
The Thunder Bay & Area Pandemic Influenza Plan applies to the City of Thunder Bay and the following Municipalities:

- Shuniah
- Neebing
- Gillies
- O'Connor
- Conmee
- Oliver/Paipoonge

Thunder Bay & Area Pandemic Influenza Plan can be accessed online at
www.tbdhu.com

The Ontario Health Pandemic Influenza Plan (OHP/IP) can be accessed online at
http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/pan_flu_plan.html

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INTRODUCTION ...

THE PANDEMIC EXPECTED

In the 20th century, the world has seen three major influenza outbreaks. The worst of the three – the Spanish Flu of 1918 - 1919 left 20-million people dead worldwide. Experts predict that since Influenza pandemics have, historically, occurred in cycles, the next global pandemic is overdue.

IMPACT OF A PANDEMIC ON ONTARIO AND THUNDER BAY

Based on the Assumptions in Table 1., experts predict that when the pandemic occurs "...Ontario will see between 1.8 and 4.2 million outpatient visits, between 7,500 and 65,000 hospitalizations, and between 2,900 and 19,700 deaths from influenza." (*Ontario Health Pandemic Influenza Plan [OHPIP], June 2005*)

TABLE 1. PLANNING ASSUMPTION EXCERPTS FROM THE ONTARIO HEALTH PLAN FOR AN INFLUENZA PANDEMIC

- Ontario will have little lead time between when a pandemic is first declared by the WHO and when it spreads to the province.
- It will spread in two or more waves either in the same or successive years
- A second wave may occur within 3 to 9 months of the initial outbreak wave and may cause more serious illnesses and death than the first.
- Because the population will have had limited prior exposure to the virus, most people will be susceptible.
- There will be an attack rate of 35% during the first wave.
- About 45% of people who acquire influenza will not require medical care, but they will need health information and advice; about 53% will require outpatient or primary care (e.g., treatment by a family physician); and approximately 1.5 to 2% will require hospitalization.
- A vaccine will not be available for at least four to five months after the seed strain is identified, which means it will not be available in time for the first wave of illness but may be available in time to mitigate the impact of the second wave.
- Once available, the vaccine will be in short supply and high demand.
- When vaccine becomes available, approximately 2 to 4 million doses will have to be administered per month until Ontario's population is fully immunized.
- Because Ontario will not have a large enough initial supply of either antivirals or vaccine for the entire population, the province will have to set priorities for who receives limited vaccine and antiviral drugs.
- During a pandemic, the availability of public health and health care workers could be reduced by up to one-third due to illness, concern about disease transmission in the workplace, and care-giving responsibilities.

(*OHPIP, p.14-16*)

In the Thunder Bay District, the impact would be as follows given a 15% and 35% attack rate:

TABLE 2. IMPACT OF PANDEMIC ON ONTARIO & THUNDER BAY

	Ontario 15-35% Attack Rate	Thunder Bay District 15-35% Attack Rate
Deaths	5,000 – 12,000	70 – 160
Hospitalized	22,000 – 52,000	290 – 680
Ill and needing out-patient care	1 million – 2.3 million	12,800 – 29,800
Ill but not needing professional care	800,000 – 1.9 million	10,400 – 24,700
Total affected:	1.8 million – 4.2 million	24,000 – 55,000

PREPAREDNESS TO REDUCE THE IMPACT

The Ontario Pandemic Plan

With a stance that contingency planning can reduce the rates of morbidity and mortality from a pandemic, in June 2005, the Ontario government released its most current version of the Ontario Health Pandemic Influenza Plan (Ontario Plan). The Ontario Plan provides an overview of the national, provincial, and municipal responsibilities in preparing for, responding to, and recovering from an influenza epidemic.

