

Pandemic Influenza

Planning Guidelines, Roles
and Responsibilities for
the Health Sector



Health and Community Services

NOVEMBER 2007

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Preface and Acknowledgments

Pandemics of influenza occur at regular intervals, approximately two or three times a century. The next pandemic is inevitable, although its timing and severity remain unpredictable. Canadian federal, provincial and territorial (FPT) officials have increased public health awareness and planning activities to prepare for this threat. International initiatives led by the World Health Organization (WHO) have increased surveillance and global pandemic planning.

The Department of Health and Community Services (The Department) of Newfoundland and Labrador drafted its first pandemic influenza planning document in 2001. Similar to other pandemic influenza plans this is a living document that will be updated periodically to reflect the outcomes of the pandemic working groups.

This planning tool will guide the health sector both at the provincial and community levels to enhance awareness, planning and response. It references the Canadian Pandemic Influenza Plan¹ which reflects the Federal/Provincial/Territorial (FPT) collaboration on a consistent pan-Canadian approach to planning and response. The annexes of the Canadian plan contain the details necessary for provinces and regions to prepare for and operationalize the response during a pandemic. This is referenced but not duplicated in the provincial planning document.

This Newfoundland and Labrador influenza planning document for the health sector was developed through a collaborative and consultative process including representatives of several Government Departments (including Fire and Emergency Services Newfoundland and Labrador), and the Regional Health Authorities, with input from experts and references from other pandemic planning documents.

This material is provided for clarification of respective roles and responsibilities, general information purposes and as a guideline to support consistent and comprehensive planning,

preparedness, response and recovery for the health sector.

The Department wishes to thank the many individuals who have contributed to this planning effort. These individuals represent:

Department of Health and Community Services
Eastern Regional Health Authority
Central Regional Health Authority
Western Regional Health Authority
Labrador/Grenfell Regional Health Authority
Department of Human Resources, Labour and Employment
Association of Registered Nurses of Newfoundland and Labrador
Fire and Emergency Services Newfoundland and Labrador

The Department also wishes to acknowledge:

- Public Health Agency of Canada, Government of Canada
- Ministry of Health and Long Term Care, Government of Ontario
- Ministry of Health, Government of British Columbia

for their permission to utilize their respective pandemic plans for general and specific reference in the preparation of this document.

Executive Summary

Influenza is an acute viral disease of the respiratory tract which occurs every year in the population. Outbreaks or epidemics occur every few years and can cause widespread illness in the population resulting in thousands of medical visits, hospitalizations, and deaths across Canada. Complications of influenza, such as pneumonia, are most likely to occur in infants, the elderly and persons with underlying health conditions. A flu shot each fall can prevent annual or “seasonal” influenza.

At regular intervals, but usually two or three times per century, a new influenza virus appears causing a worldwide epidemic or “pandemic”. When this happens widespread disease, increased hospitalizations and high mortality will occur challenging the health care system and causing widespread social disruption.

Comprehensive early planning will reduce the effects of a pandemic on society. It will be too late to take any of the actions that can mitigate the impact of a pandemic if preparation is delayed until it arrives.

Effective planning requires a collaborative effort by all health organizations and partners throughout the province. This will provide the public with information on appropriate public health measures, self-care and treatment to help reduce the negative impacts of the illness. Planning across the health sector will ensure the development of common operational pandemic influenza plans for the greatest care and protection of the population. These plans should be comprehensive, strategic, sustainable, and resilient and allow for trans-jurisdictional integration and coordination.

The goal of the pandemic planning process is to minimize serious illness and mortality, and to reduce societal disruption in the population during an influenza pandemic. Planning will consider possible risks, hazards and vulnerabilities in order to reduce the negative impacts both on individuals and society as a whole. The planning process will identify the human and physical resources required to respond to a pandemic and to mitigate its effects.

To ensure consistency in planning for the pandemic, standard assumptions have been adopted in keeping with the Canadian Pandemic Influenza Plan. These assumptions will also provide a basis for the actions undertaken during the planning for and response to the pandemic.

Planning will include an assessment of the existing resources, skill sets and activities relative to those required to ensure response capability. The gaps identified must be addressed through the reassignment of the existing resources and activities, training, and addition of required new resources.

This process is a collaborative effort of the Department of Health and Community Services, the four Regional Health Authorities, and other health partners. As this planning process continues at the regional level throughout the provinces other partners will contribute and link operationally to provide a seamless, coordinated, emergency management approach to dealing with a pandemic.

Through a process of regular review, consultation, and the addition of new information, this planning document will provide guidance for effective preparedness and response to a pandemic influenza.

Pandemic Influenza

Section 1: Introduction



Health and Community Services

1. Introduction

1.1 Seasonal Influenza

Influenza is an acute viral disease of the respiratory tract characterized by fever, headache, myalgia, prostration, coryza, sore throat, and cough. Diarrhea, nausea, and vomiting may also be present in children. Influenza occurs every year in the population with outbreaks or “epidemics” occurring every few years causing widespread illness resulting in thousands of medical visits, hospitalizations and deaths across Canada. Complications such as pneumonia are most likely to occur in infants, the elderly and persons with underlying health conditions. An influenza shot each fall can prevent this annual or “seasonal” influenza.

This highly communicable disease is transmitted directly from one person to another primarily through the spread of droplets from sneezing or coughing. The virus can survive for up to 48 hours on hard, non-porous surfaces and up to 12 hours on cloth or paper products. Thus, touching these surfaces with your hands and then touching your mouth, nose or eyes can also result in transmission of infection. The incubation period for influenza is from one to three days. People with influenza can shed the virus for up to 24 hours before symptoms appear and are thus able to transmit the virus before knowing that they are infected. Adults are infectious for three to five days after symptoms appear while children can be infectious for up to seven days after symptoms appear.

Influenza viruses are unstable and undergo regular change from one season to another. This process of gradual mutation in the virus is called antigenic drift. New influenza vaccines are produced each year to protect against these new influenza virus strains.

1.2 Pandemic

At regular intervals, usually two to three times per century, an influenza pandemic occurs. An influenza pandemic is a global outbreak that occurs when a new influenza A virus, to which virtually no one is immune, spreads easily from person to person causing

serious human illness. In contrast to the pattern of antigenic drift, which typically occurs from one influenza season to another, sometimes the change in the virus is so great that a new virus emerges. This sudden and major change to the virus is an antigenic shift. Because of the extreme change in the virus, there is little or no immunity within the population, infection spreads rapidly and disease is more severe. When this happens on a global scale it is considered a pandemic.

Over the past century, three influenza pandemics have occurred (1918-19, 1957-58, and 1968-69), each causing higher rates of illness and death than that caused by an annual influenza. In the Spanish influenza epidemic of 1918-19, an estimated 20-50 million people died worldwide. In Canada an estimated 30,000-50,000 people died of influenza in 1918-19; this is in contrast to 4 thousand influenza deaths in Canada annually. The pandemics of 1957-58 and 1968-69 each claimed approximately one million lives worldwide.

1.3 Pandemic Planning

The next pandemic is expected to cause widespread disease, increased hospitalizations and high mortality which will challenge the health care system and result in significant social disruption.

Comprehensive early planning will reduce the effects of a pandemic on society. It will be too late to take any of the actions that can mitigate the impact of the pandemic if preparations are delayed until the moment it arrives. The goal of the pandemic planning process is to minimize serious illness and mortality, as well as to reduce societal disruption in the population during an influenza pandemic.

Effective planning requires a collaborative effort by all health organizations and partners throughout the province. This will provide the public with information on appropriate public health measures, self-care, and treatment to help reduce the negative impacts of the illness. Planning across the health sector will ensure

the development of common operational pandemic influenza plans for the greatest protection and care of the population. These plans should be comprehensive, strategic, sustainable and resilient, and allow for trans-jurisdictional integration and coordination.

This process is a collaborative effort of the Department of Health and Community Services (DHCS), the four Regional Health Authorities and other health partners. As this planning process continues at the regional level throughout the province, other partners will contribute and link operationally to provide a seamless, coordinated, emergency management approach to dealing with a pandemic.

Planning will consider possible risks, hazards and vulnerabilities in order to reduce the negative impacts both on individuals and society as a whole. The planning process will identify the human and physical resources required to respond to a pandemic and to mitigate its effects.

Planning will include an assessment of the existing resources, skill sets and activities relative to those required to ensure response capacity and capability. The gaps identified through this process must be addressed through the reassignment of existing resources and activities within the system, increased desired skillset training, and the addition of essential and required new resources.

The World Health Organization (WHO) is active with governments and other organizations throughout the world to promote planning activities. Many countries are moving forward with their planning processes. Planning within Canada is well advanced relative to many other countries. The Department in this province is working closely with Regional Health Authorities and other organizations to promote planning activities. This document will provide guidelines, planning activities, roles and responsibilities for planning within the health sector and other organizations.

Pandemic Influenza

Section 2: Planning Environment and Assumptions



Health and Community Services

2. Planning Environment and Assumptions

2.1 WHO Pandemic Phases

The World Health Organization (WHO) has identified four distinct pandemic periods before, during and after an influenza pandemic. The post-pandemic period is a time for recovery, evaluation and return to the interpandemic period.

Specific phases subdivide each period, according to the assessed risk of a pandemic. Several factors trigger changes from one phase to another. These include the spread of the disease among humans and the characteristics of circulating viruses. There are international, national, provincial and local planning and response actions associated with each phase.

Table 2.1: WHO Pandemic Periods and Phases⁵

Period	Phase	Description
Interpandemic Period	Phase 1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk ^a of human infection is considered to be low.
	Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk ^a of human disease.
Pandemic Alert Period	Phase 3	Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
	Phase 4	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans ^b
	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 (substantial pandemic risk). ^b
Pandemic Period	Phase 6	Increased and sustained transmission in general population ^b
Post-Pandemic Period		Return to interpandemic period

- a The distinction between phase 1 and phase 2 is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction is based on various factors and their relative importance according to current scientific knowledge. Factors may include pathogenicity in animals and humans, occurrence in domesticated animals and livestock or only in wildlife, whether the virus is enzootic or epizootic, geographically localized or widespread, and/or other scientific parameters.
- b The distinction between phase 3, phase 4 and phase 5 is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include rate of transmission, geographical location and spread, severity of illness, presence of genes from human strains (if derived from an animal strain), and/or other scientific parameters.

2.2 Canadian Pandemic Phases

The phases used in Canadian planning have been adapted from the WHO phases. Sub phases have been added to identify levels of novel virus activity in Canada.

The Canadian levels are: 0 – no activity observed in Canada; 1 – single case(s) observed in Canada (i.e. no clusters) and; 2 – localized or widespread activity in Canada.

