBATION PERIOD

The incubation period for influenza is 1-3 days. This means that a person may develop symptoms of influenza 1-3 days after coming into contact with a person with the influenza virus.

8.1.5 SYMPTOMS

Infection with influenza can result in a wide range of illness. Some people might not have any symptoms. About half of infected people will experience some symptoms. These include the following:

- Sudden onset of fever, headache, chills, muscle aches, physical exhaustion, and a dry cough.
- Subsequent onset of sore throat, stuffy or runny nose, and worsening cough.
- Children may also feel sick to their stomach, vomit, or have diarrhea.
- Elderly and immune-compromised people may not develop a fever.
- Most people recover in 7-10 days.

8.2 INFECTION CONTROL PRACTICES FOR THE GENERAL PUBLIC

There are a number of things people can do to prevent or reduce the risk of getting influenza. These are called "Infection Control Practices":

8.2.1 HAND HYGIENE

Clean your hands frequently with an alcohol-based hand sanitizer or soap and water, especially after you cough, sneeze, or blow your nose. A 60% to 90% alcohol-based hand sanitizer is the preferred agent for hand hygiene, unless your hands are visibly soiled. If your hands are visibly soiled, you should wash them with soap and water. If you are not near water and your hands are visibly soiled, clean your hands with a moist towelette to remove visible debris, then use an alcohol-based hand sanitizer.

The influenza virus is easily killed by soap, hand-wash, or hand sanitizer products, and household cleaning products. Therefore, gloves or special antibacterial hand-wash products are not needed. Hand-washing/sanitizing is a very important method to prevent the spread of influenza pandemic before a vaccine becomes available.

8.2.2 RESPIRATORY ETIQUETTE

Cover your mouth and nose when you cough or sneeze. This will help stop the spread of germs that can make people sick. It is important to keep your distance from people who are coughing or sneezing. (See the following website:
http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_fri_080406.pdf)

8.2.3 AVOID TOUCHING YOUR EYES, MOUTH AND NOSE

Influenza spreads when the infected respiratory secretions from the mouth or nose of one person come into contact with the mucous membranes (mouth, nose or eyes) of another person. Without even realizing it, you may touch the infected nose and mouth secretions of someone who has influenza (e.g. pushing an elevator button). If you go on to touch your mouth, nose or eyes, the influenza virus may gain entry into your body causing infection.

Hand-washing Procedure

1. Wet hands and wrists.
2. Apply soap.
3. Lather for 15 seconds. Rub in between fingers, the back of your hands, wrists, and fingertips.
4. Rinse thoroughly.
5. Dry with paper towel or hot air blower.
6. Turn taps off with paper towel, if available.

7. Open bathroom door using paper towel.
8. Discard paper towel in waste basket.

Hand Sanitizing Procedure

1. Follow the manufacturer's recommendations on the amount of hand sanitizer to use.
2. Apply the alcohol-based sanitizer to the palm of one hand.
3. Rub hands together.
4. Work the sanitizer in between fingers, the back of your hands, wrists and fingertips (covering all parts of the hands and fingers).
5. Keep rubbing your hands until dry.

Cover Your Cough Procedure

1. Cover your mouth and nose with a tissue when you cough or sneeze, or if no tissues are available, cough or sneeze into your upper sleeve, not your hands.
2. Put your used tissue into the waste basket.
3. Wash your hands with soap and water or clean with alcohol-based hand sanitizer.

8.2.4 STAY HOME IF YOU ARE ILL TO AVOID INFECTING OTHERS

Most adults infected with influenza can transmit the virus from 1 day before and up to 3 - 5 days after the onset of symptoms. This period may last for 7 or more days in young children and some adults. Some experts believe that the highest concentration of viral shedding occurs early and decreases quite a bit after 3 days of illness. However, there is no clear data on how long a person should wait before returning to their usual activities (e.g. school, work) in order to minimize the risk of infecting others. The best advice at this time is that adults should return to their usual activities at least 5 days after the onset of symptoms (7 days for young children), or when they feel well enough to return to their duties, whichever is longer.

8.2.5 USE OF MASKS

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 federal 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 likely will 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.

8.2.6 GET VACCINATED

The best way to protect yourself from seasonal influenza is to get vaccinated every fall. The influenza vaccine (flu shot) is made from particles of killed flu viruses. It contains three different types of influenza viruses (two types of influenza A and one type of influenza B). Doctors and scientists around the world determine the strains of influenza virus that are circulating, and the vaccine is then prepared to protect against the types that are most likely to occur each year. A person who receives the flu shot develops immunity for the types of influenza in the vaccine. The body needs about two weeks to build up protection to the virus, and this protection may last for about four to six months. The influenza virus changes each year, so a different vaccine has to be used each year.

It is important to get vaccinated for seasonal influenza. Although the pandemic strain will be a new strain of influenza, getting vaccinated protects individuals against seasonal strains. Seasonal immunization may also reduce the chances of genetic re-assortment of a new influenza virus. The influenza vaccine is available free of charge to everyone who lives, works or attends school in the province of Ontario through physicians, NRPHD, and workplaces. NRPHD immunizes approximately 12,000 individuals in public clinics throughout the city every year.

