Office of the
Chief Public Health Officer
Department of Health and Wellness

Prince Edward Island

Pandemic Contingency Plan

for the Health Sector

Prince Edward Island
CANADA

EXECUTIVE SUMMARY

PRINCE EDWARD ISLAND PANDEMIC CONTINGENCY PLAN

PREFACE

A pandemic occurs when a new pathogen subtype emerges, against which no one is immune. The appearance of a new virus may result in several simultaneous outbreaks worldwide leading to high rates of illness and death. With increases in global transport, urbanization and climate change, outbreaks could occur much more rapidly and with increased frequency than we have experienced historically. The 2009 Influenza A (H1N1) pandemic provided the first real test of Canada's pandemic preparedness planning efforts, with collaboration among all levels of government and stakeholders was unprecedented compared with previous events such as the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003. While no one knows for sure when a pandemic will occur, most experts agree that it is not a question of if a pandemic will occur, but when.

Prince Edward Island's Plan for the Health Sector

PEI's Pandemic Contingency Plan for the Health Sector is a framework document to guide the health system in the ongoing development of operational plans for a pandemic. It is closely aligned with the Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector (2018), which has provided important guidance throughout the planning process. It is also guided by the Federal/Provincial/Territorial Public Health Response for Biological Events (2018).

The Province of Prince Edward Island has the overall responsibility to ensure that each division of the health system has in place an operational plan that will result in an integrated and coordinated health sector response to a pandemic in PEI. Ongoing review and testing of the strategies through exercises will occur in order to keep the plans current and responsive.

SECTION 1

PLANNING FOR APANDEMIC

The Risk

While it is rare for novel viruses to evolve into pandemic viruses, the pandemic potential of any new virus must be considered.

The Asian strain of H5N1 influenza discovered in 1997 (commonly referred to as 'bird flu') in meets all but the last of the following conditions necessary for an influenza pandemic to occur:

- a new influenza A virus arising from a major genetic change, i.e. an antigenic shift;
- a virulent virus with the capacity to cause serious illness and death;
- a susceptible population with little or no immunity;
- a virus that is transmitted efficiently from person to person.

Many of the recent pandemics are zoonotic viruses; that is, viruses that have the ability to infect both animals and people. Often zoonotic viruses are not very efficient at infecting and spreading amongst the human population, however, minor changes in a virus' genetic code can impact its virulence and transmissibility in humans.

The experience with the novel coronavirus that caused the severe acute respiratory syndrome (SARS) outbreak in Toronto in 2003 showed how an infectious disease outbreak could significantly affect the health care system. Another lesson learned however, was in the overall impact to society. Businesses suffered because the outbreak kept people close to home and tourists away from the city. The economic effects far outweighed the health impacts of SARS in Canada and were felt across the country, including in PEI.

The risks associated with a pandemic are significant because of the potential impacts to the health of the population as well as the risks for societal disruption.

The Impacts

History tells us that pandemics occur in waves, with a gradual build in influenza like illness reaching a peak at week 4 or 5, and then gradually declining to "normal" activity by week 8. A second and possibly a third wave might occur either in the same season or in the next year. Using the Canadian planning assumption of an attack rate of 25% over the course of a pandemic (one or more waves with the majority of cases occurring in the first wave), PEI could see:

- 140-200 deaths

- 600 hospitalizations, likely due to secondary complications such as pneumonia

- 26,000 people with symptoms severe enough to require a visit to an emergency department, doctors' office, or clinic
- about 40,000 people ill with symptoms severe enough to keep them home from work for a minimum of a half day.

The Canadian Department of Finance has done predictive modeling on absenteeism during a potential influenza pandemic. The most current recommendation from this work is for health sector employers to plan for a total workplace absenteeism rate of 25% during the peak two- week period of a pandemic wave with lower rates in the preceding and subsequent weeks.

Ethical Decision Making

The development of the pandemic operational plan will be done in collaboration with the Provincial Clinical Ethics Committee. The framework to guide ethical decisions will be used to work through a number of ethical dilemmas that can be anticipated in a pandemic resulting from shortages in human resources, supplies, equipment, and medications. This work will be incorporated into training and education initiatives that are planned for staff and physicians and with the public.

Emergency Management and the Plan

The four components of emergency management are mitigation, preparedness, response and recovery. These components are described within the context of the health system in a disease pandemic.

Mitigation refers to measures the health system can take in advance of a pandemic in order to prevent, lessen or alleviate the impacts and overall outcomes of a pandemic. These measures are longer term strategies that provide a strong foundation for successful emergency management.