Through a coordinated and collaborative response to a pandemic, the goals of the Ontario Plan are:

- *to minimize serious illness and overall deaths through appropriate management of Ontario's health care system and*
- *to minimize societal disruption in Ontario as a result of an influenza pandemic.*

(OHPIP, p.13)

THE ROLE OF THE MUNICIPAL GOVERNMENT & PUBLIC HEALTH

Coordination of Local Response

In addition to each health unit developing a pandemic plan which outlines the community's response to a pandemic outbreak, the Ontario Plan indicates municipalities and health units must ensure the coordination of a local response as outlined in Table 3.

**TABLE 3. MUNICIPAL AND PUBLIC HEALTH AUTHORITY RESPONSIBILITIES
IN THE EVENT OF A PANDEMIC INFLUENZA OUTBREAK**

- ➔ *maintaining a local surveillance e-system, reporting clusters of febrile illness/influenza-like illness (FI/ILI), and investigating outbreaks*
- ➔ *developing plans to provide mass immunization and distribute vaccines, antiviral drugs and medical supplies*
- ➔ *liaising with local partners (e.g., emergency responders, hospitals, community services, mortuary services, schools, workplaces)*
- ➔ *assessing the capacity of local health services, including health human resources, and helping health services identify additional/alternative resources*
- ➔ *defining clear responsibilities for communication at the local and facility level during a pandemic*
- ➔ *collaborating with the provincial government to deliver public information/education programs*
- ➔ *delivering mass vaccination/prophylaxis program*

(OHPIP, p.6)

THE THUNDER BAY PLAN ...

DEVELOPMENT OF THE THUNDER BAY PLAN

In conjunction with the Ontario Plan's expressed need for a municipal-level response to a pandemic to reach provincial goals, the Thunder Bay District Health Unit called together key community partners in spring 2004 to participate on a Steering Committee to develop a local approach to pandemic planning.

Community partners participating on the Steering Committee included designates from the municipal, health and emergency response sectors, including the:

- Canadian Red Cross (Local Branch)
- City of Thunder Bay
- Coroner's Office
- Emergency Measures Organization
- First Nations and Inuit Health Branch
- Ministry of Health and Long Term Care the Community Care Access Centre
- Public Health Lab
- St. Joseph's Care Group
- Thunder Bay District Health Unit (with the Medical Officer of Health acting as Steering Committee Chair)
- Thunder Bay Regional Health Sciences Centre

The Steering Committee determined its purpose was to:

- *develop a Pandemic Influenza Contingency Plan as part of an Emergency Response Plan, to protect the life, health and safety of the citizens of the District of Thunder Bay in the event of an influenza pandemic and to ensure that the plan dovetails with federal and provincial plans (Steering Committee Minutes, February 2004).*

GOALS OF THE THUNDER BAY PLAN

The Goal of the local plan is:

- *to minimize serious illness and overall deaths in the City of Thunder Bay by appropriately planning for, responding to and recovering from an influenza pandemic.*
- *the Thunder Bay & Area Pandemic Influenza Plan (Thunder Bay Plan) development would also address the municipal and public health authority responsibilities outlined in the Ontario Plan (Table 3), as well as any unique local needs.*

OBJECTIVES OF LOCAL PLAN

The following objectives are outlined as part of the Thunder Bay Pandemic Influenza Contingency Plan:

1. To enhance surveillance systems for influenza in the District of Thunder Bay.
2. To develop a comprehensive influenza pandemic communications plan at the district level.
3. To develop operational procedures for vaccine and antiviral delivery and administration.
4. To develop operational procedures for medical care.
5. To develop operational procedures for emergency measures specific to an outbreak situation.

The Thunder Bay Plan would act as the “community’s” plan, with appropriate and required community organizations assuming responsibility for the development of agency-specific measures to support the Thunder Bay Plan and coincide with provincial and local initiatives.

District communities may use the Thunder Bay Plan as a template for creating local plans which will incorporate existing response systems utilizing the resources and process available and in place within their communities.

APPROACH TO THE THUNDER BAY PLAN ...