In the event of a pandemic strain of influenza, it is estimated that it will take approximately 4 - 6 months to produce a suitable vaccine. Initially, there will not be enough vaccine for everyone. The government has developed "priority groups" to determine the order in which people will receive the influenza pandemic vaccine. Currently, the priority groups, listed in order of

highest to lowest priority, are health care workers, essential service workers, persons at high risk of serious illness, healthy adults, and healthy children. The Niagara Region Public Health Department will work with hospitals and other organizations to ensure that vaccine priority groups receive vaccine. When enough vaccine becomes available, NRPHD will organize mass vaccination clinics in order to vaccinate the general public. NRPHD will make public announcements about the time and location of these clinics.

8.3 ENVIRONMENTAL CLEANING WHEN CARING FOR A PERSON WITH KNOWN OR SUSPECTED INFLUENZA AT HOME

People sick with influenza may contaminate their surroundings with respiratory secretions from their mouth and nose. As mentioned earlier in this chapter, the influenza virus can live for up to 5 minutes on hands, 8 -12 hours on soft surfaces, and up to 2 days on hard surfaces. Therefore, some additional cleaning measures should be taken if there is someone in your household with suspected or confirmed influenza.

Remember that frequent and careful hand-washing/sanitizing is the single most important method to prevent the spread of influenza pandemic before a vaccine becomes available.

Housekeeping

Environmental surfaces (e.g. bathroom counters) and objects (e.g. door knobs) that have been touched by a person with known or suspected influenza should be cleaned every day with your regular household cleaning agent.

Laundry

Special handling of clothes and linens used by a person with known or suspected influenza is not needed.

If an item is heavily soiled it should be rolled or folded to contain the heaviest soil in the centre of the bundle. Large amounts of solid soil, which may include feces or blood clots, should be removed from the item with a gloved hand and toilet tissue, and then placed in a bed pan or toilet for flushing. In order to prevent splashing, solid soil should not be removed by spraying with water.

Use of commercial laundry detergent with household bleach (according to product instructions and where suitable for fabrics) and a normal machine wash are enough to clean soiled clothing and linens in the home.

Following machine washing, machine drying or hanging clothing and linens on a clothes line at home are suitable methods for drying.

Garbage

Garbage created by a person with known or suspect influenza does not need any special handling and may be placed with your regular household waste for disposal.

Medical sharps, which may include used syringes and needles, may be used in the care of someone with known or suspected influenza. It is a Niagara Region policy that medical sharps cannot be picked up as part of your regular garbage collection as they pose a serious hazard to the collector. Therefore, all medical sharps must be placed in a tightly sealed and labelled, hard, shelled container. Examples of containers include plastic pop bottles or plastic bleach bottles that have been rinsed out. Once the sharps have been put inside the bottle, screw the cap on tightly. Remember to put a label on the bottle which clearly states what is inside (e.g. used syringes and needles). Drop these containers off at a Niagara Region Household Hazardous Waste Depot. For information on Household Hazardous Waste Depots (HHW), call the HHW Info-line at 905-356-4141, or 1-800-594-5542, or go online at <http://www.regional.niagara.on.ca/living/hhw/default.aspx>.

8.4 INFECTION CONTROL PRACTICES FOR COMMUNITY SETTINGS

Community settings (e.g. emergency responders, child care settings, mortuary care workers, schools and student residences, and workplaces) must develop infection control and occupational health plans for managing influenza pandemic. These groups are referred to in Annex F: Infection Control and Occupational Health Guidelines during Pandemic Influenza in Traditional and Non-Traditional Health Care Settings, Part B of the Canadian Pandemic Influenza Plan (2004) for specific guidelines by each setting. This document can be accessed online at <http://www.phac-aspc.gc.ca/cpip-pclcpi/>

8.5 INFECTION CONTROL PRACTICES FOR HEALTH CARE SETTINGS

- Health care settings (e.g. acute care, long-term care, ambulatory care, and home care) must develop infection control and occupational health plans for managing influenza pandemic. These groups are referred to in Annex F: Infection Control and Occupational Health Guidelines during Pandemic Influenza in Traditional and Non-Traditional Health Care Settings, Part B of the Canadian Pandemic Influenza Plan (2004) for specific guidelines by each setting. This document can be accessed online at <http://www.phac-aspc.gc.ca/cpip-pclcpi/>
- All Ontario Health Care Settings should refer to 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. All health care settings need to routinely undertake febrile respiratory illness (FRI) screening according to the PIDAC guidelines. (See Appendix 21 for the Case Finding/Surveillance Protocol for Febrile Respiratory Illness.)

- In addition, a number of specific documents have been prepared for health care professionals and facilities regarding routine infection control practices.

Physicians in office practice should refer to the following:

- The College of Physician and Surgeons of Ontario “Infection Control in the Physicians Office” (2004) guidelines. This document is available online at <http://www.cpso.on.ca/> under “Publications”.
- Health care facilities should refer to the Public Health Agency of Canada's: “Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care” (1999) available online at <http://www.phacaspc.gc.ca/publicat/ccdr-tc/99vol25/25s4/index.html>; Febrile Respiratory Illness Screening and Reporting

1. At initial contact, each patient should be asked two questions:

- Do you have a new or worse cough or shortness of breath?
- Are you feeling feverish?

2. If the answer is yes to both questions the patient should be:

- Offered alcohol-based hand sanitizer.
- Provided with a surgical mask to wear.
- Asked to remain in a separate waiting area or keep at least one metre away from other people.