Preparedness refers to the period before a pandemic is declared. It includes all the actions involved in anticipating the pandemic's onset and in limiting the potential impact or repercussions—basically everything involved in getting ready to deal with a pandemic.

Response activities refer to the actions that each division will engage in based on the pre- determined roles and responsibilities in a pandemic.

Recovery consists of activities that facilitate the facilities and programs in the health system return of normal modes of operation after a pandemic wave.

The Chief Public Health Officer of Prince Edward Island is the lead for the health sector in any infectious disease outbreak or public health emergency. In a disease pandemic, an Emergency Management Outbreak Team consisting of senior directors, will manage the operations of existing health care facilities and programs as well as any non-traditional sites that are established.

The Challenge for the Health System

A pandemic presents a two-fold challenge for the health system - a significant increase in people with illness requiring medical care at the same time as a reduction in the workforce as a result of illness, caregiving responsibilities, or due to fear.

No one knows for sure how virulent the next pandemic will be or when it may arrive. An effective vaccine is the primary line of defense in any infectious disease pandemic. For pandemics caused by influenza viruses, it is expected that a vaccine will be available within 12 months after the pandemic virus is identified by the World Health Organization. Vaccine development time is expected to be reduced as new vaccine platforms are integrated into standard vaccine production in the future. Novel non-influenza type viruses, such as a novel coronavirus, may take longer in vaccine develop since much needs to be learned about the new virus before an effective vaccine can be produced. Along with a vaccine there are a number of other key strategies that can be employed to mitigate the impacts to individuals and society.

The following sections discuss the strategies that will be employed by the health system in PEI in the event of a pandemic.

SECTION 2

PROTECTING THE HEALTH OF THE PUBLIC

The *Public Health Act of Prince Edward Island* states that the Chief Public Health Officer, under the appointment of the Minister of Health and Wellness, has the responsibility for the prevention, interception and suppression of communicable diseases (including novel viruses) and other problems affecting the health of the public. The PEI Pandemic Contingency Plan for the Health Sector has identified ten key component areas that are essential in a pandemic response.

Key Component # 1 Surveillance

Our ability to identify a new virus and track its activity in the population is critical to the success of a pandemic response. Early identification of a virus increases the lead time for the development of a vaccine, identification of effective antiviral medications, and the implementation of prevention and control strategies.

Surveillance is a continuous and integrated process of collecting, analyzing, interpreting, and disseminating data. Active surveillance will identify the presence of the virus in our population early and then will both guide our response and evaluate the impacts of the response. Surveillance activities currently take place internationally, nationally and provincially and work together to "paint the map" as illness activity increases in the population. The levels of surveillance will increase as a pandemic becomes more imminent.

Key Component # 2 Laboratory Services

Laboratory-based surveillance is an integral part of monitoring disease activity. Because the signs and symptoms of novel respiratory viruses are similar to those caused by common respiratory pathogens like influenza and respiratory sync, laboratory testing must be conducted to diagnose a virus definitively. Rapid identification of a novel virus and timely tracking of virus activity throughout the duration of the pandemic are critical to the success of a pandemic response. In the early stages of a pandemic, laboratory services also contribute to appropriate clinical treatment.

Key Component # 3 Public Health Measures

Public health measures are non-medical interventions used to reduce or slow the spread of the pandemic virus. These measures will not necessarily prevent people becoming infected with the pandemic virus. However, delaying the spread will allow the health system time to manage the surge in numbers of ill people, thereby decreasing the sudden demands on the health system.

The Chief Public Health Officer for PEI has the legislated authority under the Public Health Act of Prince Edward Island to enact public health measures when there is a risk to the health of the public. Early and aggressive implementation of public health measures may significantly slow the spread of the disease.

The public health measures for consideration in PEI include:

- Providing public education to increase awareness
- Conducting case and contact management
- Closing schools
- Restricting public gatherings.

Aligning Workplace Policies and Procedures

There are a number of health sector human resource policies and procedures that can be clarified, realigned, and possibly developed prior to a pandemic to enable an effective response during a pandemic. The Health Human Resources team will work with other planning groups to ensure that as operational plans for the strategies that have been identified are developed, they are also supported in policy.

Key Component # 4 Pandemic Vaccine

Each year the WHO recommends an influenza vaccine based on the strains of influenza A and B that are in circulation in the spring of the year. Most of the time, vaccination provides significant immunity against influenza and it is widely accepted that a vaccine **is the first line of defence against a pandemic virus**.