Table 2.2: Canadian Pandemic Phases

Definition	Hypothetical Example(s)	WHO Phase
Interpandemic Period - Phase 1.0		
No new virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals located outside of Canada. If present in animals, the risk of human infection/disease is considered to be low.	Highly pathogenic H7N3 detected in poultry outside of Canada	1
Interpandemic Period - Phase 1.1		
No new virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection is present in animals in Canada but the risk of human infection/disease is considered to be low.	Highly pathogenic H7N3 detected in poultry in Canada	1
Interpandemic Period - Phase 2.0		
No new virus subtypes have been detected in humans. However, an animal influenza virus subtype that poses substantial risk to humans is circulating in animals located outside of Canada.	Highly pathogenic H5N1 detected in poultry flocks outside of Canada	2

Interpandemic Period - Phase 2.1		
No new virus subtypes have been detected in humans. However, an animal influenza virus subtype that poses substantial risk to humans is circulating in animals in Canada.	Highly pathogenic H5N1 detected in poultry flocks in Canada	2
Pandemic Alert Period – Phase 3.0		
Outside Canada human infection(s) with a new subtype are occurring, but no human-to-human spread, or at most rare instances of spread to a close contact has been observed. No cases identified in Canada.	Outside Canada, sporadic human cases are occurring in connection to an avian outbreak.	3
Pandemic Alert Period – Phase 3.1		
Single human case(s) with a new subtype detected in Canada. Virus is not known to be spreading from human-to-human, or at most rare instances of spread to a close contact have been observed.	Case imported into Canada from area outside Canada experiencing an avian outbreak. Case arising in Canada <i>de novo</i> OR in association with an avian outbreak in Canada.	3
Pandemic Alert Period – Phase 4.0		
Outside Canada, small cluster(s) with limited human-to-human transmission are occurring but spread is highly localized, suggesting that the virus is not well adapted to humans. No cases identified with these cluster(s) have been detected in Canada.	Outside Canada, small cluster(s) of human cases are occurring in connection to an avian outbreak.	4
Pandemic Alert Period – Phase 4.1		
Single human case(s) with virus that has demonstrated limited human-to-human transmission detected in Canada. No cluster(s) identified in Canada.	Detection of an imported case in Canada that is infected with the virus known to be causing small clusters of human cases outside Canada.	4
Pandemic Alert Period – Phase 4.2		
Small localized clusters with limited human-to-human transmission are occurring in Canada but spread is highly localized, suggesting that the virus is not well adapted to humans.	Detection of a localized cluster of cases in Canada linked to an imported case OR from cases arising in Canada.	4

Pandemic Alert Period – Phase 5.0		
Outside Canada larger cluster(s) are occurring 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). No cases identified with these clusters have been detected in Canada.	Outside Canada, larger cluster(s) of human cases are occurring in connection to an avian outbreak.	5
Pandemic Alert Period – Phase 5.1		
Single human case(s) with virus that is better adapted to humans detected in Canada. No cluster(s) identified in Canada.	Detection of an imported case in Canada that is infected with the virus known to be causing larger clusters of human cases outside Canada.	5
Pandemic Alert Period – Phase 5.2		
Larger localized cluster(s) with limited human-to-human transmission are occurring in Canada but human-to-human spread still localized, suggesting that virus is becoming increasingly better adapted to humans but may not yet be fully transmissible (substantial pandemic risk).	Detection of a large but localized cluster of cases in Canada linked to an imported case OR from cases arising in Canada.	5
Pandemic Period – Phase 6.0		
Outside Canada increased and sustained transmission in general population has been observed. No cases identified with the affected populations have been detected in Canada.	Countries outside of Canada have reported sustained transmission of the new virus in their populations.	6
Pandemic Period – Phase 6.1		
Sporadic infection(s) with the pandemic virus detected in Canada. No cluster(s) identified in Canada.	Detection of an imported case in Canada that is infected with the pandemic virus.	6
Pandemic Period – Phase 6.2		
Localized or widespread pandemic activity observed in Canadian population.	Large numbers of clinical cases being rapidly identified with no history of travel to an affected area.	6

Post-Pandemic Period –Following phase 6 there would be a return to the interpandemic period and recovery activity. There would be a need to address backlog of services, psychosocial effects on staff, staff fatigue, review and analysis of response, debrief of response and adjustment to the plan.

2.3 Planning Assumptions

Past pandemics have varied greatly in terms of severity and impact and the characteristics of the next pandemic will not be known until the pandemic occurs. To ensure consistency in planning for the pandemic standard assumptions have been adopted in keeping with the Canadian Pandemic Influenza Plan. These assumptions will also provide a basis for the actions taken during the planning for and response to the pandemic.

It is important for all health planners to use these common assumptions to ensure preparation and response compatibility. The assumptions summarized below should not be considered predictions for a pandemic but reflect a current view of reasonable assumptions to guide planning activities.

Origin and Timing

- The influenza pandemic will be due to a novel, highly infectious, influenza A subtype likely originating in Southeast Asia.
- Most of the world's population will have little or no resistance to the virus. The severity of illness and the number of people dying will be significantly higher than a seasonal influenza epidemic.
- The virus will be present in Canada and possibly in Newfoundland and Labrador within three months of the WHO declaring a pandemic and it may arrive at any time of year.
- The pandemic will last 12-18 months with more than one wave in a 12 month period.
- The first wave of illness will peak within two to four months after the virus arrives in Canada.
- A second wave may occur within three to nine months of the initial wave and each wave will last approximately six to eight weeks.
- Pandemic strain will predominate over other influenza strains.

Epidemiology

- The incubation period is one to three days.

- The period of communicability is approximately 24 hours before and five days after onset of illness.
- Transmission while asymptomatic is possible but is more efficient in the early stages of illness when the person is symptomatic and viral shedding is high.
- Mode of transmission is primarily large droplet and contact (direct and indirect).
- Possibility for airborne route is controversial (underscores the need for surveillance).
- Initial clinical presentation will be consistent with that of known influenza strains.
- Individuals who recover will be immune.
- Sub-clinical infection will occur. Approximately 50% of the infected population will be asymptomatic.
- The groups that are at high risk for complications or poor outcomes due to annual influenza will be at risk during the pandemic.

Pandemic Impact

- The exact impact and the extent of spread may differ from annual influenza, however this will not be known until the novel virus starts spreading efficiently in the human population.
- The majority of the population (over 70%) will be infected during the pandemic but only 15-35% of the population will become ill.
- The majority of cases will become infected during the first wave, with about 25% of the population clinically ill.
- If the pandemic is mild to moderate (consistent with previous pandemics) and in the absence of any interventions, of those who become clinically ill:
 - Up to 50% will seek outpatient care
 - 1% will be hospitalized
 - 0.4% will die
- Sound medical and ethical judgment will dictate the priorities guiding the use of scarce resources.
- Influenza will likely impact all regions at the same time, thus, there may be no assistance available from other regions.

- Influenza will lead to increased employee absenteeism as a result of personal illness, care-giving responsibilities, fear of contracting the illness at work and/or carrying the influenza virus back to family and friends.
- Workplace-avoidance absenteeism may occur and must be considered in planning for a pandemic; however, based on analysis of previous pandemics and similar outbreaks there is no evidence for this assumption.
- Absenteeism of about 20-25% may be expected at the peak of the first wave of the pandemic.

Table 2.3: Pandemic Impact for Newfoundland and Labrador at 35% Attack Rate (Maximum Impact for Moderate Influenza)

Total Deaths	836
Hospitalization (non-death)	2762
Hospitalization (Deaths) (Assumes 70% of total deaths will occur in hospital)	585
Total Hospitalization	3347

Note:
The Regional Health Authorities, with the Department, will complete detailed impact assessment on the health system by region.

* Calculation derived from the use of FluAid Model of the United States Centers for Disease Control

Antivirals and Vaccines

- It is unlikely that an effective vaccine will be available at the start of pandemic activity in Canada but it may be available for a second wave of illness.
- Because the population will have had no previous resistance to the pandemic strain, two

doses of the vaccine may be necessary to achieve protection.

- Public health staff will deliver the vaccine through mass immunization, once it is available.
- Vaccines are not 100% effective. Seasonal vaccines protect approximately 70% of healthy adults.
- Antiviral drugs may be useful for treatment if taken within 48 hours of the first symptoms.

2.4 Inter-Jurisdictional Planning and Collaboration

Pandemic influenza planning for the health sector is a collaborative effort of the Department, the Regional Health Authorities and various health partners. As this planning process continues at the regional level throughout the province other partners will contribute and link operationally to provide a seamless, coordinated, emergency management approach to dealing with a pandemic. The establishment of the Regional Health Emergency Management Committees and the Provincial Health Emergency Management Advisory Committee are key components of the inter-jurisdictional approach to pandemic planning.

Contagious viruses such as influenza are not limited by geographic or political boundaries, thus the international, national, provincial, and local health and other sectors must work together to ensure the most positive outcome for the population of the respective jurisdiction.

The development of a National Framework for Health Emergency Management provides a standard guide to emergency management program development and is another tool that will allow ease of collaboration and sharing in the development of a seamless pan Canadian emergency management system.

Pandemic influenza is “not just a health issue” and all government departments and agencies,

municipal councils, non-government agencies and the private sector must develop their own pandemic plans. All groups must collaborate throughout the emergency management process to integrate for the most effective response.

2.5 Incident Management System (IMS)

An incident management system (IMS) is a key element of the response component of any emergency management program. The use of IMS across different sectors and organizations provides a structure and process for managing a response to any emergency or disaster. This system allows an organized response by a single agency to a small incident or a coordinated multi-agency response to a major incident.

An incident management system provides structure and function for an emergency response as it:

- Standardizes the processes for delivery of a coordinated response
- Clarifies functions of related and/or overlapping response groups
- Clarifies and enhances communication within and between response groups
- Establishes use of common terminology
- Establishes common management standards and position descriptions at each level of response
- Uses common report and documentation forms
- Recommends interoperability of communication response equipment
- Provides management of personnel, equipment, facilities and other resources for each layer of authority having responsibility for the incident response
- Adjusts to the nature and scope of the incident

Training in IMS has been introduced in RHAs, however system wide training, and mock exercises are necessary to integrate this into all levels of the health system.

2.6 Ethical Considerations for Decision Making

The **Canadian Pandemic Influenza Plan** (CPIP) sets out several overarching goals for pandemic preparedness and response. These goals are to minimize serious illness and overall deaths, and to minimize social disruption among Canadians because of a pandemic influenza. These goals serve to guide the decision-making around the use of scarce resources.

Health decisions during a pandemic must be based on sound science, accepted ethical values and constructed through open discussion. Before a pandemic, the general population must be informed of the reasoning behind any prioritized allocation or use of scarce resources. Examples of these resources may include things like antiviral drugs, vaccines, diagnostic testing, hospital beds and other equipment. The public must also understand the rationale for any possible reduction of individual liberties that may occur if isolation or quarantine is required. In addition, health care workers need to be comfortable with, and accepting of, the level of risk to which they may be exposed if providing care. The public must be educated about the process so that most people may understand the decisions as being fair and in the best interest of the health and well-being of the public.

2.7 Legislation and Policy Environment

The Newfoundland and Labrador health sector derives its authority from the established legislative and policy direction of the government. This legislation and policy are summarized in Appendix 1. The Regional Health Authorities should review Appendix 1 and other legislation and policy documents to determine their authority to function during pandemic. The gaps identified through this process will be the foundation for recommending changes in policy or legislation.

Pandemic Influenza

Section 3: Strategic Approach



Health and Community Services

3. Strategic Approach

3.1 **Goals of Pandemic Preparedness and Response**

The goals of influenza pandemic planning are first, to minimize serious illness and overall deaths and second, to minimize societal disruption in Newfoundland and Labrador. Planning activities will consider risks, hazards, and vulnerabilities associated with pandemic influenza in order to reduce the negative impacts on individuals and society as a whole. Planning will include an assessment of the existing resources, skill sets and activities relative to those required to ensure response capability.

The gaps identified must be addressed through the reassignment of existing resources and activities, training and addition of required new resources. These may include capital improvements, stockpiling, training, organized redistribution of assets and human resources and the prioritization of service delivery.

Neither organizational mandate nor government boundaries will restrict the influenza virus; it will infect multiple jurisdictions at the same time. Therefore, each region must plan to respond with the resources available within their jurisdiction. Most areas of the country will be involved in their own response to pandemic influenza and will not be available to provide aid to their neighbours.

A collaborative approach within the health sector, among different areas and levels of government, and across related public and private organizations, is essential to successful readiness, prevention, response and recovery activities. The health sector relies on public and private organizations to provide a wide range of daily services and supplies. Without many of these services and supplies, the health sector will find it difficult to carry out its business priorities. Regional Health Authorities must encourage their regional public and private partners to engage in their own emergency management planning activities.

During the pandemic, it may be difficult if not impossible to maintain the current level of health services. An expert collaborative group within each RHA is required to make ethically-based decisions as to what services the organization will retain, reduce, or curtail during a pandemic. Regional Health Authorities will need to discuss their tentative priority services with other Regional Health Authorities, service partners and other related groups to ensure compatibility across the province during response. The plans must be exercised to refine the ability of the system to respond in a well-organized fashion, and to ensure the most effective and efficient response. This planning guide will help the health sector and its partner organizations to achieve maximum readiness.

3.2 **Strategic Considerations**

It is important to use a common approach to the pandemic planning process in a pan-Canadian, cross-jurisdictional manner. This Newfoundland and Labrador document provides common guidelines for regional pandemic influenza planning. It has been developed with consideration of the national Canadian Pandemic Influenza Plan in order to assure a common approach across the country. Regional Health Authorities while using this guide to develop their regional plans must also refer to the Canadian Plan for details on specific topics referenced in the provincial document.