3. Health care providers who assess the patient should:

- Take droplet/contact precautions (hand hygiene, mask, eye protection).

Health care providers should ask the patient:

- Have you travelled in the last 14 days? Where?
- Have you had contact with a sick person who has travelled in the last 14 days?

- Where did that person travel?

For a current list of countries with health alerts, see <http://www.phac-aspc.gc.ca/tmp-pmv/index.html>

4. Report immediately to Niagara Region Public Health Department by telephone at 905-688-3762, ext. 7330, when there is:

- A positive travel history in a case or contact of a case.
- A possible FRI cluster.
- "Hand-washing, Cleaning, Disinfection and Sterilization in Health Care" (1998) available online at <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/98vol24/index.html> scroll down to the heading "Advisory Committee Statements and Supplements to the CCDR"; and
- "Prevention and Control of Occupational Health Infections in Health Care" (2002) available online at <http://www.phac-aspc.gc.ca/publicat/ccdrmtc/02vol28/index.html> scroll down to the heading "Advisory Committee Statements and Supplements to the CCDR".
- **Long-term care homes should refer to:**
- The Ministry of Health and Long-Term Care document entitled "A Guide to the Control of Respiratory Outbreaks in Long-Term Care Homes" (2004) available online at http://www.health.gov.on.ca/english/providers/pub/pubhealth/ltc_respoutbreak/ltc_respoutbreak.html.

Chapter 9 Pandemic Communications Plan

9.0 INTRODUCTION

The Niagara Region Public Health Department will lead public health communications for our community, in concert with the Ministry of Health and Long-Term Care and key stakeholders (i.e. Niagara Health System). In order to support this leadership role, communication objectives, principles and accountabilities have been clearly outlined in the event of a pandemic.

Multiple communication methods will be employed to ensure that information conveyed is transparent, accessible, accurate, and real time, in order to assist residents, businesses, the health care sector, and other community stakeholders with their pandemic response.

9.1 OBJECTIVES

- Niagara Region Public Health Department (NRPHD) will link to, and liaise with, the Ministry of Health and Long-Term Care (MOHLTC), Health Canada, and established regional networks.
- NRPHD will ensure open, transparent, and supportive communications with the Niagara Health System, West Lincoln Memorial Hospital, and Hotel Dieu Shaver Health and Rehabilitation Centre, as the lead health care providers for Niagara.
- NRPHD will ensure that health care workers and essential services workers have access to real time information to assist with pandemic response.
- NRPHD will be the lead organization for public and stakeholder communications within Niagara, pertaining to health-related communications.
- NRPHD communications will be supported by provincial, national, and international sources, complemented by information from local hospitals and municipal leaders.
- NRPHD will distribute clear, concise, and timely information to the public via multiple communication vehicles.
- NRPHD will be available to provide proactive and reactive advice and information to the broader community and stakeholders.
- NRPHD will establish and identify local community groups/organizations and develop networks and partnerships for the purposes of informing the public.
- NRPHD will convey information, key messages, and information products to local networks/partnerships for distribution to their respective networks.

- Niagara Region Corporate Communications will co-ordinate non-health-related communications to inform residents of changes in regional services (i.e. snow removal, waste collection, etc.).
- Communications strategies and actions will consider the information needs of identified internal and external audiences.
- NRPD will apply key learnings from leading public health and health care reviews, such as the Walker Report and the Campbell Commission on SARS.

9.2 COMMUNICATION PRINCIPLES

Public health risk communication principles must be applied in developing both content and strategy for public communications activities in response to an influenza pandemic.

Key communication principles include the following:

- All communication materials, from all sub-committees, will be approved by the Medical Officer of Health and/or designate, Public Health Department Communications, and the Corporate Communications Strategist, as per the Department Policy X-40 "Media Communications and Co-ordination".
- During all stages of pandemic communications, the Board of Health and the Corporate Management Team will be briefed regularly on activities and developments, in order to assess emergency management actions.
- Essential information will be disseminated promptly through multiple mechanisms.
- Information targeted at the general public will be written and developed for appropriate literacy levels and provided in multi-lingual formats (available via MOHLTC and Health Canada websites) and in formats designed for the disabled (large print, audio, signed TV segments).
- Health care stakeholders will receive daily and/or more frequent information, as it is received by the Ministry of Public Health and Long-Term Care.
- The media and the general public will be provided with regular, up-to-date information.
- Official spokespersons will be credible and will be supported by all parties involved in the crisis.
- Communication activities will be conducted in a manner designed to retain public confidence while minimizing anxiety and disruption, and encouraging vigilance.

9.3 COMMUNICATIONS ACCOUNTABILITIES

The Ontario Pandemic Crisis Communications Toolkit for the Broader Health Sector [September 2006] clearly articulates communication roles and responsibilities for the federal government, provincial government, and local government/public health authorities. The specific activities for the public health authority include the following:

- Implement surveillance and outbreak control measures consistent with provincial guidance.
- Communicate with the Government of Ontario.
- Communicate with health care facilities and emergency responders regarding provincial guidance on health services delivery, outbreak management, and other issues.