Canada is among the few countries in the world to have a contract with a vaccine manufacturer for the development and supply of a vaccine for pandemic influenza as soon as the World Health Organization identifies the seed strain and it becomes available for vaccine production. Once this occurs, with current influenza vaccine manufacturing capabilities it is expected that the vaccine company can produce two

doses for the entire population of Canada at a rate of 3.85 to 7.7 million doses per week. Because doses will be available to PEI in limited quantities initially, prioritized groups have been established and will be appropriately adjusted once the epidemiology of the pandemic influenza virus is determined. PEI will follow the national standards on the priority groups.

Novel viruses for which there is no current established vaccine production process (such as the case with novel coronaviruses) will likely require more time until vaccine production since there is much to learn during the pandemic about the novel virus and they type of vaccine needed to prevent infections.

Key Component # 5 Antiviral Medication in a Pandemic

Because vaccines are not expected to be available early in a pandemic, antiviral medications are considered the next best pharmacological intervention in the control and treatment of viral symptoms. Antivirals work by reducing the ability of the virus to reproduce in the body and therefore decreasing severity and duration of illness. Antivirals do not provide immunity against the virus, and not all viruses are susceptible to antivirals. The Canadian recommendation on the use of antiviral medication in a pandemic is primarily for the symptomatic treatment of people who are infected and ill with the virus.

Stockpiling Essential Supplies Medication and Equipment

A pandemic will result in an increased demand in medical supplies required to treat patients and to protect health care workers. Border closures or illness among workers involved in the manufacturing or delivery of medical supplies, medications, and equipment may result in supply chain interruptions. A provincial plan will be developed for the stockpiling and managing of supplies in the event of a pandemic.

SECTION 3

DELIVERY OF HEALTH SERVICES

Key Component # 6 Infection Prevention and Control and Occupational Health

Health Canada's Infection Control Guidelines, *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care Settings (2013)* recommend that in addition to routine practices, droplet and contact precautions should be taken for pediatric and adult patients with seasonal influenza during the inter-pandemic period. These same precautions are recommended in an influenza and other similar viral pandemics.

Precautions include the importance of hand hygiene before and after caring for patients; the need to use gloves, mask/eye protection, face shields, and gowns when splashes or sprays of blood, body fluids, secretions or excretions are possible; the cleaning of patient care equipment, the physical environment and soiled linen; precautions to reduce the possibility of health care workers' exposure to blood borne

pathogens; and patient placement in a facility. Strict adherence to hand washing/hand antisepsis is the cornerstone of infection prevention and control. **Proper hand hygiene may be the most effective control measure available during a pandemic.**

Key Component # 7 Health Care Services

Protection of Health Care Workers

It is generally thought that health care workers will be at higher risk of contracting the pandemic illness than the general public due to being exposed to greater amounts of virus for concentrated periods of time.

The *Occupational Health and Safety Act* outlines the responsibilities of the employer to take all reasonable precautions to protect workers. It also outlines the worker's responsibility to adhere to the precautions that are deemed reasonable. Precautions include the safe use of personal protective equipment such as masks, facial protection and gowns, strict adherence to handwashing, and the use of therapeutic interventions such as vaccination and antiviral medications when these are available and recommended.

Education and training will be critical to the protection of health care workers. PEI's health sector will implement the following three actions to reduce the risk of workers acquiring the pandemic virus in the workplace:

1) *Ensure all workers have the education and training they need to protect themselves while providing effective care.*

2) *Institute and monitor appropriate occupational health and infection prevention and control measures.*

3) *Provide appropriate personal protective equipment as recommended by the Public Health Agency of Canada.*

Patient Prioritization /Essential Services

Programs and facilities will increase their capacity to deal with the increase in patients by moving to an essential services plan. While not all services will be deemed essential in a pandemic it is important to stress that all people will be essential and proper planning will allow for the redeployment of people to areas where their particular skill set can be utilized.

Working collaboratively to ensure the continuum of care in a pandemic, facilities and programs in PEI will define their essential services that will be provided in a pandemic using the following common terminology:

- **Must Do –** critical services, cannot be deferred or delegated

- **High Priority** – do not defer if possible or reinstate as soon as possible
- **Medium Priority** – can wait if a pandemic period is not too long
- **Low Priority** – can be brought back when the pandemic is over.

Caring in Place

Caring in place is a strategy to reduce or slow admissions to hospitals in order to decrease the strain on acute care facilities. Caring in place means that as much as possible care sites will care for their patients/residents who become ill rather than transfer them to an acute care hospital. Individuals will be encouraged to care for themselves in their homes and residents will stay in long term care to receive their care. Preparedness activities, including education for health care workers and the public, will facilitate caring in place.

