Guide to Developing a Workplace Health Plan for an Influenza Pandemic

Ontario Ministry of Health and Long-Term Care

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Table of Contents

Figures and Tables

Note
The characteristics of the workplace will vary from business to business and across different types of organizations. These unique circumstances need to be taken into consideration when adapting this guide to your operations.

This document is intended for medium and large size organizations. A guide for small business will be forth coming.

1. Background

1.1 Aims and Objectives of the Guide

This guide will help medium and large size organizations in developing a workplace health plan for an influenza pandemic that will help to prepare for and manage the impact of an influenza pandemic on employees and business operations. It sets out four key objectives for a workplace pandemic plan:

- Communication: Opening lines of communication with employees, clients and external suppliers
- Containment: Containing the disease by reducing the spread in the workplace
- Continuity – Maintaining continuity of critical services
- Personal Preparedness – Preparing individuals for a pandemic.

Organizations identify other objectives based on the nature of their operations. These objectives should be clearly articulated and addressed when initiating planning efforts.

1.2 About Influenza and Influenza Pandemics

About Influenza

Influenza is a contagious respiratory illness caused by a group of viruses: Influenza Types A, B and C. Most seasonal influenza epidemics are caused by Types A and B; Type C rarely causes human illness.

Influenza can cause mild to severe illness. Influenza usually starts suddenly. Common symptoms include: fever (usually high, lasting 3 to 4 days), headache (often severe), aches and pains (often severe), fatigue and weakness (can last 2 to 3 weeks), extreme exhaustion (very common at the start), stuffy nose, sneezing, sore throat, chest discomfort and cough, and nausea, vomiting and diarrhoea (in children).

A lot of different illnesses, including the common cold, can have similar symptoms. While most healthy people recover from influenza without complications, some people – such as older people, young children, and people with certain health conditions – are at higher risk for serious complications from influenza. Some of the complications caused by influenza include: bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes. Children and adults may develop sinus problems and ear infections.
A highly infectious disease, influenza is directly transmitted from person to person primarily when people infected with influenza cough or sneeze, and droplets of their respiratory secretions come into contact with the mucous membranes of the mouth, nose and possibly eyes of another person (i.e., droplet spread).

Because the virus in droplets can survive for 24 to 48 hours on hard non-porous surfaces, for 8 to 12 hours on cloth, paper and tissue, and for 5 minutes on hands, it can also be transmitted indirectly when people touch contaminated hands, surfaces and objects (i.e., contact spread).

The incubation period for influenza is from 1 to 3 days. People with influenza are infectious and able to transmit the virus for up to 24 hours before symptoms appear. Adults are infectious for 3 to 5 days after symptoms appear while children are infectious for up to 7 days after symptoms appear.

About Influenza Pandemics

Strains of influenza are circulating throughout the world all the time. When does a strain cause a pandemic? Only

influenza A viruses are associated with pandemics. Influenza pandemics arise when all four of the following occur:

- a novel influenza A virus emerges
- the new virus can spread efficiently from human to human
- the new virus causes serious illness and death
- the population has little or no immunity to the new virus.

The WHO (2005) suggests two mechanisms for the emergence of influenza viruses that cause pandemics:

1. Genetic reassortment, which occurs when two different viruses infect the same cell and exchange some gene segments. If the new virus can infect humans, cause serious disease, and spread easily from person to person, it will ignite a pandemic
2. Adaptive mutation or stepwise changes in a virus, which occurs during sequential infection of humans or other mammals. The virus gradually changes to become more transmissible among humans.

The majority of new influenza strains emerge in Southeast Asia where human populations have close interactions with pigs and domestic fowl due to their agrarian lifestyle. The probability of a new strain emerging in North America is relatively low.

The attack rate describes the impact over the entire duration of the pandemic, that is: the proportion of the population that will be infected over the multiple waves of influenza that usually occur during a pandemic. (Note: a 35% attack rate means that, over the entire course of a pandemic, about 35% of the population would have influenza severe enough to take a half day off work.)

About 45% of those who do fall ill will only need self-care and health information, and will not require formal medical care; the remaining people who acquire influenza will need some form of care.

