



# British Columbia Pandemic Influenza Preparedness Plan

Managing Pandemic Influenza  
A Guide for B.C. Industry and Commerce

February 2006 Edition

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## Foreword

With the threat of pandemic influenza so prominent in today's news, there can hardly be a single business owner who doesn't wonder about how they would cope with such an event. Widespread absenteeism, loss of suppliers, building closures, and long-term changes to the marketplace are potential issues that organizations should address in any business continuity plan to address pandemic influenza.

B.C. industry and commerce can play a key role in helping to mitigate the economic and social impacts of an influenza pandemic. Although there are many unanswered questions about a potential pandemic, such as what proportion of the workforce would become ill and how long illness would last, we now possess more useful knowledge and medical tools than at any time in human history.

Medical research has confirmed how influenza passes from one person to another, which gives businesses a head-start in planning their own protection. Measures to increase social distance and implement infection countermeasures in the workplace will slow the spread of the disease and allow timely access to antiviral medications. Electronic extensions of the organization, including web access and e-commerce, will allow business transactions to continue while reducing the risk of infection.

Successful businesses are nowadays comfortable with the concepts of Enterprise Risk Management and loss prevention. You know from practical experience that deliberate action can control risks of all types. Sometimes it takes innovation, but that is nothing new to British Columbia businesses.

The British Columbia Ministry of Health prepared this Guide to promote the simple fact that businesses can take practical actions to manage pandemic influenza and its consequences. It applies the principles of risk management to help businesses of all types and sizes ensure continuity of operations, maintain essential services, and help employees and communities cope with illness and its impacts.

With this Guide, we seek your comments and suggestions on improving the message to all businesses on how to prepare for and respond to the next pandemic threat. Please forward all comments to me by e-mail at the address below.

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*Only the first edition of this document will be issued in hardcopy. The Guide and any future revisions will be available on the Ministry of Health website at:*

**[www.health.gov.bc.ca/pho/pandemic.html](http://www.health.gov.bc.ca/pho/pandemic.html)**

# Table of Contents

<b>SECTION</b>	<b>PAGE</b>
<b>1. INTRODUCTION.....</b>	<b>1</b>
PANDEMIC INFLUENZA DEFINED.....	2
WHY BUSINESSES SHOULD ACT.....	2
PURPOSE OF THIS GUIDE.....	3
<b>2. UNDERSTANDING PANDEMIC INFLUENZA .....</b>	<b>4</b>
THE AGENT .....	4
MEANS OF INFLUENZA TRANSMISSION.....	5
INFECTION TIMELINE.....	5
SEVERITY CATEGORIES .....	7
INTERVENTIONS .....	8
PANDEMIC WAVES .....	9
SECONDARY CONSEQUENCES OF PANDEMIC INFLUENZA .....	10
<b>3. PRINCIPLES IN PANDEMIC PLANNING .....</b>	<b>12</b>
UNDERSTAND THE RISK.....	12
FOCUS ON ACTIONS .....	12
RAISE WORKER AWARENESS.....	13
KEEP YOUR BUSINESS IN BUSINESS .....	13
COLLABORATE WITH OTHERS.....	14
<b>4. PLANNING FOR PANDEMIC INFLUENZA .....</b>	<b>15</b>
OBJECTIVES IN PANDEMIC PLANNING.....	15
OBJECTIVE 1. GET ORGANIZED .....	16
OBJECTIVE 2. ASSESS THE RISKS.....	17
OBJECTIVE 3. PROTECT EMPLOYEE HEALTH .....	18
OBJECTIVE 4. PREPARE EMPLOYEE POLICIES.....	19
OBJECTIVE 5. PLAN FOR BUSINESS CONTINUITY .....	20
OBJECTIVE 6. PREPARE FOR SUPPLY AND SERVICE INTERRUPTIONS .....	21
OBJECTIVE 7. PREPARE TO FILL VACANCIES.....	22
OBJECTIVE 8. INFORM EMPLOYEES.....	23
OBJECTIVE 9. INFORM OTHER STAKEHOLDERS.....	24
OBJECTIVE 10. PREPARE A PANDEMIC INFLUENZA MANAGEMENT PLAN.....	25
<b>5. ADDITIONAL INFORMATION ON PANDEMIC PLANNING.....</b>	<b>26</b>