Non-Traditional Sites: Triage Clinics and Alternate Care Sites

The activation of mass triage sites is called for in **Stage 2** of PEI's pandemic implementation plan. The rationale behind this strategy includes:

- Pooled resources in a centralized location allow for quicker assessment, treatment and placement to the appropriate level of care, ie. discharge to self care, observation, or hospitalization.
- Separating patients with pandemic -like- illness from other patients in emergency rooms,

clinics, and doctor's offices is an effective infection control strategy in delaying the spread of the pandemic virus.

Stage 3 of PEI's pandemic plan is declared when the volume of patients requiring hospitalization is significantly higher than available beds, even after the system has scaled back to deliver only essential services and hospitals have maximized their bed capacity. The primary activity of Stage 3 is the establishment of alternate care sites that will function as step down units from acute care hospitals.

Education for Health Care Workers

During a pandemic, health care workers may need to be re-deployed from their usual roles and settings. Health care workers may be required to take on supervisory duties of volunteers and other staff within their own or another site; facilities may be caring for patients or residents that would, in normal circumstances, be transferred to another facility. Changes in roles and responsibilities will require education and training. Some of the training can be implemented in the pandemic alert stage and partially as a pandemic becomes more imminent.

Optimal Use of Health Care Workers

With the expected absenteeism in health care workers and the surge in people needing health care, PEI's health system will develop in advance of a pandemic a process that will enable the efficient re-

deployment of health care workers. Re-deployment may be needed within work sites to support essential services or to another work sites to provide care to pandemic patients. The overall goal is to match the skill set of the health care worker with the work that is needed.

Maximizing the Availability of Health Care Workers

Most jurisdictions are likely to be short on trained health care professionals in a pandemic. For this reason, PEI is not anticipating having health care workers from other provinces or territories coming to work in PEI during a pandemic. Potential sources of health care workers outside of the system include: health care workers who may have recently retired; students in a health related field who have almost completed their course or program; and volunteers. The process for recruiting alternate health care workers to assist during a pandemic will be developed in the subsequent months of a pandemic.

Key Component # 8: Clinical Care Guidelines

Clinical care involves the assessment and treatment of persons with suspected or confirmed pandemic illness. For example, the spectrum of illness seen with influenza is broad and ranges from asymptomatic infection to severe illness causing death, which is frequently due to an exacerbation of an underlying chronic condition or secondary bacterial pneumonia. Certain aspects of pandemic management may be unfamiliar to some practitioners, and new risk factors and presentations may emerge. Critically ill patients may require extraordinary support measures, some of which may not be universally available in a high-impact pandemic.

Key Component # 9: Mass Fatality Planning

In a pandemic, the number of deaths in a 6- to 8-week wave is estimated to be similar to that which typically occurs over 6 months in a non-pandemic period. As in the health care system, demands on funeral industry services will increase at the same time as their workforce is reduced due to illness or caregiving responsibilities. A mass fatality plan for a pandemic will be established to deal with the predicted increase in deaths.

SECTION 4

COMMUNICATIONS AND RESEARCH

Key Component # 10 Communications

Communication of information and advice is often the first and most important public health intervention during an emergency. This is especially true during a pandemic, where behaviour change is a central part of risk management. Providing clear and consistent information about the disease, who it affects, how it spreads and ways to reduce risk is an effective way to help reduce the spread of infection before other interventions like vaccines are available. Open and honest public communication also reinforces trust in public health authorities and helps to minimize societal and economic disruption.

In any emergency or disaster situation, effective internal and external communications are foundational components necessary for a successful response. In a pandemic, there will be extensive information relating what is known about the pandemic strain, the risks to public health, as well as advice on how to manage those risks during each stage of a pandemic.

The Department of Health and Wellness is committed to the release of accurate, honest, and timely information during an influenza pandemic. The Crisis Communications Plan will guide communications activities as we move from the pandemic alert period to the pandemic response phase.

Key Component # 11 Research

Research plays a key role in addressing knowledge gaps about the pandemic virus and effective illness prevention, treatment and control. Much of this research can be carried out in the interpandemic period, but some can only be conducted during a pandemic. Given the potentially long interval between pandemics, it is important not to miss these infrequent but invaluable opportunities and to plan for a rapid research response.

CONCLUSION

A pandemic outbreak is a threat that cannot be ignored. This plan lays the foundation for the development of the operational plans for the health sector to prepare for and respond to a pandemic. While we do not know for sure when a pandemic will emerge, the planning by PEI's health system will ensure a constant level of health system readiness aimed at reducing the number of people with serious illness and the number of overall deaths as well as minimizing societal disruption as a result of the pandemic. This planning will also assist the health system in preparing for other public health emergencies.