Depending on the severity of the pandemic, 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. (Note: these estimates do not take into account the potential impact of antiviral drugs or an effective vaccine.)

1.3 Context for Planning

Phases of an Influenza Pandemic

The World Health Organization (WHO) has identified 6 phases of an influenza pandemic.

The pandemic phases reflect recent developments, including the risk to human health posed by infection in animals and the benefit of focusing more attention on the early phases when intervention may contain or delay the spread of a new influenza virus, including intervention by employers. Canada and Ontario are using the WHO pandemic periods and phases.

Table 1 (below) identifies and describes the pandemic periods and phases.

Table 1 WHO Pandemic Periods and Phases

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* 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 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.
	Phase 5	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).
Pandemic Period	Phase 6	Increased and sustained transmission in general population.
Postpandemic Period		Return to interpandemic period

Source: World Health Organization, 2005.

* The distinction between phase 1 and phase 2 is based on the risk of human infection or disease from circulating strains in animals.
** The distinction between phase 3, phase 4 and phase 5 is based on the risk of a pandemic.

Planning Assumptions – For Business

- 20-60% of working population unable/unwilling to work for 2 to 4 weeks at the height of a severe pandemic wave. Each wave will last approximately 8 weeks
- There will be significant loss of people and specific expertise/skill sets **within your organization**
- There will be significant loss of people and specific expertise/skill sets **within other organizations and infrastructure that you depend on** (i.e., suppliers, contractors, IT providers, government agencies, transportation)
- Employee and customer health and safety (i.e., personal health and protection) will have to be a priority in order to mitigate the impact on your organization
- Demand for goods and services will be affected (either severe increase or decrease, depending on good or service).
- Organizations may have resources that could contribute to their community's emergency response efforts.

Planning Assumptions – General

The challenge of planning for an influenza pandemic is that the exact characteristics of the virus will not be known until the pandemic occurs. However, historical experience and current scientific and modelling activities tells us that a pandemic will have serious health effects in the general population and will cause significant social and economic disruptions as well as security concerns.

Table 2 outlines the assumptions used by Ontario health authorities in their influenza pandemic planning. Organizations may need to make additional assumptions to those listed below in order to coordinate preparedness activities for their particular operations.

Table 2 Planning Assumptions - General

How will a pandemic begin and how long will it last?	➢ A pandemic will be due to a new subtype of influenza A. ➢ A new strain is most likely to emerge in southeast Asia. ➢ Ontario will have little lead time between when a pandemic is first declared by the WHO and when it spreads to the province. ➢ An influenza pandemic usually spreads in two or more waves, A second wave may occur within three to nine months after 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 will be approximately eight weeks.
How will people be affected?	➢ Because the population will have had limited prior exposure to the virus, most people will be susceptible. Children and otherwise healthy adults may be at greater risk because elderly people 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. ➢ Individuals who recover from illness with the pandemic strain will likely be immune to infection from that strain.
Can my organization depend on vaccine or antivirals?	➢ Vaccines provide protection against the virus ➢ 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 initially in short supply and high demand. The vaccine will be produced in Canada and will eventually provide vaccine to all residents. Vaccines manufactured in other countries are likely to be embargoed during a pandemic. ➢ The efficacy of antivirals against the pandemic strain is unknown but, when antivirals are used to treat seasonal influenza, they have been shown to shorten the length of time people are ill, ameliorate symptoms and reduce hospitalizations. Antivirals can also prevent infection with the virus as long as the antiviral is taken ➢ The only specific treatment option for influenza during a pandemic will be antiviral drugs, which must be started within 48 hours of the onset of symptoms. ➢ 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.
How will the health care system be impacted?	➢ 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. ➢ Hospital capacity is already limited and could be further reduced because of staff illness.