A detailed critical review of the preparedness and response resources, as well as the training needed to address the identified hazards, risks, and vulnerabilities will be required. Addressing the identified gaps will require the collaboration of many individuals and organizations as the gaps identified may not all be within the health sector. Realignment or reassignment of resources will require agreement on prioritization of program delivery, sharing and cross-training for specific skill sets. The development of mutual aid agreements between organizations, an information sharing

agreement, and agreements on such things as emergency transportation and alternative care sites will be required.

Since it is assumed that there will be little or no assistance from other jurisdictions each RHA should have plans and programs that will allow them to be as self sufficient as possible and that are compatible with those of partner organizations. Inter-regional planning will be necessary for shared and specialized services as well as for coordination of service reduction plans which may have an impact on another region.

The National Framework for Health Emergency Management Guidelines for Program Development⁸ should be used in developing a programmed approach. Consideration should be given to the five key components of emergency management:

1. **Hazard**, risk and vulnerability assessment will guide the planning process by helping to understand what could be mitigated, identifying the specific items needed to be addressed and clarifying the underlying assumption and working environment.
2. **Mitigation** includes the activities required to prevent or reduce the negative impacts of a disaster. An activity to prevent a disaster may be as universal as the development and utilization of a vaccination to prevent a disease or as simple as education on hand washing or the use of personal protective equipment (PPE) to control the spread of a disease.
3. **Preparedness** is the process of planning which includes the assessment of resources and skills necessary to respond to a disaster and the actions necessary to fill the gaps identified. Exercising the plan is a crucial component of preparedness. A key part of the educational component is to practice execution of the plan and to refine the plan further by addressing additional identified gaps or weaknesses.

4. **Response** begins simultaneously with the measured coordinated mobilization of resources to act on both the impact of the disaster event and on the assessment of other possible impacts with mitigation where possible. Evaluating the response and addressing identified shortfalls is critical to continuous improvement of the emergency management program.

5. **Recovery** includes the actions required to bring the system back to normal operating levels and to deal with the residual health issues. In the case of the health sector, this would involve: restocking supplies; ensuring availability of adequate staff; addressing psychosocial effects on staff; reducing service back-log; and rescheduling staff work and client appointments. The recovery component may be at different stages for different program areas and different regions.

The World Health Organization's approach to pandemic planning is organized into periods and phases which will assist with local planning and response activities. These also serve as a reference for understanding the progression of the pandemic and the associated threat to the world's population.

The pandemic periods and phases outlined in detail in the previous section are: (1) Interpandemic Period, (2) Pandemic Alert Period, (3) Pandemic Period, and (4) Post-Pandemic Period. To understand how the five components of Health Emergency Management Programming relate to these pandemic periods see Table 3.1.

Table 3.1: Pandemic Planning Periods and Health Emergency Management Components (HEMC)

Period	Phase	Pandemic Planning Periods Description	Health Emergency Management Components Description
Interpandemic Period	Phase 1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection is considered to be low.	Hazard risk and vulnerability assessment, mitigation and preparedness (including planning, training and exercising)
	Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	
Pandemic Alert Period	Phase 3	Human infection(s) with a new subtype, but no human-to-human spread, or at most, rare instances of spread to a close contact.	Hazard risk and vulnerability assessment, mitigation and preparedness (including planning, training and exercising)
	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 (substantial pandemic risk).	
Pandemic Period	Phase 6	Increased and sustained transmission in general population	Response including initial impact assessment and mitigation activity
Post-Pandemic Period		Return to interpandemic period	Recovery including business resumption response evaluation and return to normal activities

Pandemic Influenza

Section 4: Preparedness - Planning, Training and Exercising



Health and Community Services

4. Preparedness - Planning, Training & Exercising

The purpose of preparedness is to ensure the availability of resources, the clarification of roles and responsibilities, and the application of an organized and skilled approach to disaster response within the health sector and between it and partner organizations. The goal of this activity is to mount an effective response to achieve the most positive outcomes for the people of the province.

Preparedness for any disaster is accomplished through emergency management which includes pre-disaster planning, training and exercising of the plans. Emergency management must be an integral component of all program areas throughout the entire organization.

Planning must include an assessment of the current resources, skill sets and activities relative to the needed resources to ensure response capability. The gaps identified can be addressed through: the addition of new resources; planned reassignment of existing resources and activities on a priority basis; cross-training of current staff; and training of additional people to ensure effective operation of critical activities during a disaster.

The response component of the plan must identify the specific response activities as determined by the organization and client services needs.

Recovery planning will identify the resources required to allow the organization to return to normal operation as quickly as possible after a disaster. This stage of the process must consider and secure all the resources required to recover, as well as the human resources and supports necessary to help employees deal with any negative personal or emotional impacts of a disaster.

The preparedness process is only as good as the knowledge, training, and capability of the planning team involved. Education in emergency management and training to eliminate gaps throughout the organization are necessary to minimize the disaster. This will ensure that response systems are resilient and robust.

The exercising of emergency plans, through tabletop or mock exercises, is an invaluable training tool to simulate the response, clarify internal and external roles and responsibilities, identify planning and operational gaps and to further refine the planning activities.

Table 4.1 – Preparedness – Planning, Training and Exercising Roles and Responsibilities by Pandemic Phase

Preparedness During Interpandemic Period Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low.		
National	Provincial	Regional
<ul style="list-style-type: none"> • Establish a national pandemic planning committee • Develop and update national plans in collaboration with relevant decision-makers • Exercise pandemic plans and adjust as required • Identify and train staff who may be reassigned during a pandemic • Explore need to stockpile (e.g. syringes and other medical supplies) • Identify how essential services will be maintained during a pandemic • Ensure that the response network is ready to respond • Provide technical information liaison • Share PHAC/HC information with PSEPC, federal regional officers and with provincial and territorial partners • Facilitate sharing information between animal and health authorities 	<ul style="list-style-type: none"> • Establish a provincial pandemic planning committee • Assess the hazards, risks and vulnerabilities for a pandemic • Develop and update provincial plans in collaboration with relevant decision-makers • Work with RHA's to ensure regional pandemic plans are in place • Identify human and material resources required during a pandemic • Identify, inform and train key personnel who will be involved in pandemic planning and response • Work with EMO to ensure municipalities have emergency plans in place • Communicate and collaborate with other emergency management partners • Develop continuity of business plans within the Department • Exercise pandemic plans and adjust as required 	<ul style="list-style-type: none"> • Establish a regional pandemic planning committee • Assess the regional hazards, risks and vulnerabilities for a pandemic • Develop and update regional and local plans in collaboration with relevant stakeholders • Work with communities to ensure pandemic plans are in place • Identify regional human and material resources required during a pandemic • Identify critical gaps in local health infrastructure and resources • Develop continuity of business plans to maintain necessary regional health services • Identify and plan for the required human resources, training, supplies and equipment • Exercise pandemic plans and adjust as required

Table 4.1 – Continued.

Preparedness – Planning, Training and Exercising Interpandemic Period Phase 2 - New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase • Develop surge-capacity contingency plans for the internal management of domestic resources and essential workers during a pandemic • Establish national guidance to address food safety, safe agricultural practices and other public health issues related to infected animals • Activate joint mechanisms for actions with animal health authorities and other relevant organizations • Assess preparedness status and identify actions needed to fill gaps • Ensure ability to mobilize and rapidly deploy a multisectoral expert response team • Ensure ability to rapidly deploy stockpile resources to field locations • Establish compensation policies for loss of animals through culling 	<ul style="list-style-type: none"> • Continue activities of previous phase • Propose a Pandemic Emergency Management Structure for the DHCS and the Provincial Government • Develop surge-capacity contingency plans for the internal management of domestic resources and essential workers during a pandemic • Assess preparedness status and identify actions needed to fill gaps • Develop with RHAs a plan for stockpiles of essential items • Develop plan to rapidly deploy stockpile resources to regions 	<ul style="list-style-type: none"> • Continue activities of previous phase • Propose a regional emergency management structure for pandemic response • Coordinate planning activities with bordering jurisdictions in collaboration with provincial and federal authorities • Ensure additional effective communication plans between health and emergency response systems • Exercise pandemic plans and use the results to improve and refine plans and preparedness • Develop training programs and pre train where practical for essential tasks • Develop plan to rapidly deploy stockpile throughout region

Table 4.1 – Continued.

Preparedness – Planning, Training and Exercising Pandemic Alert Period Phase 3 - New influenza subtype identified in at least one human case. No human-to-human transmission or rare cases of spread through very close contact only.		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activity of previous phase(s) • Activate national pandemic contingency planning arrangements • Mobilize national response and provide guidance to relevant authorities in reviewing, updating and implementing contingency plans • Brief appropriate officials in all relevant government departments (e.g. health, agriculture, executive, legislative/judicial) at national and provincial levels, regarding the status of the incident and the potential need for additional resources, interventions and the use of emergency powers • Provide assistance to regional, district and local authorities (including private essential services) in implementing interventions 	<ul style="list-style-type: none"> • Continue activity of previous phase(s) • Review business continuity plan, ensure all essential services including outside contractor/suppliers are identified and covered for temporary or permanent loss of resources • Plan for up to 25% of absent staff/contractors/suppliers for 2-4 weeks around the peak of the first wave • Ensure training programs are conducted or ready to teach non essential staff and volunteers essential tasks • Meet with appropriate partners and stakeholders to review planning activities • Ensure emergency health service providers are aware of infection control precautions • Test decision making procedures and chains of command and plans 	<ul style="list-style-type: none"> • Continue activity of previous phase(s) • Activate regional pandemic contingency planning arrangements (planning committees and working groups) • Review regional readiness for response and provide guidance to relevant authorities in reviewing, updating and implementing contingency plans • Review business continuity plan, ensure all essential services including outside contractor/suppliers are identified and covered for temporary or permanent loss of resources • Ensure training programs are conducted or ready for delivery to essential staff and volunteers for essential tasks

Table 4.1 – Continued.

Preparedness – Planning, Training and Exercising Pandemic Alert Period Phase 4 - Localized small clusters of limited human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Confirm plans are in place • Activate national pandemic contingency planning arrangements • Reassess current state of preparedness; implement actions required to close priority gaps • Identify ability to respond to requests for international assistance • Ensure highest levels of political commitment for ongoing and potential interventions/ countermeasures • Activate procedures to obtain additional resources; consider invoking emergency powers • Activate overarching national command and control of response activities, either by formal means or de facto (close oversight of district and local activities) • Deploy operational response teams across all relevant sectors • Ensure cross-border collaboration with surrounding countries for information-sharing and coordination of emergency responses 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Update RHAs and all staff about status of pandemic influenza • Mobilize provincial response and provide guidance to relevant authorities in reviewing, updating and implementing contingency plans • Activate provincial pandemic contingency planning arrangements • Reassess current state of preparedness; implement actions required to close priority gaps • Review results of any previously conducted simulation exercises and consider what (if any) significant changes have occurred since and confirm that corrective actions have been taken • Identify ability to respond to requests for provincial and national assistance • Activate business continuity components of plan as necessary • Ensure highest levels of political commitment for ongoing and potential interventions/ countermeasures 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Notify emergency service managers of virus report and current monitoring activities • Ensure emergency health service providers are aware of infection control precautions • Review results of any previously conducted simulation exercises and consider what (if any) significant changes have occurred since and confirm that corrective actions have been taken • Update partners and all staff about status of pandemic influenza • Activate regional pandemic contingency planning arrangements as necessary • Reassess current state of preparedness; implement actions required to close priority gaps • Identify ability to respond to requests for assistance within the region • Continue training to ensure continuation of essential services • Meet with appropriate partners and stakeholders to review planning activities

Table 4.1 – Continued.