# Managing Pandemic Influenza

– A Guide for B.C. Industry and Commerce –

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## 1. Introduction

Among the many natural and technological hazards that threaten modern society, pandemic influenza represents one of the greatest risks. No one knows for sure when we will see the next pandemic, but experts agree it could arrive in the near future. Influenza pandemics have happened every 10 to 40 years for at least the last 200 years, with the last occurring in 1968. Planning for the prospect of pandemic influenza is one of the most effective steps businesses can take to mitigate the impacts of such an event.

Depending on the nature of next pandemic influenza virus, the rate of spread and consequences could exceed anything we have encountered in the last century. The disease could spread easily, resulting in high rates of employee absenteeism. Viral infection and associated complications could lead to prolonged illness and death among a large portion of the population, and traditional health services could be overwhelmed by the demand for urgent care. Illness and death will have an emotional impact on family, friends, and colleagues.

People may choose to avoid social contact, keep their children home from school, and avoid the workplace to avoid becoming ill. Tourism and other service-related industries in affected regions could experience a sharp and persistent decrease in demand. Impacts from such actions could ripple throughout our communities, affecting retail businesses, restaurants, development proposals, construction projects, and other elements of day-to-day community life.

B.C. businesses can protect their workers from the impacts of pandemic influenza, reduce risks to critical business functions, and minimize financial losses for the enterprise over the long term. Businesses can expect that employees will become ill, and some may die. They should plan for the possibility of losing employee skills and knowledge, at least temporarily. Organizations should also be prepared to deal with the loss of critical infrastructure, such as electrical power, transportation, and telecommunications.

**B.C. businesses can take actions to protect themselves and their workers from pandemic, and build resilience to other disasters.**

Well-managed business response and recovery efforts, in partnership with stakeholders, can reduce both the likelihood of widespread infection and the consequences of a pandemic influenza in all respects.

## ***Pandemic influenza Defined***

The term “**pandemic**” implies a rapid spread of a severe human disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population. The significance of this term becomes clear when one considers that impacts will likely be felt in all communities around the world.

“**Influenza**” refers to a family of virus-caused diseases that result in respiratory infection with fairly predictable symptoms. The nature of the pandemic influenza discussed in this Guide differs from the more benign influenza outbreaks that occur in British Columbia each year because of the high proportion of the population affected and the expected severity of symptoms, including death.

## ***Why Businesses Should Act***

B.C. businesses play a significant role in safeguarding employee health and reducing financial losses associated with pandemic influenza. Businesses should consider the importance of efforts to:

**Protect Employees** – Employees will look to the organization for leadership and protection, including measures to minimize exposure to the virus. A pandemic influenza of the nature considered in this Guide will likely result in temporary workforce attrition. Each business will want to seek the optimum means of meeting their legal obligation to protect employees from exposure to the influenza virus, working with occupational health and safety professionals, union representatives, and medical experts.

**Protect Essential Business Functions** – Workforce reduction could put at risk the business operations needed for survival, such as acquiring raw materials, manufacturing, transporting finished products, delivering customer services, and invoicing. Interruption of such critical functions can cripple the effectiveness of a business unit or an entire organization. Extended loss of capability in any of a number of integrated functions could ultimately lead to business failure.

**Minimize Net Financial Impacts** – Business expenditures are likely to increase dramatically while each organization struggles with response and recovery activities. At the same time, income could drop substantially due to falling demand. Managing such financial impacts at a time of momentous uncertainty will be a challenge for any business.

**Assist Communities** – Beyond directly supporting employees and customers, organizations that provide critical infrastructure, such as electrical power, financial services, and telecommunications, have a special responsibility to plan for continued operation during a pandemic.