2. Communication

2.1 To the business from external sources regarding pandemic phases

During an influenza pandemic, organizations can obtain information from a number of government and health sources. This section describes the type of sources and they type of information they will provide:

International Agencies:
Designation of global pandemic phases is made by the Director General of the World Health Organization (WHO).
http://www.who.int/csr/disease/influenza/pandemic/en/

Federal Agencies:
Public Health Agency of Canada will report on pandemic status within Canada.
www.influenza.gc.ca

Foreign Affairs Canada provides information on travel advice, travel restrictions and other matters related to international travel.
http://www.voyage.gc.ca/main/sos/ci/cur-en.asp?txt_ID=637

Provincial Agencies:
Ontario's Chief Medical Officer of Health will provide information on pandemic status within Ontario via the Ontario Ministry of Health and Long-Term Care (MOHLTC).

The MOHLTC leads Ontario's planning and response to an influenza pandemic. The ministry provides information based on the advice of the Scientific Response Team (SRT) and specialists in emergency management. This information can be accessed using a variety of mechanisms:

MOHLTC InfoLine:	1-800-268-1154
MOHLTC Employers Pandemic Hotline:	1-866-331-0339
MOHLTC On-line:	www.health.gov.on.ca

Regular updates on pandemic activity will be provided on the www.health.gov.on.ca website and through the media

Information Cycle

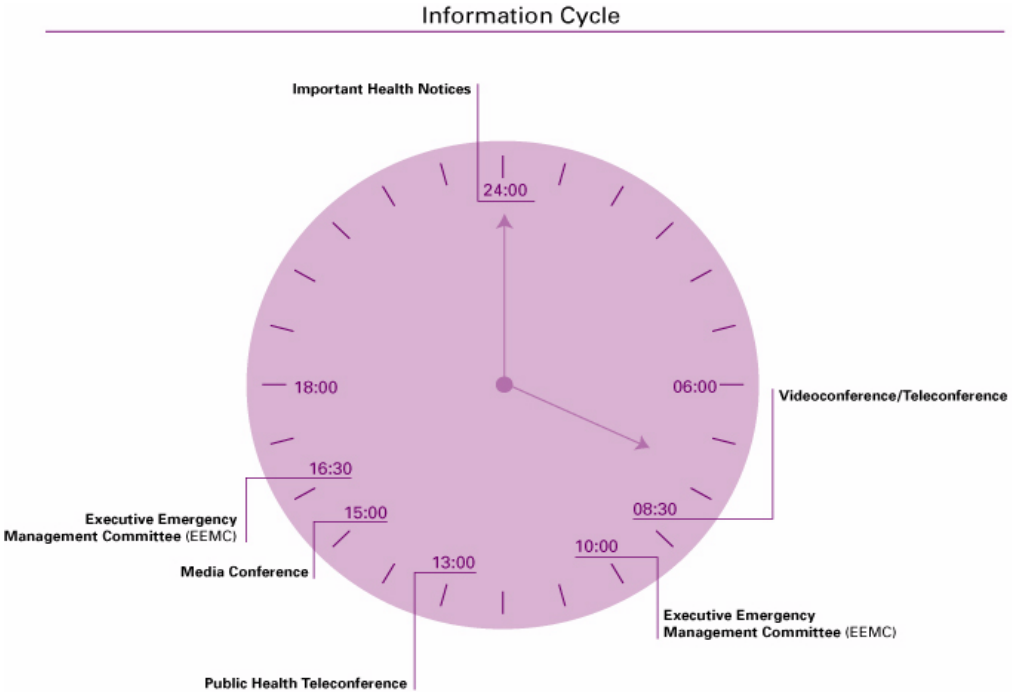
The MOHLTC has developed an information cycle to be used in a pandemic to keep the **health care sector** informed about significant events and timely recommendations.

MOHLTC is working with Emergency Management Ontario to include business sector associations in the information cycle to be used during an influenza pandemic.

The information cycle will include a standard time, teleconference number, agenda and disciplined procedure to ensure consistent information is provided in a streamlined manner during a pandemic. Monitor www.health.gov.on.ca for updates relating to this initiative.

An illustration of the information cycle is provided below:

Figure 1 MOHLTC Information Cycle



2.2 Within the business to staff, clients and stakeholders

Role of the Crisis Management Team
Notification of a change in the pandemic phase and/or escalated pandemic-related activity in Ontario will come from the Chief Medical Officer of Health via the media and on www.health.gov.on.ca.