Preparedness – Planning, Training and Exercising Pandemic Alert Period Phase 5 - Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Identify needs for international assistance • As needed, designate special status to affected area in order to facilitate interventions (e.g. state of emergency) • Assist in the ongoing evaluation of interventions • Finalize preparations for imminent pandemic, including activation of internal organizational arrangements (within command-and-control system) and staffing surge capacity • Adjust and maximize efforts and resources to reduce disease burden and contain or delay the spread of infection 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Ensure cross-border collaboration with surrounding countries/provinces for information-sharing and coordination of emergency responses • Identify needs for national assistance • As needed, designate special status to affected area in order to facilitate interventions (e.g. state of emergency) • Assist in the ongoing evaluation of interventions • Finalize preparations for imminent pandemic, including activation of internal organizational arrangements (within command-and-control system) staffing for surge capacity and business continuity • Adjust and maximize efforts and resources to reduce disease burden and contain or delay the spread of infection • Activate procedures to obtain additional resources as needed; consider invoking emergency powers 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Ensure collaboration with surrounding regions for information-sharing and coordination of emergency responses • Identify needs for provincial assistance • As needed, designate special status to affected area in order to facilitate interventions (e.g. state of emergency) • Assist in the ongoing evaluation of interventions • Finalize preparations for imminent pandemic, including activation of internal organizational arrangements (within command-and-control system) and staffing surge capacity • Adjust and maximize efforts and resources to reduce disease burden and contain or delay the spread of infection • Activate procedures to obtain additional resources as needed, consider invoking emergency powers

Table 4.1 – Continued.

Preparedness – Planning, Training and Exercising Pandemic Period Phase 6- Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phases as they relate to response • Implement specific pandemic response activities when pandemic reaches Canada 	<ul style="list-style-type: none"> • Continue activities of previous phases as they relate to response • Implement specific pandemic response activities when pandemic reaches Newfoundland and Labrador • Activate procedures to obtain additional resources as needed; consider invoking emergency powers 	<ul style="list-style-type: none"> • Continue activities of previous phases as they relate to response • Implement specific pandemic response activities when pandemic reaches the region • Activate procedures to obtain additional resources as needed; consider invoking emergency powers

Preparedness – Planning, Training and Exercising Post-Pandemic Period -- Recovery		
National	Provincial	Regional
<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1

Pandemic Influenza

Section 5: Surveillance



Health and Community Services

5. Surveillance

Surveillance activity not only leads to early detection of virus activity within the population but by tracking the occurrence, progression, and severity of the pandemic, it helps guide prevention and control efforts.

Surveillance is the collection, collation, and analysis of data and the timely dissemination of that information to those who need to know in order to take action.⁹ In this instance, surveillance is used to determine when, where, and what influenza viruses are circulating and the disease epidemiology. Influenza surveillance takes place in all phases of the pandemic with tracking, investigation and evaluation of both clinical and laboratory confirmed cases.

Surveillance starts locally and feeds into provincial, national, and international systems. The Department, Regional Health Authorities and the Provincial Public Health Laboratory must ensure that they have a plan and the capacity to increase surveillance activities as the novel influenza virus becomes more widespread.¹⁰

5.1 Objectives of Surveillance Program

An effective surveillance system will provide information on which to base decisions for prevention and treatment. The objectives of influenza surveillance are to:

- Provide data on currently circulating strains and facilitate comparison with vaccine composition and vaccine recommendations;
- Describe the affected population, thereby facilitating the identification of high-risk groups and comparison with other populations or with other influenza seasons;
- Detect unusual events including unusual or new strains, unusual outcomes and or syndromes, or unusual distribution or severity of the disease in the population;

- Inform the pandemic response through the early detection and tracking of the emergence, spread and impact of novel influenza viruses in the population.

The epidemiological knowledge derived from surveillance will guide the process of the health and other sectors in disease prevention, treatment and control activities. Ongoing evaluation of surveillance activities for each pandemic phase is important so that the appropriate adjustments can be made. The Department, Regional Health Authorities, Provincial Public Health Laboratory, and other health partners must collaborate on their surveillance activities to achieve these objectives.

5.2 Interpandemic Period

The Department and Regional Health Authorities in the province participate year-round in the Public Health Agency of Canada (PHAC) FluWatch program for laboratory confirmed influenza and for influenza-like illness (ILI) surveillance. Regions report the ILI activities on a weekly basis from workplace, long-term care, childcare, outpatient departments, hospital emergency settings and physicians' offices. This information provides community based data on the ILI activity within the region and on the severity of illness during the regular influenza season. The Provincial Public Health Laboratory reports all confirmed influenza cases to the Medical Officers of Health. Summary data from all sources is sent to PHAC for use in FluWatch reports.

5.3 Pandemic Alert Period

The alert period is a time of enhanced surveillance for the detection of the first appearance of the novel influenza virus strain in Canada. Surveillance activities continue as in the Interpandemic Period, with enhanced Severe Respiratory Illness (SRI) surveillance carried out in physicians' offices and hospital emergency settings. SRI is reported to the RHA, who then report to the office of the Chief Medical Officer of Health.

5.4 Pandemic Period

Surveillance activities during the Pandemic Period (Phase 6) are intended to detect the arrival of the pandemic virus in Canada (and in Newfoundland and Labrador) in order to track its occurrence and spread through communities. Surveillance activities may be modified from routine annual influenza surveillance in order to best capture the data needed to manage the outbreak and to report it in a timely manner. These activities must take into account the scarcity of human resources to conduct surveillance. Once the presence of the pandemic strain has been confirmed some disease surveillance activities may be reduced while surveillance for antiviral drug resistance and events associated with vaccine may be added.

5.5 Post-Pandemic Period

The post-pandemic phase begins when the number of cases of influenza returns to normal pre-pandemic levels. The results of applied research and epidemiologic analysis will be shared. Surveillance-related information will contribute to the knowledge of the pandemic for future planning.

Table 5.1 - Surveillance Roles and Responsibilities by Pandemic Phase

<p style="text-align: center;">Surveillance Interpandemic Period</p> <p style="text-align: center;">Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low.</p>		
National	Provincial	Regional
<ul style="list-style-type: none"> • Provide ongoing leadership through organization of teleconferences/meetings, providing guidance and advice as needed • Participate in the WHO Global Influenza Surveillance Network • Coordinate routine interpandemic surveillance activities via FluWatch and Canadian Integrated Outbreak Surveillance Centre (CIOSC) • Gather and disseminate P/T data with weekly reporting • Develop case definitions, minimum data elements and mechanisms for data collection and reporting during the pandemic period • Provide regular dissemination of surveillance information and specific alerts and recommendations • Ensure links to veterinary counterparts are in place 	<ul style="list-style-type: none"> • Provide provincial leadership • Coordinate provincial surveillance activities (FluWatch, CIOSC, SRI, Lab confirmed cases) • Participate in national and regional surveillance activities and reporting • Inform Regional Health Authorities of national and international plans • Align NL pandemic surveillance plan with Canadian and WHO pandemic surveillance plans • Ensure capacity to meet national standards for case definitions, minimum data elements and mechanisms for data collection and reporting during the pandemic period • Assess burden of seasonal influenza to help estimate additional needs during a pandemic • Disseminate surveillance information and specific alerts and recommendations to Regional Health Authorities • Develop continuity plans to increase capacity and training required for surveillance during the pandemic period • Link with provincial veterinarian 	<ul style="list-style-type: none"> • Provide regional leadership • Coordinate regional surveillance activities <ul style="list-style-type: none"> • Weekly FluWatch • Reporting of lab-confirmed cases • Enhanced surveillance for SRI • Inform stakeholders in region of provincial and national plans • Align regional pandemic surveillance plan with Provincial pandemic surveillance plan • Ensure capacity to meet national standards for case definitions, minimum data elements and mechanisms for data collection and reporting during the pandemic period • Assess burden of seasonal influenza to help estimate additional needs during a pandemic • Disseminate surveillance information and specific alerts and recommendations to regional stakeholders • Develop continuity plans to increase capacity and training required for surveillance during the pandemic period

Table 5.1 – Continued.

Surveillance Interpandemic Period Phase 2 – New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) 	<ul style="list-style-type: none"> • Continue activities of previous phase(s)

Surveillance Pandemic Alert Period Phase 3 – New influenza subtype identified in at least one human case. No human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Verify epidemiological data and current risk assessment from official sources • Review and confirm that all interpandemic surveillance activities are operating optimally • Convey current international risk assessment in a Canadian context • Provide information and national recommendations to F/P/T stakeholders 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Coordinate enhanced SRI surveillance and report any activity to PHAC • Determine best method for and coordinate mortality surveillance with funeral directors, emergency settings etc. 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Maintain enhanced SRI surveillance and report any activity to province • Advise, update and monitor partners regarding enhanced surveillance, including SRI • Identify resources and train for increased surveillance capacity

Surveillance Pandemic Alert Period Phase 4 – Localized small clusters of limited human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Enhance current surveillance activities based on circumstances 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Disseminate information and educate regarding case definitions and SRI tools 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement revised case definitions and SRI tools • Enhance surveillance activities based on situation

Table 5.1 – Continued.

Surveillance Pandemic Alert Period Phase 5 – Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Describe and communicate clinical picture and how it varies from annual influenza • Review, confirm and disseminate the data requirements for cases, report forms etc. • Implement border-based surveillance (depending on origin of cases) coordinated by the Centre for Emergency Preparedness and Response (CEPR); include notifications to ill and well travellers 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Communicate clinical picture and how it varies from annual influenza to aid in reporting • Ensure a process is in place for Regional Health Authorities to report to province and province to PHAC • Disseminate national report forms and reporting process to PHL and Regional Health Authorities 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Communicate clinical picture of illness to clinicians and how it varies from annual influenza to aid in reporting • Ensure a process is in place for local authorities to report to region • Disseminate national report forms and reporting process to all health care workers (HCW) involved • Report to province all data as per national report forms; including cases, deaths, hospitalizations and events following administration of antiviral drugs

Surveillance Pandemic Period Phase 6 – Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review epidemiology of pandemic to direct priorities • Monitor surveillance activities; compile and report outcomes 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review epidemiology of pandemic to direct priorities • Monitor surveillance activities; compile and report outcomes including mortality surveillance 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement surveillance activities for pandemic period • Review regional epidemiology to direct response • Provide timely data and report to the province

Table 5.1 – Continued.

Surveillance Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none">• Review activities; compile and analyze reports• Evaluate response• Debrief with relevant partners• Revise pandemic plans based on review, evaluation and analysis• Return to Phase 1	<ul style="list-style-type: none">• Review activities; compile and analyze reports• Evaluate response• Debrief with relevant partners• Revise pandemic plans based on review, evaluation and analysis• Return to Phase 1	<ul style="list-style-type: none">• Review activities; compile and analyze reports• Evaluate response• Debrief with relevant partners• Revise pandemic plans based on review, evaluation and analysis• Return to Phase 1

Pandemic Influenza

Section 6: Antiviral Drugs



Health and Community Services

6. Antiviral Drugs

Antiviral drugs are effective for treatment and prophylaxis of annual influenza. During the pandemic, particularly during the first wave of illness when vaccine is not yet available, antiviral drugs are expected to be effective. The Department and the Regional Health Authorities must plan for the strategic use of a limited supply of antiviral drugs. The creation of a provincial stockpile of antiviral drugs will ensure their availability for the province during the pandemic.

Drugs currently approved for the prevention and treatment of influenza in Canada include:

- **Amantadine®**, has been available for several decades but has limited use because of its side effects and the rapid development of resistance when used for treatment;
- **Tamiflu®** (oseltamivir phosphate) and **Relenza®** (zanamivir), the neuraminidase inhibitors, when administered within two days of onset of the first symptoms, have been shown to reduce the duration of illness, complications, antibiotic use, hospitalizations and deaths.

During the pandemic, antiviral drugs will be used in the province in accordance with established national priorities and best practices. The final recommendations for antiviral use will be determined after the pandemic begins and will be adjusted in light of the epidemiology of the pandemic, what is known about the effectiveness of treatment and resistance and the antiviral supply available at the time.

6.1 Objectives of Antiviral Program

The objectives of an effective antiviral drug program include to:

- Provide a secure supply of antiviral drugs (neuraminidase inhibitors) for treatment of residents of Newfoundland and Labrador

- Store, allocate, distribute and administer antiviral drugs efficiently and appropriately
- Monitor the safety and effectiveness of the antiviral program and monitor resistance to the antiviral drugs.