In short, B.C. businesses should prepare for pandemic to ensure their survival, to enhance sustainability in emergency situations, and contribute to community protection.

## **Purpose of this Guide**

This Guide summarizes the threat and the many key actions that members of B.C.'s industry and commerce can and should take before, during, and after the arrival of pandemic influenza.

The audience for this work includes businesses of all sizes, types, and sectors active in

British Columbia. Whether small business or a multi-national corporation, or some enterprise in between, every organization will find ideas for practical application in this Guide they can adapt to meet individual needs.

**By consulting this Guide, B.C. businesses can take steps to reduce the consequences of a pandemic.**

The intent of this document is to offer suggestions for consideration in managing pandemic risks, not to prescribe specific procedures. In every respect, businesses are encouraged to collaborate with health authorities, emergency management experts in local government, and other stakeholders in pandemic planning.

As an overview, this document presents the large concepts behind planning for pandemic influenza, and leads readers to sources of additional information. In particular, readers are encouraged to pursue specific topics of interest by consulting the **Annotated Index**, accessible through the Ministry of Health website.

## 2. Understanding Pandemic Influenza

The bulk of this Guide contains suggested actions for businesses to consider in managing the risks of pandemic influenza. However, it is important to understand some basic facts about the disease and the rationale behind the recommendations.

One concept should dominate all others as we approach an understanding of pandemic influenza. **There are a lot of unknowns.**

Medical researchers are unable to forecast with confidence how many people will become ill in a pandemic, how many will be hospitalized, or how many will die. Much depends on the nature of the virus causing the illness and, until it can be observed, the consequences of the next pandemic can only be estimated.

**Scientists cannot predict when the next pandemic will arrive, only that one will affect us at some future time.**

### ***The Agent***

Influenza epidemics have plagued humanity for hundreds and probably thousands of years, but it was not until 1933 that the agent of the disease was first identified as a virus. A virus, as you may know, is much smaller than a bacterial cell and behaves differently in several ways. There are three things to know about the influenza virus in contemplating actions to manage risks in the workplace:

**Transmitted by Contact** – The influenza virus can be transferred from an ill individual to a susceptible host by indirect contact, such as contaminated hands. Hand-washing, therefore, represents an important method for controlling the spread of the virus. There is no evidence that the use of masks in general public settings offer protection once the virus is circulating widely in a community.

**Impervious to Anti-Bacterial Medications** – Viral-based influenza does not respond to antibiotics like bacterial-related diseases. The common medications used for bacteria infections, such as penicillin and streptomycin, have no effect on the influenza virus. Some recently developed antiviral medications can inhibit the dispersal of viral particles inside the body, but there is no medical cure for influenza. This suggests the most effective way to combat the disease is to avoid exposure to the virus.

**High Mutation Rate** – Influenza viruses have an ability to rapidly mutate. Viruses can and do change their characteristics readily from one generation to the next. The ability to adapt rapidly means the influenza virus can overcome obstacles to growth, including the body's defences, antiviral medications, and vaccines. Since experts do not expect that we can prevent a pandemic, advance preparations are key.

## Means of Influenza Transmission

People could become exposed to the influenza virus in a number of ways, but the most typical methods involve contact with secretions from an infected individual.

A person could inhale virus-laden droplets or particles released when an infected person coughs or sneezes. A contagious individual can easily infect others within **about one metre (3 feet)** through coughing and sneezing.

Someone could also pick up the virus on their hands from touching an infected person or a hard surface where the virus is present, and then introduce the virus by bringing their hands to their mouth, nose, or eyes. The virus makes its way to the respiratory track where it goes to work.

**Understanding the means of transmission is essential in controlling infection and reducing risks of spreading the disease.**

Viruses can live on hard surfaces such as doorknobs for 24 to 48 hours, and on non-porous surfaces such as cloth, paper and tissue from 8 to 12 hours. Once on the hand, the virus can survive for about 5 minutes.

