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## CHAPTER 1 Background

### 1.1. INTRODUCTION

During the 20th century, the world experienced three influenza pandemics. The most deadly, the "Spanish Flu" of 1918-19, killed 40 to 50 million people worldwide. Although no one can predict when the next influenza pandemic will hit, public health officials have warned that a global influenza pandemic is overdue.

Strategic and operational pandemic plans can reduce:

- the number of people infected (i.e., the extent of the outbreak),
- the amount of burden of illness, the number of deaths, and
- the level of socio-economic disruption.

The Niagara Region Public Health (NRPH) is responsible for planning Niagara's local responses to an influenza pandemic with direction from both the provincial/territories and federal levels. This involves liaising with local stakeholders (e.g., emergency responders, hospitals, mortuary services) in advance of a pandemic to facilitate a coordinated response if pandemic influenza strikes a community. It is likely that the NRPH, through existing or enhanced surveillance, may be the first ones to detect influenza in their communities. It is essential that the lines of communication in communities and up the line to the P/T and federal levels are clear and established in advance of a pandemic.

NRPH has developed this operational plan to prepare them to mobilize resources quickly, and to effectively limit the impact of an influenza pandemic. Every jurisdiction must be prepared to respond to a novel influenza virus.

### 1.2. GOALS OF PANDEMIC PLANNING

The following goals are based on the Canadian Pandemic Influenza Plan (CPIP) and the Ontario Health Plan for an Influenza Pandemic (OHPIP) 2008 ([http://www.health.gov.on.ca/english/providers/program/emu/pan\\_flu/pan\\_flu\\_plan.html](http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/pan_flu_plan.html)):

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

These goals can be achieved through the coordinated and collaborative efforts of the health stakeholders in the Niagara Region all levels of government in planning and preparation.

### 1.3. OBJECTIVES

The objectives for the Niagara Region Public Health Pandemic Plan are:

- To develop a plan that can be adapted for other public health communicable infectious emergencies (e.g., outbreak of Hepatitis A);
- To develop a plan that is sufficiently flexible to account for the unknown epidemiology of a pandemic and the needs of different stakeholders;

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- To develop a plan that is consistent with federal, provincial and territorial pandemic plans that is acceptable and applicable to stakeholders, and that clearly identifies roles and responsibilities;
  - To recommend planning considerations for the appropriate prevention, care and treatment during a pandemic;
  - To recommend planning considerations for appropriate communications, resource management and preventive measures;
  - To provide a plan that is reviewed on an annual basis to ensure the incorporation of new developments and to ensure consistencies with best practices; and
  - To provide an evaluated plan that is sufficiently clear and comprehensive to ensure operational viability.

#### 1.4. IMPLICATIONS AND ASSUMPTIONS

The following planning assumptions have been adopted to inform the plan, but would be adjusted real-time in an influenza pandemic situation based on the actual epidemiology. Although there is alignment with the planning assumptions of the federal and provincial plans, the Niagara Region Public Health Response to H1N1 Influenza has adapted the following general assumptions:

- The Niagara Region Public Health pH1N1 influenza pandemic plan will be an “evergreen” document – recognizing that this plan will continually be revised as the world, federal and provincial plans and best practices are identified.
- The influenza pandemic will simultaneously affect the Region of Niagara, the Province of Ontario and other jurisdictions.
- The impact of illness upon the residents of Niagara will be significant.
- There will be a cumulative attack rate of 15 - 35% during the first wave.
- More severe illness and mortality than the usual seasonal influenza is likely in all population groups.
- The specific pandemic epidemiology (incidence, distribution, and control of disease in the population) will not be known until the pandemic virus emerges.
- Children and otherwise healthy adults may be at greater risk because elderly adults may have some residual immunity from exposure to a similar virus earlier in their lives if the pandemic is caused by a recycled influenza strain.
- An influenza pandemic usually spreads in two or more waves, either in the same year or in successive years. A second wave may occur within three to nine months of the initial outbreak wave and may cause more serious illnesses and deaths than the first. In any locality, the length of each wave of illness is approximately eight to twelve weeks.