6.2 Interpandemic Period

Antiviral drugs are currently used to control seasonal influenza outbreaks in long term care facilities in Newfoundland and Labrador. Individual physicians may also prescribe antiviral drugs as indicated for their patients.

6.3 Pandemic Alert Period

As part of the national pandemic planning process, Canada has secured and cost-shared a stockpile of antiviral drugs for use in the provinces and territories based on populations in each jurisdiction. The stockpile is sufficient to treat persons ill with influenza and requiring treatment during the first wave of the pandemic.

The Department of Health and Community Services maintains the provincial supply of antiviral drugs in proper storage ready for distribution to the Regional Health Authorities when needed. The Regional Health Authorities must begin to plan for secure storage and distribution throughout the regions as well as a system of rapid distribution to patients within the treatment window.

6.4 Pandemic Period

Distribution and Administration – The Department will provide secure storage and transportation to the regions for antiviral drugs held by the province. On receipt of the antiviral drugs, the Regional Health Authorities will provide secure storage and distribution of the antiviral drugs according to the nationally agreed upon protocols and treatment plans.

Surveillance for Antiviral Drug Adverse

Events – Recipients of neuraminidase inhibitors will be monitored for severe and unexpected adverse events, as is the protocol for all new medications. Information will be provided for patients and health care providers outlining what to look for and how to report.

The Provincial Public Health Laboratory will ensure ongoing monitoring of viral isolates for antiviral resistance as part of a national surveillance plan. Additional studies should be conducted if there is evidence of ineffectiveness of antiviral drugs, eg., failure to control an outbreak in a nursing home.

6.5 Post-Pandemic Period

Research and epidemiologic analysis will be completed in this phase. To facilitate analysis it is important for RHA's to gather required information on clinical presentation, effectiveness, antiviral drug uptake and antiviral drug resistance. Protocols will be provided. Information is shared with national teams for further analysis. Resulting recommendations should be shared with all relevant stakeholders.

Table 6.1: Antiviral Roles and Responsibilities by Pandemic Phase		
Antiviral Drugs Interpandemic Period Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low Phase 2 – New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none">• Provide updates on ongoing risk assessment for pandemic influenza potential.	<ul style="list-style-type: none">• Provide updates on ongoing risk assessment for pandemic influenza potential.	<ul style="list-style-type: none">• Provide updates on ongoing risk assessment for pandemic influenza potential.

Table 6.1 – Continued.

Antiviral Drugs Pandemic Alert Period Phase 3 – New influenza subtype identified in at least one human case. No human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Develop or modify plans to acquire, store and distribute antiviral drugs • Confirm security of supply of antiviral drugs • Review recommended priority groups and plans for antiviral drug use based on available epidemiological data 	<ul style="list-style-type: none"> • Ensure that RHAs have identified antiviral requirements • Develop or modify plans to acquire, store and distribute antiviral drugs • Acquire recommended antiviral stockpile • Ensure that RHAs have identified their needs for storage and distribution of antiviral drugs • Work collaboratively with RHA on developing strategies for rapid treatment • Confirm security of supply of antiviral drugs 	<ul style="list-style-type: none"> • Identify antiviral requirements • Develop or modify plans for adequate supply, storage and distribution of antiviral drugs • Identify human resources, training and supplies for administering antiviral drugs • Develop strategies for rapid treatment

Antiviral Drugs Pandemic Alert Period Phase 4 – Localized small clusters of limited human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess antiviral inventory relative to perceived need • Confirm distribution points, shipping requirements and security for antiviral drugs • Provide training materials for use and monitoring of antiviral drugs 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess antiviral inventory relative to perceived need • Confirm distribution points, shipping requirements and security for antiviral drugs • Review and update educational materials on administering antiviral drugs • Provide training materials for use and monitoring of antiviral drugs 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess antiviral requirements relative to perceived need • Confirm distribution points, shipping requirements and security for antiviral drugs, including isolated communities • Review regional treatment plan • Provide training materials for use and monitoring of antiviral drugs • Provide additional training/education as required

Table 6.1 – Continued.

Antiviral Drugs Pandemic Alert Period Phase 5– Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Distribute antiviral drugs as required for early containment 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Distribute antiviral drugs as required for early containment • Ensure staff are trained and infrastructure is in place • Track recipients of antiviral drugs and report adverse events and drug resistance

Antiviral Drugs Pandemic Period Phase 6 – Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Monitor antiviral drugs supply, demand, distribution, uptake adverse events and resistance 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Distribute antiviral drugs • Coordinate and compile data on use in RHAs • Monitor antiviral drug supply, demand, distribution, uptake adverse events and drug resistance 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Distribute antiviral drugs • Coordinate and compile data on use • Manage antiviral drug supply and demand • Monitor distribution, uptake adverse events and drug resistance

Table 6.1 – Continued.

Antiviral Drugs Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1

Pandemic Influenza

Section 7: Vaccines



Health and Community Services

7. Vaccines

Following their development more than 50 years ago, influenza vaccines have become the cornerstone of influenza prevention and control. Influenza vaccine is effective in reducing influenza illness, hospital admissions and deaths during annual influenza outbreaks.

Vaccination will be the primary measure for prevention and control of influenza and its complications during the pandemic. Since the pandemic vaccine cannot be manufactured until the pandemic strain of the influenza virus is identified it is unlikely that the vaccine will be ready before the first wave of illness in Canada.

Canada's capacity to manufacture influenza vaccine has been increased to a level that will ensure a domestic supply of the pandemic vaccine. The vaccine will be produced in batches necessitating a prioritization of the groups to be vaccinated. Newfoundland and Labrador participates in the national annual influenza vaccine procurement process and this will continue for the procurement of the pandemic vaccine.

While production will be a national initiative, the Department of Health and Community Services, with the Regional Health Authorities, must be prepared for the challenges of secure storage, distribution and safe administration of the vaccine as rapidly as possible.

7.1 Objectives of Vaccination Program

Objectives for an effective vaccine program include to:

- Prevent illness, hospitalization and death
- Provide a secure supply of safe, effective vaccine for residents of Newfoundland and Labrador
- Allocate, distribute, and administer vaccine as rapidly as possible to the appropriate groups of people
- Monitor the safety and effectiveness of the vaccine program

7.2 Interpandemic Period

The Department of Health and Community Services provides an annual influenza vaccination program for persons at risk of complications due to influenza.¹¹ The mandate of this program is to reduce influenza related illness and death.

During the interpandemic period, the Regional Health Authorities should identify the resources required to deliver a two-dose mass vaccination program for the total population. The Regional Health Authorities should also consider the site locations and supplementary vaccination staff that may be required.

7.3 Pandemic Alert Period

During this period the Department should continue to work with Federal/Provincial/Territorial partners to ensure an adequate and timely supply of effective and safe vaccine. The purchase of immunization supplies should be included in the business continuity plans of RHAs. Secure storage and distribution plans for vaccines and related supplies should be established.

Plans for mass immunization should be reviewed with more attention to operational details including supplies, staffing requirements and mass immunization sites.¹² Any required training programs for non traditional vaccinators and support staff should be developed.

7.4 Pandemic Period

Distribution and Administration – When pandemic vaccine becomes available it will be distributed throughout the province. The Department of Health and Community Services will provide secure storage and transportation for vaccines held by the province. The provincial depot will distribute vaccines to RHA vaccine depots or designated locations according to established distribution procedures.

On receipt of vaccine, each of the Regional Health Authorities must provide secure storage, transportation, and distribution to the mass immunization sites. RHAs are responsible for administration of vaccine throughout their regions. The cold chain must be maintained at all times for influenza vaccine as per the Newfoundland and Labrador Immunization Policy Manual.

Vaccine Dosage – During interpandemic periods, one dose of vaccine is generally sufficient to provide protection against influenza. In contrast, children without any previous exposure to the influenza virus require two doses to produce an immune response. In a pandemic situation, the population's immunity is similar to that of unexposed children. Two doses of vaccine spaced at least three weeks apart will likely be required to confer adequate levels of immunity. The Regional Health Authorities must consider the possibility of this dosing schedule in their mass vaccination plans.

Vaccine Access During Limited Supply Period

– Because the production of vaccine will take place over several months, vaccine will not be available for everyone in Canada at the same time. During a period of limited supply vaccine will be provided on a priority basis as established in the Canadian Pandemic Plan and according to the goal of minimizing serious illness, overall deaths and societal disruption. It is important to keep in mind that these priorities may change as more information on the epidemiology of the pandemic becomes available.

The Regional Health Authorities will identify members of these priority groups in their jurisdictions and develop procedures to vaccinate them. The Department, with the Regional Health Authorities, will develop a communication plan to inform the public of the immunization strategy.

Surveillance for Adverse Events – The province and Regional Health Authorities should plan for enhanced surveillance for severe or unexpected

adverse events following immunization. Enhanced surveillance is essential when a new vaccine is introduced and more so during a pandemic when larger numbers of people are being vaccinated. Vaccine recipients and health care providers will receive information on reporting of severe or unexpected events. If a significant adverse event is identified, appropriate responses will be recommended.

7.5 Post-Pandemic Period

Regions should report their vaccination program data during this period according to the national protocol provided. The Department will facilitate the collection and epidemiologic analysis of this data.

Table 7.1: Vaccination Roles and Responsibilities by Pandemic Phase

Vaccines Interpandemic Period Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low Phase 2 - New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none"> • Maintain up-to-date plans to acquire, store and distribute vaccine • Facilitate the bulk purchase of vaccine administration supplies 	<ul style="list-style-type: none"> • Promote annual influenza and pneumococcal immunization programs • Increase coverage rates among high risk and health care workers (HCW) • Develop records systems for influenza immunization • Develop inventory systems for vaccine management and control 	<ul style="list-style-type: none"> • Promote annual influenza and pneumococcal immunization programs • Increase influenza vaccine coverage rates among high risk and HCW • Plan to implement records systems for influenza immunization • Plan to implement inventory systems for vaccine management and control

Vaccines Pandemic Alert Period Phase 3 – New influenza subtype identified in at least one human case. No human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess vaccine requirements • Review pandemic vaccine infrastructure readiness with domestic manufacture 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess vaccine requirements • Confirm security of supply of vaccine • Work with RHAs to identify a strategy to stockpile vaccine related supplies • Develop and maintain up-to-date plans to acquire, store, secure and distribute vaccine • Arrange for security of vaccine stocks and transport • Work with Regional Health 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess vaccine requirements • Identify persons who meet the priority definitions if vaccine supply is limited • Identify and pre-arrange for alternate vaccine administration sites • Identify numbers of doses and related supplies needed • Work with the DHCS to identify a strategy to stockpile vaccine related supplies

Table 7.1 – Continued.

National	Provincial	Regional
	<p>Authorities and stakeholders (e.g. professional organizations, labour associations) for human resource requirements to administer vaccine</p>	<ul style="list-style-type: none"> • Acquire vaccine supplies • Identify and arrange secure storage facilities for vaccine • Identify required human resources and training to administer vaccine • Work with DHCS and stakeholders for human resource requirements to administer vaccine

Vaccines Pandemic Alert Period Phase 4 – Localized small clusters of limited human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Confirm distribution points, shipping requirements and security for vaccines • Review, update and distribute educational materials on administering vaccine 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Confirm distribution points, shipping requirements and security for vaccines • Review, update and distribute educational materials on administering vaccine 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Confirm distribution points, shipping requirements and security for vaccines, note isolated communities • Review regional mass immunization plans and ensure list of qualified vaccinators is up to date

Table 7.1 – Continued.