Additional activities for the public health authority, as a liaison between the MOHLTC and Niagara, include the following:

- Work with the senior leadership (i.e. CAO, MOH, and Regional Chair) to assist with daily calls with the various branches of the MOHLTC (i.e. communications, operations, etc.).
- Communicate information from the MOHLTC to Niagara organizations.
- Develop key messages and statements.
- Work with internal experts to interpret Important Health Notices (IHN) from the MOHLTC for community stakeholders, and develop content for internal and external stakeholders.
- Distribute materials and information from the MOHLTC to members and community stakeholders.
- Communicate with the media.
- Identify and help prepare primary and secondary spokespeople.
- Determine third-party contacts to use as spokespeople.
- Ensure that media monitoring is in place.
- Provide ongoing and regular updates to senior leadership.

Based on the above, NRPHD has identified the following terms under which Public Health Department communications area will function:

- Distribution of information and key messages will be managed by the Public Health Department, Communications Branch, with support from corporate communications.

- The Incident Management System (IMS) (refer to Appendix E) framework will be applied to pandemic communications and related activities.
- Public Health Department, Communications and Corporate Communications will access the “Communications Plan for Issues and Incidents – Corporate and Departmental Plan” (refer to Appendix G). This plan identifies appropriate responses to issues and incidents and provides the details related to crisis management, roles of Regional staff and Regional Chair, the location of a central communications area, the establishment of a public information centre, etc.
- Health promotion staff may be seconded to provide tactical and administrative support to the Public Health Department, Communications Branch, in order to manage the above activities.

Communication accountabilities will be shared among key public sector communication branches, specifically the Niagara Health System, area schools boards, and post-secondary institutions.

9.4 COMMUNICATIONS COMMITTEES

To address the work that is required to sustain communications over a long period of time, two separate committees have been established. They are as follows:

9.4.1 NIAGARA REGION COMMUNICATIONS SUB-COMMITTEE

Co-chair: Community Development Manager, Public Health Department
Communications Co-ordinator, Public Health Department.

Reports to: Influenza Pandemic Steering Committee.

Members: Public Health professionals, with support from Corporate Communications and the Office of the Regional Chair.

9.4.1.1 Goal of Niagara Region Communications Sub-committee

- Develop a communications plan for the Niagara Region.

9.4.1.2 Objectives

1. Ensure that NRPHD, with MOHLTC support, is prepared to respond to community communication needs (i.e. general public, health care sector, and service providers).

2. Ensure that health care providers have access to transparent, accessible, accurate, real time information that will help them respond to challenges during each phase of the pandemic (as per Appendix 9-A).
3. Provide consistent, co-ordinated, effective, and on-going public and provider communications regarding the pandemic plan and in the event of a pandemic outbreak.
4. Identify the communication activities that must occur during each phase of the pandemic.
5. Develop a plan to meet sustained, intense media demands during the course of the influenza pandemic, and to ensure the materials and means to meet those demands are established, available, and identified.
6. Encourage and assist the Influenza Pandemic Steering Committee with effective collaboration and communication across pandemic planning sub-committees.

9.4.2 PANDEMIC RESPONSE COMMUNICATIONS GROUP (COMMUNITY-BASED)

Co-Chair: Corporate Communications Strategist, Regional Municipality of Niagara
Community Development Manager, Public Health.

Members: Public Sector Communicators Group (as per Appendix 9-B).

9.4.2.1 Goal of Pandemic Response Communications Group

- Support the implementation of communication strategies and plans as defined by this working team.

9.4.2.2 Objectives

1. Strengthen communication channels among public sector communication leads.
2. Provide two-way communication opportunities with stakeholder groups.
3. Assist in educating various targeted audiences about the influenza pandemic, pandemic planning, how to access self-care information, and how to encourage behaviour change to minimize the spread of disease.
4. Share resources to strengthen internal business continuity plans.
5. Assist in promoting influenza immunization to prevent morbidity and mortality in the general population.
6. Maintain public confidence in public services.

9.5 COMMUNICATION METHODS

A number of communication methods will be used to inform the public and stakeholders. A 24-hour clock has been created to co-ordinate daily communication activities (see Appendix F).

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

9.5.1 EXTERNAL STAKEHOLDERS (GENERAL PUBLIC/COMMUNITY)

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

- Niagara Health System (NHS):
 - NHS locations include Greater Niagara General Hospital, St. Catharines General Hospital, Welland Hospital, Douglas Memorial Hospital, Niagara-on-the-Lake Hospital, and Port Colborne General Hospital.
- West Lincoln Memorial Hospital.
- Hotel Dieu Shaver Health and Rehabilitation Centre.
- Emergency responders (police, fire, ambulance).
- Health professionals and health care facility staff.
- Essential services (i.e. hydro, etc.)
- Family physicians.
- Municipalities directly affected.
- Municipalities not directly affected but impacted.
- Members of provincial and federal parliament.
- Regional and national media.
- Municipal, regional, provincial, and federal governments.
- Medical laboratories.

- Pharmacies.
- Funeral Directors Association of Niagara.
- Key non-governmental associations and organizations.
- Industry representatives.
- Tourism industry.
- Niagara Economic Development Corporation.
- Niagara Regional Housing.
- Niagara Peninsula Conservation Authority.
- Chambers of Commerce.
- Local Business Improvement Associations.
- Information Niagara.
- Faith communities.
- Area employers.
- School boards.
- Private educational institutions.
- Post-secondary institutions.