## Infection Timeline

It is also important to acknowledge what happens when a person becomes infected in considering actions to manage pandemic risks. Figure 1 offers a simplified illustration of how the body responds when exposed to influenza. Symptoms and complications for a pandemic virus may be more severe.

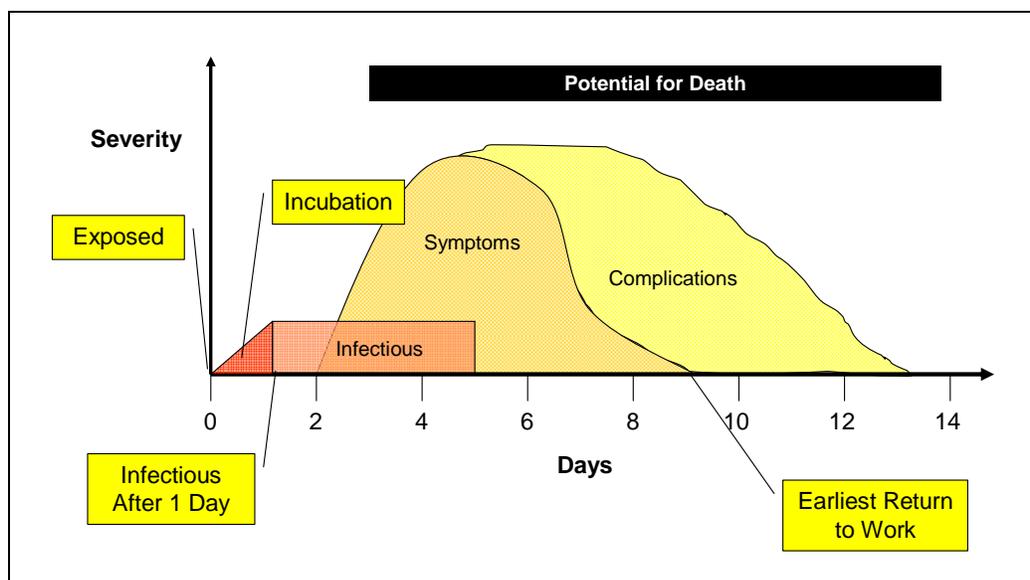


Figure 1. Influenza Infection Timeline

**Exposed** – Once an individual is exposed to the virus, influenza particles make their way to the respiratory system, where they begin to replicate. A single virus can produce millions of copies of itself during the “incubation” stage. The incubation period usually ranges from one to three days.

**Infectious** – A person may be able to infect others within one day of acquiring the virus and is contagious for three to five days following the onset of symptoms. More importantly, **people can be contagious 24 to 72 hours before the appearance of any symptoms**. Businesses cannot rely on simply sending sick workers home to control the disease. By the time their illness becomes obvious to them and to others, many people may have been infected.

**Symptoms** – People respond to influenza in different ways, but the most common symptoms include fever, headache, cough, body aches, and weakness. Symptoms could rapidly increase in severity, and persist for a week or two. Some people, who are sick with influenza, and therefore contagious to others, show few or no symptoms throughout their illness.

**Complications** – A major threat in past influenza pandemics has been the tendency for the viral infection to exhaust the body’s immune capacity. This opens the door for other diseases. Most notable among these complications is pneumonia, a bacterial infection that causes the build-up of fluid in the lungs and bronchial passages. Even if treated with appropriate medications, complications from a viral infection can result in prolonged illness or death.

**Potential for Death** – It is difficult to predict the likelihood of death among pandemic influenza victims. Much depends on the nature of the viral sub-type, how readily it resists the body’s many immune system defences, and the physical condition of those infected. Historic outbreaks of influenza have shown, however, that death can come within hours of the first symptoms, or after a prolonged battle with complications over many weeks.

The implications of these points are important to highlight for British Columbia businesses. First and foremost, organizations should identify ways to control exposure in the workplace. By reducing the chance that workers contract the disease, businesses will reduce the effects of pandemic.