Vaccines Pandemic Alert Period Phase 5 – Localized larger clusters of human-to-human transmission in Canada		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review estimates of the number of people within the P/Ts who fall within each of the priority groups for vaccination 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Work with regions to ensure all aspects of mass vaccination plans are completed • Review estimates of the number of people within the province who fall within each of the priority groups for vaccination 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Confirm persons who meet the priority definitions if vaccine supply is limited • Finalize mass vaccination plan • Develop training program for mass vaccination • Ensure staff are trained and infrastructure is in place

Vaccines Pandemic Period Phase 6 – Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Continue involvement in vaccine development, testing and production initiatives • Review and if necessary revise recommended priority groups based on available epidemiological data • Coordinate vaccine purchase • Distribute vaccine once available • Monitor vaccine coverage and adverse event activities; compile and report outcomes 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Refine nationally defined priority target groups depending on provincial circumstances • Confirm and communicate priority group definitions and update estimates from RHAs • Refine other aspects of the national guidelines (protocols, report forms, etc.) as needed for provincial and local application • Confirm security for vaccine storage and transportation • Receive, store and distribute vaccine when available • Monitor vaccine coverage and adverse events; compile and report results 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Confirm and communicate priority groups and update estimates • Establish secure storage facilities and transportation for vaccine • Confirm security for vaccine storage and transportation • Receive, store and distribute vaccines • Implement mass immunization plan • Monitor vaccine supply, demand, distribution, uptake and adverse events • Monitor vaccine coverage and adverse events; compile and report results

Table 7.1 – Continued.

Vaccines Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none">• Review activities; compile and analyze data and report• Evaluate response• Debrief with relevant partners• Revise pandemic plans based on review, evaluation and analysis• Return to Phase 1	<ul style="list-style-type: none">• Review activities; compile and analyze data and report• Evaluate response• Debrief with relevant partners• Revise pandemic plans based on review, evaluation and analysis• Return to Phase 1	<ul style="list-style-type: none">• Review activities; compile and analyze data and report• Evaluate response• Debrief with relevant partners• Revise pandemic plans based on review, evaluation and analysis• Return to Phase1

Pandemic Influenza

Section 8: Public Health Measures



Health and Community Services

8. Public Health Measures

Public health measures are actions taken to prevent, control or mitigate the effects of a pandemic. These decisions will range from population based recommendations to individual measures. The type of public health measures used and their timing will depend on the epidemiology of the outbreak.

Newfoundland and Labrador will use the public health measures outlined in the Canadian Pandemic Influenza Plan which were developed through a collaborative federal, provincial, and territorial planning effort. They are based on the best available advice from WHO and other experts, including mathematical modelling studies¹³.

Public health is a comprehensive preventative approach that may include:

- Public health advice on general personal hygiene and education programs for the public
- Case and contact management during the early stages of pandemic
- Measures to increase social distance, such as closing schools or limiting public gatherings
- Travel restrictions
- Communication plan for the public

Public health measures must consider not only the public at large but should also include public health practices in health services facilities.

8.1 Objectives of Public Health Measures

The objectives of public health measures include:

- Making recommendations regarding public health measures (e.g. cancellation of public gatherings, school closings, quarantine, etc).
- Planning occurs at all levels to raise awareness about the potential impact of these measures so that the necessary partnerships and consultations with external stakeholders start during the interpandemic and continue through all pandemic periods.
- Compliance with public health measures.

8.2 Interpandemic Period

The effectiveness of public health measures for a pandemic is dependent on the overall strength of the public health system. The interpandemic period will be a time to develop the mechanisms and strategies that will allow the public health system to move quickly to pandemic preparedness and response.

During the interpandemic period public health will:

- Work with F/P/T and regional partners to increase annual influenza vaccination uptake
- Review the public education campaign strategy for personal hygiene practices and revise if necessary
- Promote healthy living practices

8.3 Pandemic Alert

During the pandemic alert period the increased likelihood of a pandemic will enhance the need for a more aggressive approach to prepare for the pandemic. The Department of Health and Community Services will work with health partners to clarify their roles and responsibilities in preparing for the pandemic. The Department and the RHAs will promote personal emergency preparedness as a part of their pandemic planning.

8.4 Pandemic Period

During this period of the pandemic, public health measures will concentrate on the response activities of the plan. These may include:

- administration of antiviral drugs and vaccines
- promotion of public health messages on how to avoid infection
- monitoring self health and the health of the family
- self care practices to reduce the need for clinic or hospital care

8.5 Post-Pandemic Period

In the post-pandemic period all the activities are evaluated and analyzed. This will involve debriefing sessions with relevant partners. This may result in review of the current pandemic plan with revisions based on the learnings from the pandemic experience.

Table 8.1 – Public Health Measures Roles and Responsibilities by Pandemic Phase

Public Health Measures Interpandemic Period Phase 1 – No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low Phase 2 – New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none">• In collaboration with provinces and territories monitor seasonal influenza activity including animal influenza• If there are animal outbreaks provide travel health information	<ul style="list-style-type: none">• Share surveillance information with RHAs• Promote annual influenza immunization to target groups• Promote public health measures that reduce transmission of influenza• Promote healthy living practices	<ul style="list-style-type: none">• Share surveillance information• Promote annual influenza immunization to target groups• Promote public health measures that reduce transmission of influenza• Manage influenza outbreak within the RHA jurisdiction following standard protocols• Promote healthy living practices

Table 8.1 – Continued.

Public Health Measures Pandemic Alert Period Phase 3 – New influenza subtype identified in at least one human case. No human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review and update educational materials on all aspects of influenza for health care professionals, travellers, other special audiences and the general public 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review and update educational materials on all aspects of influenza for health care professionals, travellers, other special audiences and the general public 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Case and contact management of any suspect cases of severe respiratory illness (SRI) identified by surveillance

Public Health Measures Pandemic Alert Period Phase 4 – Localized small clusters of limited human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Inform health professionals and public on key messages 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • In conjunction with communication group develop public health messages as required • Ensure adequate resources are available to implement public health measures • Inform health professionals and public on key messages 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Ensure adequate resources are available to implement public health measures including isolation of cases • Inform health professionals and public on key messages

Public Health Measures Pandemic Alert Period Phase 5 – Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review national recommendations as per Annex M for public health management of cases and other control measures 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review national recommendations as per Annex M for public health management of cases and other control measures and modify as necessary 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement national public health measures • Implement infection control measures and personal protective practices

Table 8.1 – Continued.

National	Provincial	Regional
<ul style="list-style-type: none"> • Develop public education materials about infection control and personal protective measures 	<ul style="list-style-type: none"> • Work with RHAs regarding the national public health guidelines • Distribute public education materials about infection control and personal protective measures 	

Public Health Measures Pandemic Period Phase 6 – Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement communications strategy • Distribute antiviral drugs and monitor their use • Distribute vaccines and monitor their use • Implement public health measures to reduce social contact as required • Promote self and family health care to reduce the need for clinic or hospital care 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Distribute antiviral drugs and monitor their use • Distribute vaccines and monitor their use • Implement public health measures to reduce social contact as required • Promote self and family health care to reduce the need for clinic or hospital care

Table 8.1 – Continued.

Public Health Measures Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1

Pandemic Influenza

Section 9: Health Services



Health and Community Services

9. Health Services

The demand for health services during a pandemic will increase significantly. The health care system is expected to be challenged by the increased demand for care at a time when the level of absenteeism could affect the capacity to respond. Regional Health Authorities must collaborate with municipalities and other local agencies to develop comprehensive and co-ordinated regional response and recovery plans. Local governments, service organizations, private health care providers and volunteers may be asked to provide facilities, material and personnel to support the best possible care for people who become ill.

Many institutions in Newfoundland and Labrador are currently operating at maximum or near maximum capacity and have limited surge capacity. Comprehensive planning is essential to ensure that surge capacity has been addressed such that services are available when required. FluSurge is a planning tool developed by the United States Centers for Disease Control and Prevention to assist the health care sector in determining their needs and capacity during a pandemic. This tool may be useful for RHAs in developing their plans.

The Regional Health Authorities have broad regional responsibilities for a wide range of services. In addition to the traditional health care facilities and clinics, consideration must be given to other community-based services. These provide residential services and include: personal care homes, community care homes, family care homes, foster care homes, alternate family care homes, co-operative apartments, group homes, and others. Similarly, the services provided by home support/care agencies and others should be considered in the planning processes.

Regional Health Authorities should work with physicians and other health care providers to ensure that plans are in place for provision of appropriate community based medical and other health services during a pandemic. Private medical and other health service providers should plan for continuity

of their specific practices during a pandemic. These plans should be compatible with the overall pandemic plans within the regions.

Pandemic planning should also include specific support to correctional facilities where these exist in the region. The local Department of Justice representatives must be included in the planning process for these unique services.

During a pandemic essential services in many communities may be disrupted. The Regional Health Authorities may have to adapt protocols and standards of practice to meet the needs during this emergency. Depending on the severity of the pandemic, it may be necessary for the health care system to consolidate, reduce or curtail some services. Health care organizations must ensure a supply of goods and services necessary for facility operation. This may require stockpiling of some essential supplies. The Department, RHAs and partner organizations should encourage the suppliers of goods and services to develop their own contingency plans to maintain supply chains.

9.1 Objectives of Health Services

Key objectives for effective health services emergency planning include to:

- Minimize pandemic related morbidity and mortality
- Maintain essential health services
- Develop surge capacity within the health sector
- Ensure that the population is aware of the potential impact of a pandemic on the health care system

9.2 Interpandemic Period

During the interpandemic period RHAs in collaboration with community groups must begin development of a pandemic plan for the health region. This should include strategies that will

allow RHAs to continue to provide essential health services to the public during periods of increased demand. In anticipation of the increased demand on health services the plan must include attention to surge capacity, resource allocation and communications. It is important that plans be flexible so that they can adapt to new information as the characteristics of the illness and the impact on the population become known. The Health Services Emergency Planning and Response Checklist of the Canadian Pandemic Plan¹⁴ identifies key areas necessary for health services planning.

9.3 Pandemic Alert Period

In this period Regional Health Authorities should have their pandemic plans developed including:

- establishing priority operations within the organization which ensure the provision of essential and emergency services
- planning to increase surge capacity
- ensuring an adequate complement of human resources
- ensuring adequate supplies and equipment
- arranging for alternate and non-traditional care sites
- reviewing the infection control program
- reviewing the occupational health and safety program
- establishing effective information systems and databases for operational management and evaluation
- ensuring a comprehensive communications plan is in place

The Regional Health Authorities must ensure that each regional service and facility has a plan to address the surge during a time when staffing may be reduced significantly. The region must plan for a phased deferral or scale-back of certain services to ensure that essential services are available. Collaboration between Regional Health Authorities will be necessary to ensure that service adjustments in one region will not adversely affect another

region. There may be a need to plan for alternate and non-traditional care sites.¹⁵

RHAs should ensure that agreements are in place with regulatory bodies where workers may be asked to work in non-traditional settings. Staff should be provided with education and training relevant to their responsibilities during a pandemic.

Regional Health Authorities should focus on enhancing infection control and occupational health and safety practices. Occupational Health and Safety legislation requires that information, instruction and training be provided to ensure the health, safety and welfare of workers. It also requires that workplace activity, where reasonably practical, does not cause health and safety hazard exposure to persons visiting or outside workplace. The Canadian Pandemic Plan provides extensive details on this approach.¹⁶

9.4 Pandemic Period

Once a pandemic is declared emergency plans should be operationalized as needed. It will be essential for RHAs to inform the public, health professionals, service providers and other partners about the provision of health services during the pandemic.

9.5 Post-Pandemic Period

The Department will notify the RHAs when the pandemic is considered to be officially over. The Department and the RHAs will do final deactivation of emergency plan and redeploy human and other resources to enhance recovery of health case services throughout the province. The Health Services plan and activities will be evaluated and the plan will be revised as required. Activities will change to deal with recovery and then return to interpandemic period levels.

Table 9.1: Health Services Roles and Responsibilities by Pandemic Phase

Health Services Interpandemic Period Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low Phase 2 – New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none">• Rapid sharing of information among animal and human health professionals• Provide updates on on-going risk assessment for pandemic influenza potential and make recommendations for increased vigilance for surveillance and public health action	<ul style="list-style-type: none">• Rapid sharing of information among animal and human health professionals• Provide updates on on-going risk assessment for pandemic influenza potential and make recommendations for increased vigilance for surveillance and public health action• Establish regulations, agreements and policies to support the use of alternate care providers• In conjunction with RHAs, and other stakeholders establish guidelines for training and use of alternate workers and redeployment of staff• Identify information required to evaluate the impact of the pandemic on health services• Establish information systems to manage the pandemic and to evaluate its impact	<ul style="list-style-type: none">• Rapid sharing of information among animal and human health professionals• Develop pandemic plan for the health services sector• Identify issues that may require legislative adjustments and agreements to support the use of alternate care providers• Identify information required to evaluate the impact of the pandemic on health services

Table 9.1 – Continued.