Communication activities include the following:

Product/Activity	Audiences	Distribution Channel	Pandemic Period
Teleconferences	Local, Provincial, and Federal Contacts (i.e. Niagara Health System)	Telephone line	Phases 1 – 6
Info Line	General Public 905-688-8248, ext. 7765 (password will be published internally)	Telephone line	Phases 1 – 6
Pre-recorded message for the public, including FAQs	General Public 905-688-8248, ext. 7765 (password will be published internally)	Telephone line	Phases 1 – 6

Web pages/Web-casting	General Public Media	Internet World-Wide Web	Phases 1 – 6
Media Relations Activities	Local, National, and International media Niagara Public Sector Communications Network	Media products Media briefings	Phases 2 – 6
Establishment of Public Information Centre(s)	General Public	As per Niagara Region Issues and Incidents Plan	Phases 2 – 6
Paid Ads	General Public	Newspapers, radio, and TV (i.e. CHTV, COGECO)	Phases 2 – 6
Print Products Articles (stock articles for community-based newsletters) Fact sheets Bulletins – hard copies E-Bulletins – electronic copies	General Public and Targeted Audiences (i.e. childcare centres, school newsletters, church bulletins, Municipal Councils, Niagara Public Sector Communication Network)	Newsletters	Phases 1 – 6
Presentations	Municipal Councils Employee Groups Health Care Community Targeted Agencies Physicians	Meetings	Phases 1 – 6
Posters for vaccination clinic times and locations	General Public Niagara Public Sector Communications Network	Direct mail Public Information Centre Workplace Wellness Network	Phases 2 – 4 and updated as needed
Updates/Flyers (on specific issues)	General Public Niagara Public Sector Communications Network	Direct mail to residents	Phases 2 – 6 (as needed)
Mass faxing	Outbreak Emergency Management Database members	Fax through epidemiology	Phases 2 – 6 (as needed)
Dark site	Niagara Health System and Public Health employees	Managed through NRPD communications and Information Systems (IS)	Phases 2 – 6

9.5.2 INTERNAL STAKEHOLDERS

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

- Office of the Regional Chair.
- Office of the Chief Administrative Officer.
- Corporate Communications Strategist.
- Members of the Board of Health/Regional Council.
- Corporate Management Team.
- Departmental Senior Management Teams.
- Regional Emergency Operations Control Group.
- Regional Liaison Committee.
- Public Health Department.
- Regional employees.

Communication activities include the following:

Product/Activity	Audiences	Distribution Channel	Pandemic Period
Teleconferences	Staff involved in communication, service delivery, and/or business continuity planning	Telephone line	Phases 1 - 6
Internal Briefings and Updates	Regional Chair and Regional Council Chief Administrative Officer Standing Committees Regional Emergency Control Group Emergency Measures Office Regional employees Public Health Department staff (i.e. Infectious Disease and	Meetings, teleconferences, briefings, and e-mail	Phases 1 - 6

	Vaccine Preventable Disease staff) Community Services Department staff (i.e. Homes for the Aged)		
Presentations	Regional Council Public Health and Social Services Committee Public Health Department staff Community Services Department staff Regional employees	Meetings	Phases 1 - 6
E-Bulletins	Regional employees	E-mail	Phases 1 - 6
Regional web-site	Regional employees	IS staff	Phases 1 - 6
Intranet Web Pages (SHERPA)	Regional employees	IS staff	Phases 1 - 6
Staff Info Telephone Line	Regional Employees	Telephone Line	Phases 1 - 6
Internal e-mail account for two-way communication	Regional Employees	E-mail account	Phases 1 - 6
Articles for newsletters	Department and Regional employee newsletters	Submissions to editors of newsletters	Phases 1 - 6

9.5.3 MISINFORMATION AND RUMOUR MANAGEMENT

Several steps must be taken to stop rumour development and to control the spread of misinformation.

- First and foremost, communications must remain consistently proactive, transparent, and timely.
- Secondly, media coverage must be evaluated on a daily basis. This includes analyzing hard news coverage, editorials, and letters to the editor.
- Finally, those responsible for communications must anticipate public sentiment and explain public risk to manage potential sources of misinformation. This requires developing new key messages for spokespeople and establishing the proper vehicles and channels to disseminate the information.

APPENDIX 9-A: PANDEMIC PHASES

For all phases of pandemic communications, similar communications vehicles, channels and distribution methods will be used to reach target audiences. The pandemic phases described below are those adopted by Health Canada, from the World Health Organization (WHO).

Interpandemic Period

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

Phase 2 – 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 spread to a close contact only.

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 – Large 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.

1) Local Communication Activities by Phase

Phase 1:

- Work with professional organizations and labour associations to promote Universal Influenza Immunization to the public and to health care workers (HCW).
- Ensure that all educational materials for the public and HCWs on influenza are accurate, up to date, and accessible (i.e. languages, literacy level).
- Continue to reinforce the importance of prevention/mitigation activities.
- Continue to work with MOHLTC to improve communication/information infrastructure.