The issue should be escalated to the Chief Executive Officer/equivalent, or delegates of an organization for a decision to activate business continuity or health emergency management plans.

The decision should be made in conjunction with the chief health and safety body/individual within the organization in consultation with the Joint Health and Safety Committee.

If a crisis management team is not already established, one should be struck with representatives from health and safety department, the Joint Health and Safety Committee (or Health and Safety Representative where appropriate) human resources, facilities, external affairs/public relations and appropriate business units.

Where possible, the crisis management team should meet virtually (by teleconference, videoconference or other means) to avoid the risk of spreading infection among the team.

The crisis management team should establish an information/ communication cycle (similar to above) to receive information from government agencies and convey it to employees, clients and external partners (i.e., suppliers, contractors, etc).

Health and safety representatives should coordinate health-related communications related to the pandemic for the crisis management team.

Communication with Employees

With a threat as severe as an influenza pandemic, employees will be anxious and uncertain. This may contribute to increased absenteeism for reasons other than illness. Open and consistent communication with staff is essential to ensure continuity of critical operations throughout the course of a pandemic.

Suggested ways to communicate with staff in this environment include:

- Communicate the threat of an influenza pandemic in an accurate and objective manner and identify measures that your organization is planning to manage the impact. MOHLTC has developed the brochure "What you should know about a flu pandemic" to assist you with communication. This can be downloaded at www.health.gov.on.ca

- Discuss with staff the possible health and safety issues, the potential to curtail non-critical operations, and the options for employee leaves if they are ill or need to perform care giving roles.

- If necessary, target and tailor communications to groups in your organization who may be affected differently across the, e.g., management roles, front-line service providers, non-critical staff, etc.

- When activating your plan, provide clear, timely and pro-active communications to staff, including how your organization is handling the situation. See information cycle above.

- Try to limit communication activities that require close contact among employees (e.g., face-to-face meetings). Use alternatives such as email, internet/intranet, mass fax, telephone, video/teleconferencing and posters.

- Establish a phone line and/or designated unit to respond to employee inquiries about how your organization is preparing for an influenza pandemic and/or how it is responding.

Communication with Clients and Stakeholders

Here are some best practices to increase awareness among stakeholder and client groups about what your organization is doing to prepare for a pandemic:

- Where appropriate, tell your clients what your organization is doing to prepare for an influenza pandemic and how your organization is going to respond.

- Communicate clearly if your organization will be operating under degraded levels of service and the types of services clients can expect during the influenza pandemic.

- For front-line service delivery, clearly identify the precautions your organization has taken to limit disease transmission (see section on Containment).

- Encourage external suppliers to develop strategies for service continuity during an influenza pandemic. Ensure that they communicate essential information to your organization and that your organization communicates essential information to them.

- Have back-up communication mechanisms in place, should primary communication vehicles (such as phone and email) be disrupted.

3. Containment Activities

3.1 Reduce Risk of Infected Persons Entering the Site

Identify managers or others with responsibility for containment and other influenza-related activities. Ensure that a list of these individuals is posted for staff to access easily.

Designated managers, in conjunction with appropriate staff, should do the following:

- In consultation with the Joint Health and Safety Committee or equivalent, develop and implement infection control/health and safety measures, procedures, training, etc
- Post notices at entry points to appropriate facilities, advising staff and visitors not to enter if they have symptoms of influenza. **See Appendix 1**
- Post infection control notices around the workplace (e.g. hand hygiene protocols, cough etiquette, etc). **See Appendix 2** for specific protocols – The ones you use will vary depending on the work environment
- Ensure proper healthy workplace practices are executed on a scheduled, on-going basis
- Ensure the organization has adequate supplies of hand hygiene products, cleaning supplies and other protective equipment, as appropriate.

3.2 Social Distancing

Social distancing is a strategy used to limit the frequency of close contact and interaction between people, to limit public gatherings and to encourage people to keep at least 1 metre or an arms-length away from each other.