Health Services Pandemic Alert Period Phase 3 – New influenza subtype identified in at least one human case. No human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Alert health system to review preparedness plans • Ensure that estimates of health care personnel capacity are current • Develop national recommendations for clinical management of cases 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Alert health sector to review preparedness plans • Ensure that estimates of health care personnel capacity are current • Plan for the redeployment of non-essential departmental staff • Determine with RHAs the essential health services to be provided during a pandemic • Share national recommendations 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review pandemic plans with special attention to cross jurisdictional issues • Review infection control and occupational health and safety policies and procedures • Ensure that estimates of health care personnel capacity are current • Determine staff levels necessary for emergency demands and redeployment strategies • Identify how human resources gaps will be filled • Educate all health care workers on infection control core competencies • Identify initiatives that may be shared with service and supply partners (food, utilities, transportation, training, communications, facilities, corpse management, etc) • Determine the number and type of health care facilities needed (including alternate and non-traditional care sites), and their estimated capacity • Determine how essential services will be provided • Develop a pandemic influenza care management plan • Determine need for stockpiling of supplies • Ensure information management system is in place to manage the pandemic and to evaluate its impact • Determine the social and psychological supports necessary for health care sector and the affected public • Develop recovery plans

Table 9.1 – Continued.

Health Services Pandemic Alert Period Phase 4 – Localized small clusters of limited human-to-human transmission Phase 5 – Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review and revise if necessary, infection control precautions for case management • Review national recommendations for clinical management of cases and modify if necessary • Anticipate and plan to mobilize human and financial resources • Disseminate information on medical supply stockpiles and potential need for, and sources of, additional supplies • Disseminate strategy for collecting and monitoring data on health care services, use and demands • Evaluate infection control and occupational health and safety recommendations and practices and revise as necessary 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review and revise if necessary, infection control precautions for case management • Review national recommendations for clinical management of cases • Anticipate and plan to mobilize human and financial resources • Review and update regional data on the number and type of health care facilities and capacity • Disseminate information on medical supply stockpiles and potential need for, and sources of, additional supplies • Disseminate strategy for collecting and monitoring data on health care services, use and demands • Evaluate infection control and occupational health and safety recommendations and practices and revise as necessary 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement and audit infection control practices for case management and revise as necessary • Implement national recommendations for clinical management of cases and modify treatment if necessary • Anticipate and plan to mobilize human and financial resources • Review and update data on the number and type of health care facilities and capacity • Conduct availability assessment of medications, supplies and equipment potentially needed for the response • Increase extra supplies and equipment required to provide medical care • Review and modify detailed regional and facility plans for providing health services during a pandemic • Implement strategy for collecting and monitoring data on health care services, use and demands • Evaluate infection control and occupational health and safety recommendations and practices and revise as necessary • Verify availability and distribution procedures for personal protective equipment • Ensure that necessary guidelines and protocols are distributed to regional and local service providers • Alert voluntary organizations of need for their services

Table 9.1 – Continued.

Health Services Pandemic Period Phase 6 – Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Evaluate infection control and occupational health recommendations and practices and revise as necessary • At end of first pandemic wave debrief to assess impact of first wave, and then regroup • Collect available data on effectiveness and safety of clinical interventions and share these with all health care areas not yet affected and WHO 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Facilitate implementation of regional pandemic plans • Evaluate infection control and occupational health recommendations and practices and revise as necessary • Review protocols and guidelines for prioritization of laboratory services during times of high service demand and staff and supply shortages • Facilitate health services activities between regions to avoid migration to centres of perceived enhanced services • Consider strategies to mitigate shortfalls of supplies and equipment • At end of first pandemic wave debrief to assess impact of first wave, and then regroup 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement pandemic contingency plans for health systems and essential services; monitor health system status; deploy additional workforce; provide social/psychological supports • Evaluate infection control and occupational health recommendations and practices and revise as necessary • Review protocols and guidelines for prioritization of laboratory services during times of high service demand and staff and supply shortages • Review mechanisms for coordinating patient transport and tracking/managing beds • Assign volunteer organizations as required • Operationalize alternate and non-traditional health care sites as needed • Coordinate clinical care and health services activities within regions and between bordering jurisdictions to avoid migration to centres of perceived enhanced services • Consider strategies to mitigate shortfalls of supplies and equipment • At end of first pandemic wave debrief to assess impact of first wave, and make necessary adjustments to response plan

Table 9.1 – Continued.

Health Services Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1

Pandemic Influenza

Section 10: Laboratory Services



Health and Community Services

10. Laboratory Services

Currently, the Provincial Public Health Laboratory (PHL) is the only facility in the province that has the capability to provide influenza testing. The lab supports both public health surveillance and clinical diagnostic services. The PHL has the capacity to meet routine annual demands, and has developed additional capacity to meet the anticipated increased demands during the different phases of the pandemic.

As the provincial reference centre, the PHL will play a central and critical role in the surveillance of the emergence of the pandemic strain in the province, its early detection in the communities at large, and typing and further characterization of the pandemic virus strain. The provincial Laboratory is a partner within the National Laboratory Network and will maintain activities that are consistent with the Canadian Pandemic Plan.

10.1 Objectives of the Public Health Laboratory Services

The objectives include:

- Provide support to the hospital labs for their surveillance activities
- Detect the arrival and progression of the virus in the province
- Monitor virus strain drift and antiviral resistance
- Support clinical diagnostic practice

10.2 Interpandemic Period

During the interpandemic period, as part of the routine provincial influenza surveillance program, specimens are collected from suspect cases across the province and positive findings are reported to the hospital lab, Regional Medical Officer of Health and the Chief Medical Officer of Health (CMOH). Results are also reported to the Canadian Virus Reporting Program. Representative influenza isolates are forwarded to the National Microbiology Laboratory (NML) promptly for further characterization, and the information disseminated.

10.3 Pandemic Alert Period

During this period the PHL will increase the stock of essential reagents and supplies to meet the anticipated increased demand for testing during this time. Technologists will be cross-trained to create a built-in redundancy to ensure uninterrupted service. The PHL will provide guidelines on specimen collection, handling, submission, and bio-safety. The PHL will also establish a fan-out plan for laboratory information including emergency contact lists for hospital labs, MOHs and CMOH.

10.4 Pandemic Period

Depending on the extent and severity of the pandemic, the demand for influenza testing will far exceed the PHL capacity. It will be necessary to curtail some of the routine laboratory services provided by the PHL. It will also be necessary to limit testing of influenza specimens once the spread of the pandemic strain within the province is established. The PHL will use the services of the NML and other satellite reference centres established as part of the national laboratory pandemic preparedness plan.

10.5 Post-Pandemic Period

The PHL will review and analyse its response to the pandemic, replenish supplies and return to the inter-pandemic phase for surveillance and other laboratory services.

Table 10.1 – Laboratory Service Roles and Responsibilities by Pandemic Phase

Laboratory Services Laboratory Services – Interpandemic Period Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low Phase 2 – New influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none"> • Routine surveillance activities including strain characterization • Develop and update national guidelines for lab testing methodologies and issues relating to bio-safety, reagent stockpile, etc • Provide proficiency testing programs • Provide training in new testing methodologies 	<ul style="list-style-type: none"> • Routine diagnostic and surveillance activities • Develop a list of services that can be reduced or curtailed during a pandemic • Provide guidelines on specimen collection, handling, submission, and bio-safety. • Participate in national and international proficiency testing programs. • Increase the inventory of supplies and reagents to meet projected testing demands 	<ul style="list-style-type: none"> • Maintain specimen collection supplies for annual flu season • Develop a list of services that can be reduced or curtailed during a pandemic • Apply PHL guidelines on specimen collection and submission including bio-safety

Table 10.1 – Continued.

Laboratory Services Pandemic Alert Period Phase 3 – New influenza subtype identified in at least one human case. No human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Increased surveillance to ensure prompt detection of pandemic strain in Canada • Provide confirmation and strain characterization reference services • Provide proficiency testing programs to provincial labs • Ensure provincial labs have the capacity for rapid detection of pandemic strain 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Increased surveillance to ensure early detection of new virus entry in the province • Submit to NML isolates from flu cases, cases with severe respiratory illness and cases with a link to avian influenza • Assess projected needs for human resources, diagnostic supplies and reagents for scaled up activity • Participate in international and national proficiency testing 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Review and update pandemic plan as necessary • Obtain additional specimen collection and transport supplies • Submit specimens to the PHL in accordance with guidelines

Laboratory Services Pandemic Alert Period Phase 4 – Localized small clusters of limited human-to-human transmission Phase 5 – Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Scale up testing and strain characterization services to meet increased demand • Develop and assess rapid testing methodologies to identify pandemic strain and make appropriate recommendations • Monitor anti-viral resistance and emergence of variants • Review and recommend appropriate bio-safety guidelines 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Scale up to manage increased numbers of specimens • Review inventory • Ensure all hospital labs have up-to-date information and necessary supplies for increased testing • Implement selective testing • Review, update and distribute plan as necessary including bio-safety guidelines 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Ensure information on selective testing, screening protocols and bio-safety guidelines are current

Table 10.1 – Continued.

Laboratory Services Pandemic Period Phase 6 – Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Conduct surveillance activities to track the trends of the pandemic in different regions of Canada 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Initiate recommended testing methods • Redirect resources to accommodate increased demand for influenza testing, with suspension of other routine services • Review inventory and restrict influenza testing when appropriate • Assess laboratory capacity and resources and resume routine testing where possible • Forward representative pandemic strains to the NML to monitor antiviral resistance and antigenic changes 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Assess laboratory capacity and resources and resume routine testing where possible

Laboratory Services Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1

Pandemic Influenza

Section 11: Communications



Health and Community Services

11. Communications

Communications is a vital component of planning for pandemic influenza. Effective communications with external and internal audiences as well as a consistent and coordinated approach with federal and regional partners is essential to the provincial pandemic strategy.

A comprehensive communications plan is critical to increase the awareness of the public regarding the pandemic, to provide direction on health maintenance and available health care services, and to alleviate unnecessary anxiety. The key to a successful communications plan is a coordinated approach with the dissemination of information to all stakeholders in an efficient and timely manner throughout all pandemic phases.

Communications planning is coordinated from the international level through national, provincial and the regional levels. The Public Health Agency of Canada has an established link with the World Health Organization and communicates key information on international influenza activity, which in turn is communicated to the provinces and regions. The communications staff of the Department participate on the Federal/Provincial/Territorial Pandemic Influenza Communications Committee which coordinates information and strategies with the PHAC, and with other provinces and territories. The Department's communications staff meets regularly with communications directors from the four Regional Health Authorities to coordinate communications planning.

11.1 Objectives of an Effective Communications Plan

An effective communications plan will:

- inform the people of this province (including health care workers) about the pandemic and the provincial pandemic plan
- educate the public on measures that can be taken in advance that will reduce the risk of influenza infection and its consequences

- identify roles and responsibilities for communications during the pandemic phases
- establish communications networks for use during the pandemic
- provide timely information during the pandemic

11.2 Interpandemic and Pandemic Alert Periods

The focus of communications in this period will be on educating the key audiences on seasonal and pandemic influenza, respiratory hygiene, immunization and the need for optimizing health services during a pandemic. If during the Pandemic Alert Period clusters of human-to-human transmission were to occur in Newfoundland and Labrador, many of the crisis communications strategies outlined for the pandemic period would be implemented.

11.3 Pandemic Period

Once a pandemic is declared, the need to provide information will be intense and sustained for several months. A pandemic has unique characteristics which must be considered when planning a communications strategy including:

- global in scope
- threat to the health of the population with the possibility of high mortality
- may occur in waves over an eighteen month period
- significant disruption to communities and businesses
- unpredictable occurrences and effects
- events will likely overwhelm normal emergency planning measures

The Department will activate its pandemic communications response providing regular, timely information to all audiences about the status of the pandemic, identifying the steps being taken to

respond and advising the public about what to do during each phase.