- Participate in annual pandemic simulation exercise and use results to refine MOHLTC Crisis and Risk Communications Response Plan and the Regional Communications Plan.
- Work with MOHLTC to establish procedures to ensure that all information is accurate at the time at which it is released.
- Circulate copies of the Niagara Region Influenza Pandemic Response Plan and associated contingency plans to key stakeholders.
- Post Niagara Region Influenza Pandemic Plan on the Regional website for public use.
- Update SHERPA site for Regional staff and pandemic sub-committee members.
- Develop and maintain a stakeholder database (i.e. outbreak/emergency measures database – epidemiology), including their preferred method of communication.
- Raise awareness among key partners of pandemic preparedness through the following:
 - Reports to Public Health and Social Services Committee (PHSSC).
 - Meetings with pandemic sub-committee chairs and Influenza Pandemic Steering Committee.
 - Presentations at the three main hospital corporation's medical grand rounds.
- Work with the Public Sector Communicators Group.
- Strengthen relationships with local media outlets to support the communication network for ongoing dissemination of public information.

Phase 2:

- Continue phase 1 activities.

Phase 3:

- Review, and if necessary, refine local communication plans.
- Confirm when and what to communicate to the public, health care workers, workplaces, and other audiences, focusing on existing influenza prevention methods and WHO/PHAC updates.
- Review, and if necessary, update pandemic contact list.

Phase 4:

- Continue phase 3 activities.
- Confirm local spokespeople and back-up personnel for a pandemic.
- Provide crisis communication training.
- Confirm that local health facilities have updated pandemic/internal business continuity plans.
- Verify list of stakeholder and media contacts.
- Confirm translation requirements.

Phase 5:

- Work with MOHLTC to develop public education messages, and define the role of spokespersons.
- Participate in crisis communication network.
- Implement plans to communicate with all relevant audiences, including the media, key opinion leaders, stakeholders, and employees.

Phase 6:

- Activate crisis communication plan.
- Distribute fact sheets.
- Continue regular communication with communication partners.
- Provide information in real-time to HCWs, media, and the public regarding Ontario's level of readiness, possible decreases in service, and alternate care sites.
- Provide regular updates to Joint Health and Safety Committees and vice versa.
- Update annual multimedia campaign promoting Universal Influenza Immunization Plan (UIIP), adding information about current influenza activity.
- Continue to work with MOHLTC to provide consistent messages.
- Continue to provide information/updates to HCWs, the media, and the public.

- Work in partnership with the Public Sector Communicators Group.
- Gather information from the field and use that to inform/refine the communications plan.
- Monitor effectiveness of local communication strategy and modify as required.

End of First Pandemic Wave, Pandemic Subsiding

- Identify lessons learned.
- Evaluate local communication response.

Postpandemic Period

- Revise pandemic communications plan, based on experience.
- Return to Phase 1 activities.

APPENDIX 9-B: PUBLIC SECTOR COMMUNICATORS MEMBERSHIP LIST

This confidential membership list may be requested through the Public Health Department, Communications.

APPENDIX 9-C: NIAGARA REGION MEDIA CONTACT LIST

This confidential media list may be requested through
the Public Health Department, Communications

APPENDIX 9-D: MEDIA TEMPLATES



MEDIA RELEASE

Title

NIAGARA REGION, <Month, date, year> - <Introductory paragraph>

-30-

Contact:
<insert name here>
<insert title here>
<insert phone # here>



MEDIA ADVISORY

Title

NIAGARA REGION, <Month, date, year> - <Introductory paragraph>

Include information for the following (place in appropriate order):

WHO:

WHAT:

WHERE:

WHEN:

WHY:

-30-

Contact:

<insert name here>

<insert title here>

<insert phone # here>

EMAIL DISTRIBUTION CHECKLIST

This section to be completed by Corporate Communications

MEDIA RELEASE	MR# _____
MEDIA ADVISORY	MA# _____
PUBLIC SERVICE ANNOUNCEMENT	PSA# _____

SUBJECT: (please complete)

- Media one (Niagara and Hamilton area) FAX: 905-871-4500 (H. Rosentani)**
 - Media A (Niagara Dailies, Hamilton Spec, and Radio)
 - Media B (Weeklies)
- Media two (Toronto area)**
- Media three (New York State)** Completed
- Regional Chair and Executive Assistant** Completed
- CAO & The Regional Clerk** Completed
- Regional Councillors** Completed
- Customer Service Representative/Dispatch (Regional Headquarters Switchboard)** Completed
- Department(s) Switchboard staff**
 - Name:
 - Niagara Recycling
 - Community Services Completed
- Website/Sherpa site** Completed