Second, as influenza enters the community, it will not be possible to assume that anyone – even those who lack symptoms – is free of the disease. This means that essential workers who are responsible for critical business functions, such as data management, may have to be separated from others, including their family members. This is known as “sequestering” and should be considered for work of vital importance to the business.

Third, businesses should anticipate unprecedented disruptions in their workforce. Absenteeism may involve a significant number of employees at a given time, and workers may return to work one or two weeks after the onset of symptoms, or longer if complications ensue. There is always the potential for death among employees, and this brings special considerations for business continuity and emotional care among the surviving members of the workforce.

## Severity Categories

As noted above, people react to influenza virus invasion differently. Although it is impossible to predict how serious the next pandemic may be, Figure 2 shows a potential distribution of cases in a population by severity.

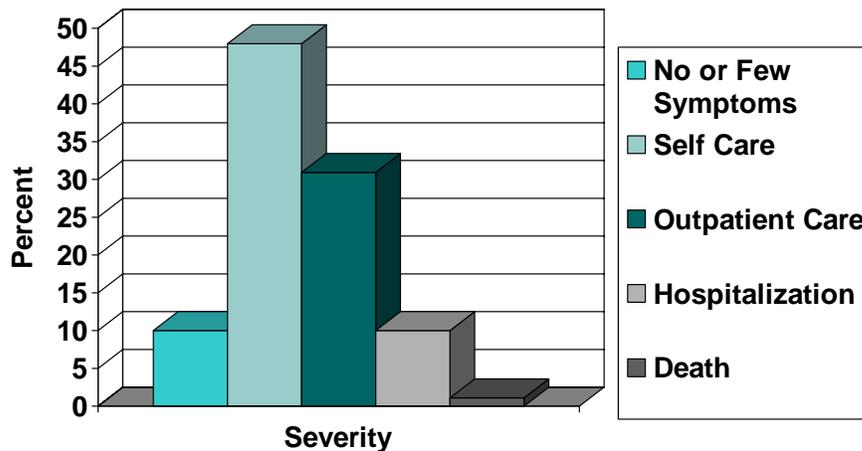


Figure 2. Distribution of Influenza Symptoms in a Sample Population

Among those who contract the disease, the severity of each case will likely fall into one of these five categories:

**Few or No Symptoms** – Some members of a population may be infected but show little or no outward evidence of disease. Although they are ill, their body’s defences may be able to control and eventually eliminate the virus.

**Self Care** – Depending on the nature of the virus, a large portion of those who become ill may not need medical care. However, they could become so weak over time that they are unable to provide the basics of feeding themselves and ensuring general cleanliness.

**Outpatient Care** – Those with more severe symptoms will likely seek medical care on an outpatient basis. This means that some influenza victims are expected to attend designated health care facilities for short visits, with no requirement of overnight stays.

**Hospitalization** – Some people will be so ill, either from the influenza virus or from complications, that only hospitalized care will provide relief. Hospitals are expected to be quickly overwhelmed by influenza patients, and health officials may need to establish temporary hospitals.

**Death** – It is inevitable that influenza will claim lives in an infected community, although it is impossible to know ahead of time how many. People routinely die in all communities, but the expected increase in fatalities could challenge services that would otherwise be able to cope, including the coroner service, funeral homes and mortuaries, and burial services.

Of course, any single influenza victim may progress through each of these severity categories in turn and, therefore, the aggregate numbers could exceed the total population.

Note that the distribution shown in Figure 2 is presented only to illustrate the possible symptom categories. Actual ratios will depend on the nature of the virus at hand. Even with this information, the ratios could differ among communities and may change if the virus mutates over time.

**It is impossible to predict how the population will react to the virus until medical researchers can observe actual cases.**

## Interventions

Health professionals have learned much about influenza over the last eight decades, including measures to help control the spread of the disease and prevent infection. Among the tools and techniques available, three are key:

**Provide Immunization** – The most powerful tool in the fight against influenza is a vaccine that stimulates the human immune system. Influenza vaccines contain small pieces of dead viruses, killed so they do not cause illness but enough to stimulate the formation of antibodies and other natural protections. A vaccine for the pandemic influenza strain will most likely differ from that given annually for the seasonal flu.