ETHICAL FRAMEWORK

The Thunder Bay Plan will follow the ethical framework outlined in the Ontario Plan (OHPIP, June 2005, p. 9-12) (see Appendix A). The decision-making process and ethical values of this ethical framework are outlined in the following table (see Table 4).

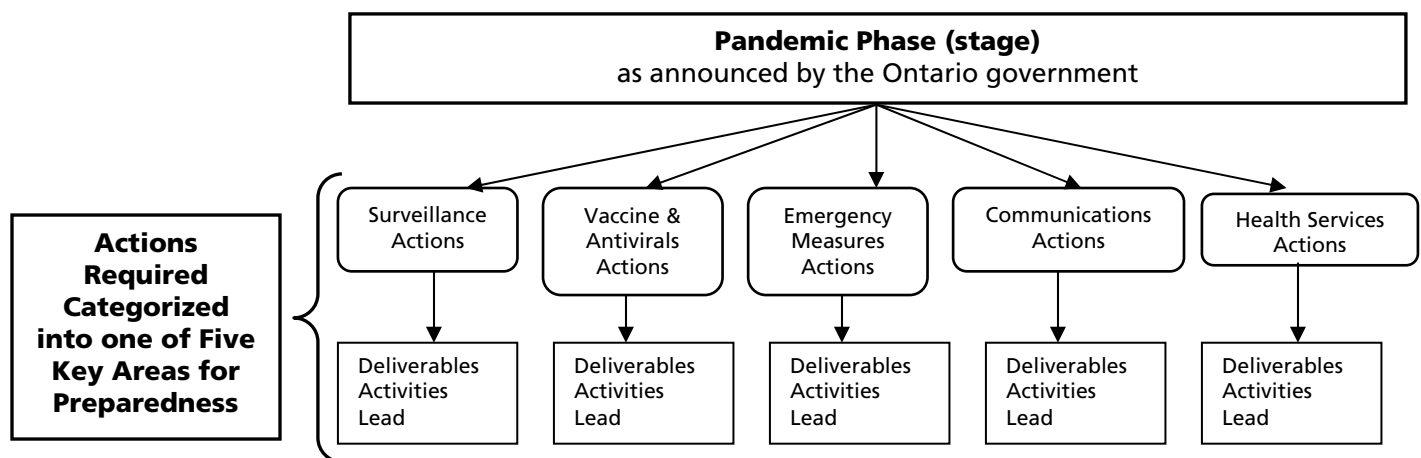
TABLE 4. OUTLINE OF THE ETHICAL FRAMEWORK FOR DECISION MAKING DURING AN INFLUENZA OUTBREAK	
DECISION-MAKING PROCESSES	CORE ETHICAL VALUES
<ul style="list-style-type: none"> • open and transparent • reasonable • inclusive • responsive • accountable 	<ul style="list-style-type: none"> • individual liberty • protection of the public from harm • proportionality • privacy • equity • duty to provide care • reciprocity • trust • solidarity • stewardship

STRUCTURE OF PLAN: ACTIONS BY PANDEMIC PHASE

Consistent with the Ontario Plan, the Thunder Bay Plan was structured to present the chronological actions that must take place to adequately prepare for a pandemic influenza outbreak.

The plan is divided into **pandemic phases** (or stages). Within each phase, the **actions required are categorized in one of five key areas for preparedness**. All actions within each area of preparedness are further broken down to corresponding deliverables, activities and lead (organization responsible for ensuring the activity is completed). See Figure 1.