If social distancing would be an appropriate way to reduce the spread of influenza in your work environment, designated managers and staff should consider the following:

- Post information on social distancing so that all staff, clients and stakeholders are aware of why such a strategy is being implemented and how it can be effective.
- Distribute staff and their services across different work locations in order to limit contact and potential exposure to the influenza virus.
- Organize shift changes to allow for a time interval between when one shift ends and another begins. This will limit contact of staff during shift changes.
- To the extent possible, avoid meeting people face-to-face. Use the telephone, teleconference/videoconference, internet and email instead.
- Avoid any unnecessary travel.
- If possible, arrange for employees to work from home or work flexible hours. This can both limit close contact and allow for care giving roles if family members become ill.
- Avoid public transport or avoid rush times when public transport is most used.
- If person-to-person contacts/meetings are unavoidable, ensure people stay 1 metre apart, in order to avoid virus transmission.
- Encourage staff to avoid classes, training exercises or other activities during or after work that require close contact with other people.

For front-line service staff, provide for a physical barrier between server and client, if service is provided within 1 metre.

3.3 Cleaning

During an influenza pandemic, workplaces should focus on office, workspace and facility cleaning. To limit the spread of the influenza virus, organizations should consistently implement the following cleaning activities:

- Inspect and replace filters of air conditioning systems regularly. If filters must be reused, clean with a disinfectant in the concentration that the manufacturer recommends
- Clean telephone sets for each phone, especially in common areas, after each shift
- Regularly clean all common areas, counters, desk tops, door handles, railings, sinks, washroom utilities, etc. daily or more frequently as necessary.

For standard workplace settings, such as office facilities, cleaning can be accomplished with water, detergent and mechanical action (such as scrubbing) with a sufficient amount of contact time. This will reduce or eliminate reservoirs of potential pathogenic organisms.

Although detergents are adequate for most work environments, some facilities may require enhanced cleaning practices.

For enhanced surface cleaning, the solution recommended for use is as follows:

- Diluted household bleach (1:50 bleach to tap water ratio) with 1000 parts per million (PPM) of useable bleach. [1] One can also consider using any disinfectant that is mixed in accordance with manufacturers guidelines.

[1] Ontario. Provincial Infectious Diseases Advisory Committee. *Best Practices for Cleaning, Disinfection and Sterilization*. (April 30, 2006)p62.

The following precautions should be taken when using the above for enhanced surface cleaning:

- Should be used in well-ventilated areas
- Protective clothing should be warn while using and handling diluted bleach
- Do not mix with strong acids to avoid release of chlorine gas
- Can be corrosive to metals

3.4 Personal Hygiene

Basic personal hygiene measures should be reinforced and people should be encouraged to practice them to minimize potential influenza transmission:

- Cover nose and mouth when sneezing and coughing, preferably with a disposable single tissue
- Immediately dispose of used tissues
- Adopt good hand hygiene practices, particularly after coughing, sneezing or using tissues (See **Appendix 1** and **2**)
- Keep hands away from the mucous membranes of the eyes, mouth and nose.

Hand hygiene is the single most important measure to reduce the risks of transmitting infection from one person to another.

Hand washing with soap and water and/or alcohol-based hand sanitizer should be performed regularly.

Hand washing and drying should always be done after coughing, sneezing or handling used tissues or after touching objects, materials or hard surfaces that may have been contaminated by someone else with the infectious illness.

See **Appendix 3** for hand hygiene protocols.

3.5 Managing Cases at Work

Organizations should develop a strategy for managing employees with influenza who come to work. The strategy must consider both the imperative of limiting the spread of influenza while at the same time treating individuals with respect.

The health and safety representative on the Crisis Management Team should, in consultation with the Joint Health and Safety Committee and based on documents released by MOHLTC, develop a **screening tool:** several questions to be answered by staff and visitors who are entering the workplace. *Please note that the screening tool may change as new information regarding the virus becomes available. Any changes will be posted on the MOHLTC website*. Screening questions should consider:

- the symptoms of the pandemic influenza strain
- contact with those already affected
- travel history
- other considerations, as necessary

Designated managers should be assigned follow-up duties based on the results of the screening tool, such as:

- instructing employees to go home immediately and follow the instructions provided by MOHLTC regarding those with suspected influenza.

- tracking the number of employees absent due to influenza.

- keeping in contact with staff who have influenza.

- taking other actions, as necessary.