OTHER BOARDS/AGENCIES

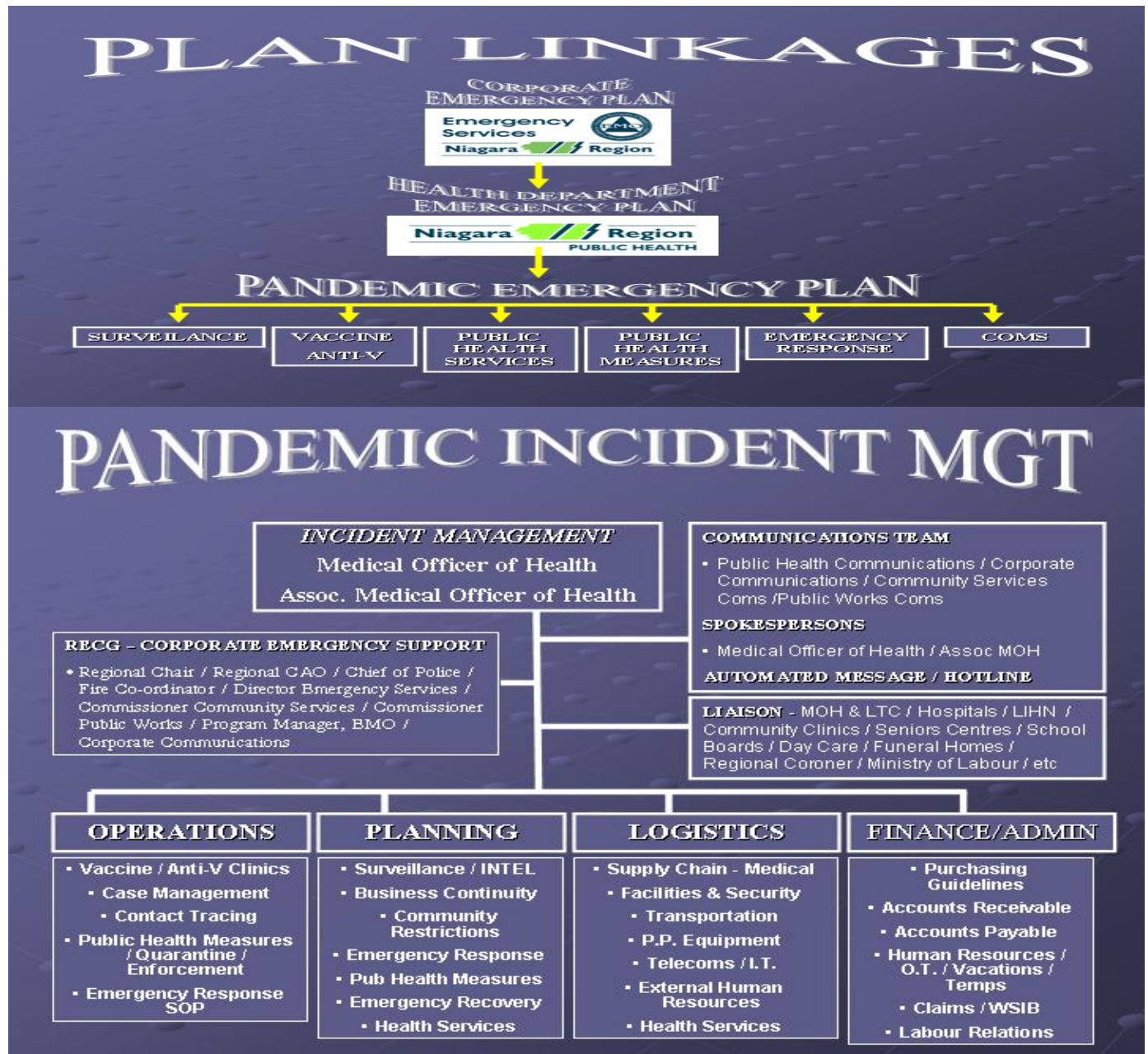
- Niagara Regional Police Communications (FAX)
- Sal Basilone, NRP Media Relations Officer
- Niagara Regional Housing
- NPCA
- NEDC Completed
- Municipalities**
 - Clerk's
 - CAOs Completed
- Chambers of Commerce** Completed
- MPs/MPPs** Completed

Other: Please provide all names

Date to be released:

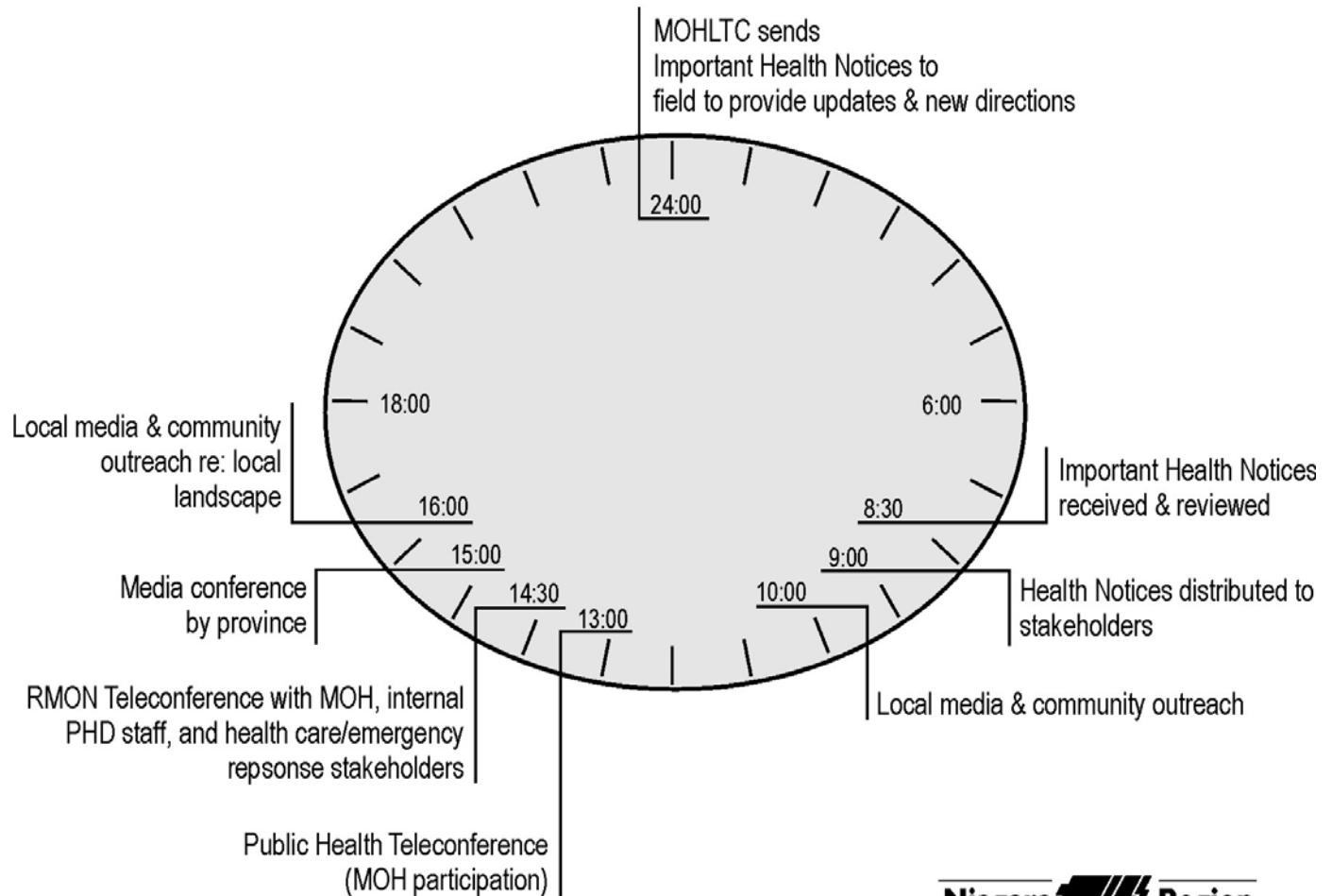
Time to be released:

APPENDIX 9-E: INCIDENT MANAGEMENT STRUCTURE, PANDEMIC



APPENDIX 9-F: NIAGARA REGION INFORMATION FLOW - DRAFT

RMON Information Cycle



APPENDIX 9-G: COMMUNICATIONS PLAN FOR ISSUES AND INCIDENTS

Under development.

ALPHABETICAL LISTING OF ACRONYMS/ABBREVIATIONS

A

AMOH Assistant Medical Officer of Health

B

C

CAO Chief Administrative Officer
CCG Community Control Group
CDC Centre for Disease Control
CEMC Corporate Emergency Management Centre
CISM Critical Incident Stress Management
CMOH Chief Medical Officer of Health
CNPHI Canadian Network of Public Health Intelligence
COMOH Council of Medical Officers of Health
CPIP Canadian Pandemic Influenza Plan
CRC DM Canadian Red Cross Disaster Management

D

E

EOC Emergency Operations Centre
ECG Emergency Control Group
EMAT Emergency Medical Assistance Team
EMS Emergency Management Services

F

FRI Febrile Respiratory Illness

G

H

HCW Health Care Workers
HMT Health Management Team

I

IHN Important Health Notices
IJC International Joint Committee
ILI Influenza-like Illness
IMS Incident Management System
IS Information Services

J

K

L

M

MOH Medical Officer of Health
MOHLTC Ministry of Health and Long Term Care

N

NACS Niagara Ambulance Communication Services
NEMS Niagara Emergency Management Services
NESS National Emergency Stockpile System
NRIPP Niagara Region Influenza Pandemic Plan
NRPS Niagara Region Police Service
NRPHD Niagara Region Public Health Department
NVCSS Niagara Victim Crisis Services

O

OHPIP Ontario Health Plan for Influenza Pandemic
OPP Ontario Provincial Police

P

PEOC	Provincial Emergency Operations Centre
PERT	Provincial Emergency Response Team
PHAC	Public Health Agency of Canada
PH-ECG	Public Health Emergency Control Group
PH-EOC	Public Health – Emergency Operations Centre
PHIPA	Personal Health Information Protection Act
PHM	Public Health Measures
PIER Plan	Pandemic Influenza Emergency Response Plan
PIO	Public Information Officer
PPE	Personal Protective Equipment
P/T	Provincial/ Territorial

Q

R

RECG	Regional Emergency Control Group
REOC	Regional Emergency Operations Centre
RC	Regional Coroner

S

SARS	Severe Acute Respiratory Syndrome
SMART	State Medical Assistance Response Team

T

U

UIIP	Universal Influenza Immunization Plan
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V

W, Y, X, Z

WHO	World Health Organization
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Alfieri-Maiolo, Angela	Niagara Region Public Health Department
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Berardi, Chief Dave	Lewiston-Queenston Bridge Traffic Operations
Bergen, Phil	Niagara Region Public Works Department
Berndt, Chief Tim	Niagara Parks Police Service
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Brown, Chief Joanne	Peace Bridge Traffic Operations
Burstein, Dr. Gale	Erie County Health Department
Caddis, Elena	Heidehof
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Pearson, Karen	Niagara Region Public Health Department

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Turineck, Dr. David	Niagara Health System
Verhoef, Alice	Tabor Manor
Vuono, Maria	Niagara Health System

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Wright, Inspector Robert	Niagara Regional Police Service
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