FIGURE 1. STRUCTURE OF THE THUNDER BAY PLAN



DESCRIPTION OF PANDEMIC PHASES

The actions required under each of the five key areas are presented chronologically by stage or “phase” of the pandemic. These phases, adopted from the World Health Organization (WHO), and used by the Canadian and Ontario Plans are as follows (Table 5.):

<p align="center">TABLE 5. PANDEMIC PHASES PUBLISHED BY WHO, 2005 <i>(WHO global influenza preparedness plan. The role of WHO and recommendations for national measures before and during pandemics, World Health Organization, 2005.)</i></p>	
<p>INTERPANDEMIC PERIOD <u>PHASE 1</u></p>	<p>No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the *risk of human infection or disease is considered to be low.</p>
<p>INTERPANDEMIC PERIOD <u>PHASE 2</u></p>	<p>No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial *risk of human disease.</p>
<p>PANDEMIC ALERT PERIOD <u>PHASE 3</u></p>	<p>Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.</p>
<p><u>PHASE 4</u></p>	<p>Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to **humans.</p>
<p><u>PHASE 5</u></p>	<p>Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic **risk).</p>
<p>PANDEMIC PERIOD <u>PHASE 6</u></p>	<p>Pandemic phase increased and sustained transmission in general **population.</p>
<p>POSTPANDEMIC PERIOD</p>	<p>Return to Interpandemic period.</p>

* 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 would be 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; other information from the viral genome; and/or other scientific information.

** 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); other information from the viral genome; and/or other scientific information.

DESCRIPTION OF 5 KEY ACTION AREAS FOR PREPAREDNESS

Planning must occur within health care systems and processes at a local-level to ensure responses are appropriate and effective in minimizing the impact of disease on the community. The systems and processes which require preparedness for an influenza pandemic have been identified as the following five key areas (Table 6):

TABLE 6. DESCRIPTION OF ACTIVITIES PLANNED BY THE LOCAL PUBLIC HEALTH UNIT, WITHIN FIVE KEY AREAS OF PREPAREDNESS	
SURVEILLANCE	<i>Improve existing systems or creating new ones to effectively monitor the course of ILI (influenza-like illness) and communicate findings.</i>
VACCINE & ANTIVIRALS	<i>Develop plans to acquire, store, distribute vaccines and antivirals to priority groups (as recommended by provincial government) using existing systems or creating new ones. Security of vaccine/antivirals and tracking of immunization also considered. Monitor events associated with vaccine/antivirals</i>
HEALTH SERVICES	<i>Develop plans to stockpile, store, distribute medical supplies. Create coordinated response systems for health care services considering essential services, human resources available, alternative care sites, training for health care workers.</i>
EMERGENCY RESPONSE	<i>Coordinate pandemic plan systems with emergency response systems, to include improving communications between both systems, determining human resources available, identifying clear roles/responsibilities, developing plans to maintain essential services.</i>
COMMUNICATIONS	<i>Establish communication systems to enhance information exchange between pandemic planning participants, facilities, community groups, the media and the general public. Create mechanisms to expedite the flow of clear, accurate information to all groups.</i>

For each of the five key areas for preparedness, subcommittees were formed with appropriate representation from the community to determine that actions formulated within each are comprehensive, ensuring existing systems and mechanisms are utilized. Involvement of stakeholders in the planning of actions also allowed the five subcommittees to recognize planning gaps, overlaps and devise new, alternative or more efficient measures to meet the prescribed needs.

Each preparedness area is presented in a table, the local/municipal-level responsibilities and actions are indicated in a chart outlining the:

- deliverables,
- the (specific) activities to be performed to achieve the deliverables, and
- the lead agency responsible for ensuring responsibilities/actions are completed.

CONFIRMATION OF PHASES

According to the adopted WHO phases all countries are in the Interpandemic Period (Phase 1) at any given moment until the progression to subsequent phases is announced by WHO.

Upon the progression of a pandemic, the federal and provincial governments, in close consultation with WHO, will announce the pandemic phase for the country and province, respectively, when appropriate to do so.

HEIGHTENED RESPONSE AT PHASE 5 AND BEYOND

The pandemic plan is a “living” document – always activated in Phase 1 at any given moment unless the WHO has declared the progression of an influenza strain beyond that phase.