4. Continuity Planning

Continuity planning for an influenza pandemic should address the following question: **how does the organization maintain its critical functions during a pandemic?** To answer this question, organizations should consider the questions posed below:

4.1 What functions are critical to the on-going operations of the organization?

To answer this question, organizations should:

- Complete an inventory of critical services and functions, detailing physical and human resource dependencies and skill set requirements.
- Determine if there are sufficient back-ups and redundancies in place to ensure critical functions can continue through extensive absenteeism.
- Identify available labour pools with appropriate skill sets to draw upon to supplement critical staff who become ill.
- Discuss the continuity plans of the suppliers and vendors that your organization relies on. Do they have a strategy in place? If so, what is it?

4.2 What are the specific impacts on the organization?

Based on the planning assumptions noted in Section 1.3, an influenza pandemic may result in: large-scale employee absenteeism, potential reduction in demand for some goods and services and curtailed services of suppliers and vendors.

These potential impacts will pose different threats to different organizations, depending on the nature of their operations, their reliance on personal interaction and specialized skill sets and other factors.

It is therefore necessary to take a close look at what your organization does, what are its principle dependencies and identify the specific impacts to the organization that a pandemic may bring. For example:

If your organization relies on front-line service delivery, some possible impacts could include:
- reluctance of clients to enter office locations
- reluctance of staff to provide front-line service
- fewer front-line service providers due to illness or care giving responsibilities.

If your organization depends heavily on external suppliers and vendors, some impacts could include:
- Curtailed levels of service in the provision of supplies;
- Reluctance of external suppliers/service providers to enter the workplace;
- Limited supply of a particular good or service due to travel restrictions.

4.3 What are the strategies your organization can put in place to mitigate the impacts of a pandemic?

Mitigation strategies that are developed for your organization should address the specific impacts that a pandemic will have on your organization.

Suggested mitigation strategies are discussed is Section 2 and 3 of this Guide. Some of these are highlighted below:

- Open communication with government agencies, staff, clients and stakeholders;
- In consultation with the Joint Health and Safety Committee develop and

implement effective workplace health and infection control policies:

- Social distancing
- Regular cleaning of office space
- Promotion of personal health and hygiene among staff
- Policies and procedures for managing cases at work during a pandemic.

Note on the use of masks: There is currently no evidence to suggest that the use of masks in general public settings will be protective when the virus is circulating widely in the community. Organizations themselves must make decisions regarding the use of masks based on the nature of their operations, in addition to the logistics around effective use, stock rotation and the impact in the work setting. If organizations decide the use of masks is appropriate, the current recommendation outlined in the Ontario Health Plan for an Influenza Pandemic (OHPIP 2005) and by numerous other jurisdictions for health care workers is a surgical mask.

4.4 What can organizations do to recover from a pandemic?

Specific recovery strategies are difficult to foresee without knowing the precise impact that a pandemic will have on an organization and society as a whole. However, there are some best practices organizations can implement throughout the course of a pandemic that will assist them in the recovery phase.

Open, honest and on-going communication with staff, clients and stakeholders can build and sustain a trusting relationship to ensure your organization has the support it needs to return to normal once the pandemic subsides.

Short, medium and long-term planning will assist in managing anticipated and unforeseen issues that emerge before, during and after a pandemic. It will also enable organizations to be knowledgeable of the internal and external circumstances of the pandemic and be proactive in the decisions taken by senior management.

Tracking significant issues and lessons learned throughout the course of a pandemic will help organizations prepare for and respond to the successive waves in which a pandemic will occur (see Section 1.3). This will also assist in the short, medium and long-term planning suggested above.

5. Personal Preparedness

Preparedness for all emergencies begins with individuals and families. To the extent possible, organizations should promote personal emergency preparedness within the workplace. This can bring benefit to individuals, their families and loved ones and to the organization.

Personal emergency preparedness can take a variety of forms, ranging from making sure there is back-up cash, medications and care providers if primary means are not available to something simple enough as having a current first-aid kit in the home and in the car.

Appendix 4 includes a personal preparedness checklist for individuals and families. Additional copies can be found at: www.health.gov.on.ca

Acknowledgements

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