Pandemic Influenza

Section 1: Introduction

Newfoundland Labrador

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.