<p>PANDEMIC PHASES 5 & 6 (WHO, 2005)</p> <p>PANDEMIC ALERT PERIOD: PHASE 5 <i>Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).</i></p> <p>PANDEMIC PERIOD: PHASE 6 <i>Pandemic phase increased and sustained transmission in general population.</i></p>
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As the pandemic potential progresses from the early phases of the Pandemic Alert Period to the late phase - Phase 5 - where a substantial pandemic risk exists, the transition into the Pandemic Period, Phase 6, is expected to occur rapidly. See sidebar for description of Phases 5 and 6.

At Phase 5 the pandemic response intensity is heightened and alerts are issued.

WHEN A PANDEMIC ALERT IS ISSUED FOR COUNTY, PROVINCE OR DISTRICT

The communication process once a pandemic moves into Phase 5 is expected as follows for the province (Figure 2) and for a local outbreak (Figure 3)

FIGURE 2. FEDERAL/PROVINCIAL ACTIVATION PROCESS AT PHASE 5

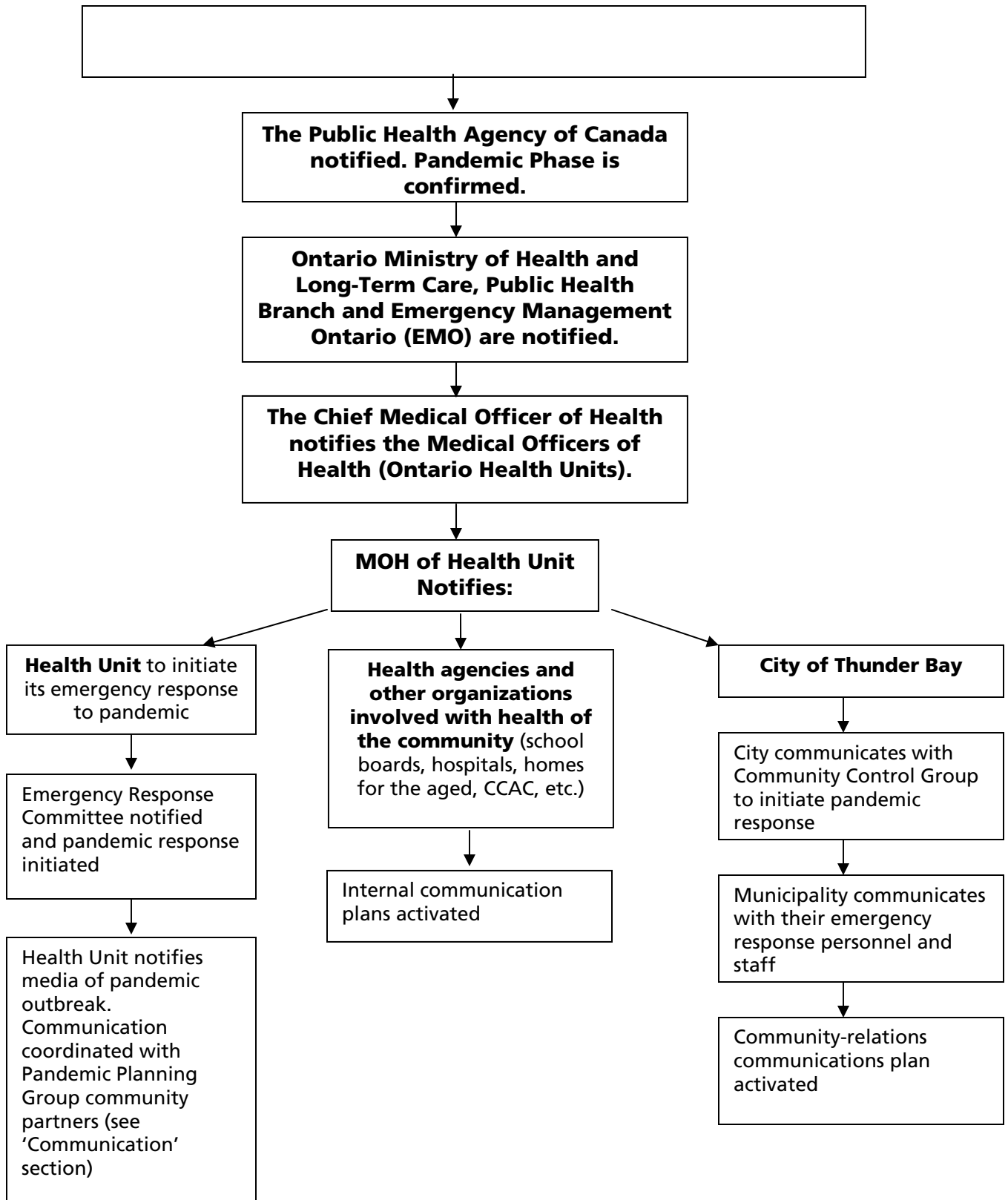
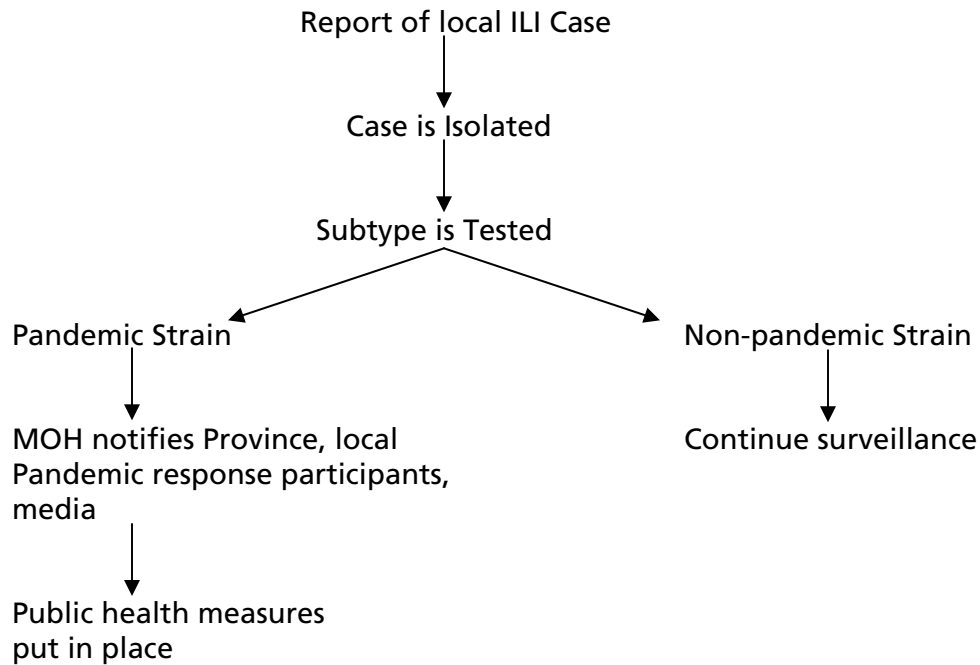


FIGURE 3. LOCAL-LEVEL ACTIVATION PROCESS AT PHASE 5



Legislation to Facilitate Pandemic Management for Public Health

Legislation is currently in place which will provide pandemic managers, health care agencies, emergency response agencies and those organizations within municipalities involved in the safety and health of the general public authority to carry out pandemic plans and access required resources and information. This legislation includes:

- The Emergency Management Act
- Health Protection and Promotion Act
- Ambulance Act
- Public Hospitals Act
- Private Hospitals Act
- Nursing Homes Act
- Charitable Institutions Act
- Homes for the Aged and Rest Homes Act,
- Health Facilities Special Orders Act
- Long-Term Care Act
- Community Care Access Corporations Act
- Regulated Health Professions Act
- Medicine Act, 1991
- Nursing Act, 1991
- Medical Laboratory Technology Act, 1991
- Health Care and Residential Facilities Regulation
- Occupational Health and Safety Act

For a detailed description, please see Appendix 2 of the Ontario Plan