The Department will use a number of different communications mechanisms during a pandemic, including daily internal briefings, media briefings, news releases, website updates and public service announcements.

11.4 Post-Pandemic Period

The Department will notify the public when the pandemic is considered to be officially over in Newfoundland and Labrador. The communications plan and communications activities throughout all phases of the pandemic will be evaluated and adjustments to the plan will be made as required.

Table 11.1 – Communication Roles and Responsibilities by Pandemic Phase

Communications Interpandemic Period Phase 1 - No new influenza subtypes have been detected in humans. A new influenza virus subtype may be present in animals, but the risk for human infection is low. Phase 2 - No new influenza subtype in animals posing a substantial risk of human disease		
National	Provincial	Regional
<ul style="list-style-type: none"> • Develop a comprehensive communications plan for all aspects of the pandemic plan • Establish networks with international, national and P/T stakeholders and define roles and responsibilities • Inform Ministers, governments and key policy decision-makers of the potential risks of a pandemic • Provide national and international information to P/Ts • Provide key messages and template materials that can be adapted to P/T needs • Promote business continuity planning 	<ul style="list-style-type: none"> • Participate on F/P/T communications committees • Develop a provincial pandemic communications plan • Provide key messages and template materials that can be adapted to regional needs • Establish networks with provincial and regional stakeholders and define roles and responsibilities • Ensure RHA communications plans are compatible with the provincial strategy • Inform Ministers, RHAs and key policy decision-makers of the potential risks of a pandemic 	<ul style="list-style-type: none"> • Participate in provincial and regional communications committees • Develop communications plan compatible with provincial communications plan • Promote personal hygiene practices and self-care • Encourage and promote pandemic planning for health facilities and community stakeholders

Table 11.1 – Continued.

Communications Pandemic Alert Period Phase 3 - New influenza subtype identified in at least one human case. No human to human transmission or rare cases of spread through very close contact only		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Inform P/Ts and other key stakeholders of increased risk and its implications • Engage and prepare media for their information support role • Coordinate F/P/T communications response • Update communications plans • Coordinate communications on the technical and scientific information 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Establish a provincial pandemic communications working group • Communicate the elevation of pandemic risk to provincial and regional partners including the public • Update communications plans • Ensure that key provincial stakeholders have accurate information to provide to their audiences/media • Communicate technical and scientific information to regional health authorities 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Update communications plans • Communicate the elevation of pandemic risk to local partners and provide updates to key stakeholders in the region • Inform the public

Communications Pandemic Alert Period Phase 4- Localized small clusters of limited human-to-human transmission Phase 5 - Localized larger clusters of human-to-human transmission		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Inform federal government departments, P/Ts and NGOs of global pandemic activity including the health response • Implement nation-wide public education and awareness campaign 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Update prepared messages in light of current information • Inform provincial departments and RHAs of global pandemic activity including the provincial response • Provide detailed updates to the public, health care workers and other key stakeholders on clusters of human-to-human transmission of influenza • Enhance public education and awareness campaign 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Provide detailed updates to the public, health care workers and other key stakeholders on clusters of human-to-human transmission of influenza • Enhance public education and awareness campaign

Table 11.1 – Continued.

Communications Pandemic Period Phase 6 - Increased and sustained transmission in general population		
National	Provincial	Regional
<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement pandemic phase of national communications plan • Coordinate response with provinces, territories and federal populations • Update key stakeholders • Inform the public • Assess ongoing effectiveness of communications activities • Fully implement high profile nation-wide public education and awareness campaign • Keep stakeholders up to date with the latest information, and emphasize their roles and responsibilities 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement pandemic phase of provincial plan • Establish provincial spokesperson(s) for health • Share information with federal, provincial and regional stakeholders • Fully implement high profile province-wide public education and awareness campaign, aligned with national campaign • Ensure consistency in messaging with other jurisdictions • Inform public of self-care practices, antiviral treatment and vaccination availability • Assess ongoing effectiveness of communications activities • Keep stakeholders up to date with the latest information, and emphasize their roles and responsibilities • Ensure the media have up-to-date information 	<ul style="list-style-type: none"> • Continue activities of previous phase(s) • Implement pandemic phase of regional and local plans • Establish regional spokesperson(s) for health • Share information with provincial, regional and local stakeholders • Support education and awareness campaigns for health professionals and the public • Inform public of self-care practices, antiviral treatment and vaccination access • Ensure consistency in messaging with province and local bodies • Keep stakeholders/partners up-to-date with the latest information, and aware of their roles/responsibilities • Assess ongoing effectiveness of communications activities

Table 11.1 – Continued.

Communications Post-Pandemic Period Recovery		
National	Provincial	Regional
<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1 	<ul style="list-style-type: none"> • Review activities; compile and analyze data and report • Evaluate response • Debrief with relevant partners • Revise pandemic plans based on review, evaluation and analysis • Return to Phase 1

Pandemic Influenza

Appendices



Health and Community Services

Acronyms

ACPHHS	Advisory Committee on Population Health and Health Security
CCMOH	Council of Chief Medical Officers of Health
CEPR	Canadian Integrated Outbreak Surveillance Centre
CESSD	Council of Emergency Social Services Directors
CHEMD	Council of Health Emergency Management Directors
CIDPC	Centre for Infectious Disease Prevention and Control
CIOSC	Canadian Integrated Outbreak Surveillance Centre
CMOH	Chief Medical Officer of Health
CPIP	Canadian Pandemic Influenza Plan
CUPE	Canadian Union of Public Employees
DHCS	Department of Health and Community Services
EMO	Emergency Measures Organization
EOC	Emergency Operation Centre
F/P/T	Federal/Provincial/Territorial
FRI	Febrile Respiratory Infection
HCW	Health Care Worker
HRLE	Department of Human Resources, Labour and Employment
ILI	Influenza Like Illness
IMS	Incident Management System
MOH	Medical Officer of Health
NAPE	Newfoundland and Labrador Association of Public and Private Employees
NGO	Non-Government Organization
NLMA	Newfoundland and Labrador Medical Association
NLNU	Newfoundland and Labrador Nurses Union
NML	National Microbiology Laboratory
P/T	Provincial/Territorial
PHAC	Public Health Agency of Canada
PPE	Personal Protective Equipment
PPHL or PHL	Provincial Public Health Laboratory
RHA	Regional Health Authority
RMOH	Regional Medical Officer of Health
SRI	Severe Respiratory Illness
WHO	World Health Organization

Legislation and Policy

The purpose of this is to outline the legislative and policy directives currently in effect that create a need for, or give effect to, a departmental emergency management plan and program. This information is provided for quick reference only and not for the purpose of guiding decisions or actions. Decisions and actions will be based on careful review of relevant legislation and upon the receipt of legal advice from solicitors with the Department of Justice or the Regional Health Authorities.

A. Legislative Directives

The Department of Health and Community Services Notice, 2003 identifies that the Minister of Health and Community Services is responsible for a number of matters including:

- the promotion and preservation of health
- the prevention and control of disease
- public health
- services to children, youth and families
- child care services
- the control of drugs
- facilities and programs for dependent persons and persons with disabilities.

The Health and Community Services Act in:

- section 3 requires that officials of public institutions, medical officers of health, clerks or secretaries of municipalities, school board officials, medical practitioners, nurses, social workers, dentists, and pharmacists to answer communications from the Department promptly, gather requested information and submit the same to the Department in relation to matters impacting on public health or the provision of services to families, children and youth;
- section 5 authorizes health officers, inspectors or other persons designated by the Minister or authorized by the Chief Medical Officer of Health to enter into buildings or onto land and to issue orders or give directions as necessary

to protect the public health;

- section 8 authorizes the Minister to declare an area to be a restricted area; and
- section 11 authorizes the Minister to make regulations applicable to many aspects of health and community services.

The Communicable Diseases Act in:

- section 4 requires physicians to give notice, within 24 hours, to the deputy minister or health officer of the relevant jurisdiction that a person is believed to be infected with a communicable disease;
- section 5 requires that officials in charge of hospitals, residential institutions and teachers/instructors in educational facilities give notice to the deputy minister or health officer of the respective jurisdiction that a person is believed to have a communicable disease;
- section 6 authorization is provided to health officers, upon receipt of notification that a case of communicable disease exists, to inspect premises where the disease is reported to exist and obtain information as to the persons suspected of being infected or as to the source of the infection;
- section 14 enables the Minister, in writing, to authorize and direct qualified persons to investigate outbreaks of infectious disease and unusual and unexplained mortality, such persons may exercise the powers conferred upon a commissioner under the Public Inquiries Act;
- section 15 provides a medical health officer, with reasonable grounds, to issue a written order that a person having or suspected to have an infectious disease, submit to a medical examination by the medical health officer or physician acceptable to the medical health officer, where it appears that a person is infected with a communicable disease the medical health officer may, with the approval of the Minister or Deputy Minister in writing

order the treatment necessary to protect the public, should the person not comply the medical health officer may by written order request police assistance in removing the non-compliant person to a place of treatment or examination;

- section 17 authorizes a health officer, or person authorized by them, to remove persons with a communicable disease from public conveyances and detain the conveyance until it is properly disinfected;
- section 18 enables the Lieutenant-Governor in Council to take those precautions necessary to prevent the spread of an epidemic of communicable disease into the province;
- section 21 enables the Minister, in an emergency situation relating to a communicable disease, make immunization or re-immunization compulsory;
- section 23 requires that certificates of immunization be provided to the person responsible for children recently immunized;
- section 30 authorizes the Minister, subject to approval by the Lieutenant-Governor in Council, to make general and particular quarantine orders and regulations; and
- section 31 authorizes the Minister to issue orders declaring an epidemic and ordering quarantine, isolation, vaccination, disinfection and the closure of schools, public and private gatherings necessary to stop the spread of infectious disease.

A schedule of communicable diseases is attached to the Act.

The Emergency Measures Act in:

- section 2(b) defines a “civil disaster”; in this context it is an actual or potential event, other than war, that may or does endanger public health and safety, including disease;
- section 2(f)(v) defines the emergency medical services and public health and welfare measures as emergency measures,

- section 7 identifies that the Lieutenant-Governor in Council, by proclamation, can declare a state of civil disaster,
- section 8 identifies that the Lieutenant-Governor in Council, upon proclamation of a state of civil disaster, enact a plan and/or take those measures to protect persons from suffering and maintain and coordinate medical and welfare services; he or she may also make regulations necessary for public health and welfare; it also authorizes the Minister of Municipal and Provincial Affairs to conscript and empower persons with appropriate qualifications to perform medical, dental, nursing, pharmaceutical and optometry services;
- section 10 enables local disasters to be declared in areas of the province where an emergency threatens safety, welfare and well-being and that cannot be handled locally, in such circumstances the Minister of Municipal and Provincial Affairs may designate an officer to take charge of emergency operations including the control and co-ordination of health and welfare services; and
- section 15 stipulates that the Lieutenant-Governor in Council may order that each department identify, by title, interim successors to act in place of the Deputy Minister during periods of civil disaster and may specify their order of seniority; there are to be at least two and not more than six interim successors, these successors shall when the Deputy Minister is unavailable during civil emergencies act in the capacity of the Deputy Minister; each Minister shall also compile a list of senior departmental officers below the rank of Deputy Minister to act in the capacity of Minister should he or she be unavailable during times of civil disaster and shall specify the order of succession; and
- section 16 outlines matters applicable to auxiliary police.

B. Policy Directives

The Public Health Division is mandated as primarily responsible for epidemiology, surveillance and control of communicable diseases through immunization, disease reporting, follow-up and control of disease outbreaks. This Division is responsible for the disease surveillance, control, immunization and environmental health programs. It is headed by the Chief Medical Officer of Health and will take a lead role in the coordination of departmental activities relating to the management of communicable disease outbreaks and will assist in the coordination of public health measures needed to respond to major emergencies and disasters.

The Health Emergency Management Division has a program mandate for emergency preparedness in the provincial health sector. As such, this Division will play a key role in departmental emergency management activities and assist in the coordination of the Department's response to major emergencies and disasters.

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