The vaccine for the pandemic strain can only be developed after the virus has been identified, and manufacture could require six months or more. Even after a suitable vaccine is ready, it will take time to distribute and must be administered before exposure to the disease to be effective. Two doses of vaccine may be required to build immunity, and these doses may need to be delivered one month apart.

**Slow Initial Spread Rate** – With a vaccine unavailable for six months or more, it makes sense to impede the spread of the influenza virus, if possible. The most effective way is through hand-washing and other personal hygiene practices. The influenza virus is inactivated by hand-washing with regular soap and water.

Slowing the rate of illness spread also involves distance and time. The means of influenza transmission suggest that reducing the number of people in one place and limiting the amount of time people spend together will help control the spread of infection. The greater the distance between an infected person and a healthy one, the less chance the virus will be exchanged. Also, the less time they spend sharing the same space, the lower the probability of disease transmission.

**Care for Those Affected** – Some community members will become ill before a vaccine is available. To augment health care in traditional medical facilities, businesses may offer outreach services to their employees and families, collaborating with local governments. Even an action as simple as checking on sick workers by telephone could result in life-saving interventions.

Other risk reduction measures are possible, of course, and businesses will want to work closely with health authorities and local governments to consider and implement creative solutions.

**Businesses can play a significant role in intervening in the spread of influenza and in protecting their workers and investment.**

### Pandemic Waves

Records from past influenza pandemics show that the number of illness cases sometimes peaks in two or more waves, arriving over time. Each wave lasts about six to eight weeks, and may be separated by a period of three to nine months.

It is impossible to estimate the intensity or timeframes that will accompany the next pandemic influenza event. However, we can explore some scenarios to help understand the challenges ahead.

Figure 3 shows two scenarios of how the number of influenza cases reported could vary over time. Note that the exact numbers are impossible to predict before the virus emerges. The important point is that a lot of people will become ill in a short period of time, and some will die.

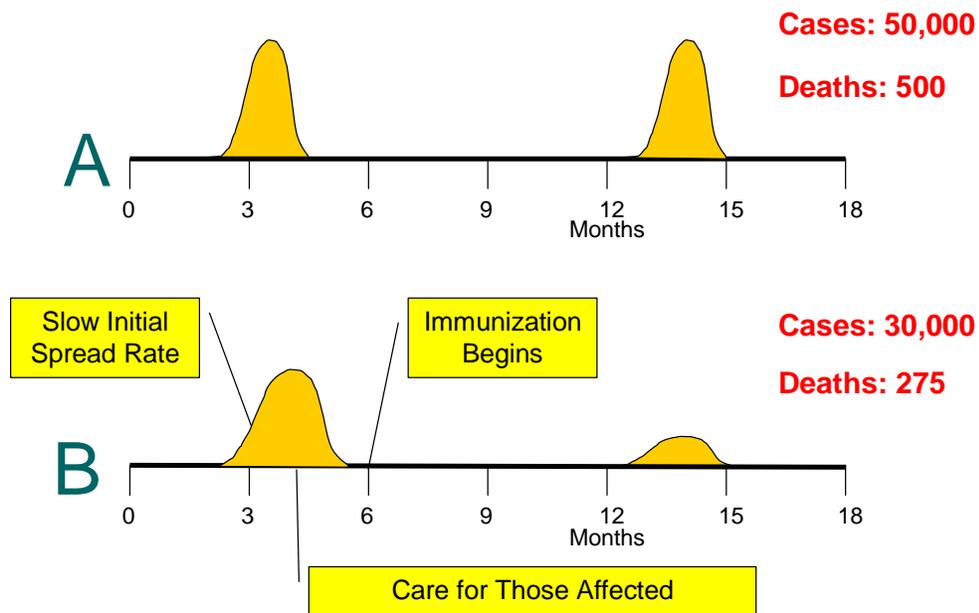


Figure 3. Possible Scenarios of Pandemic Waves

**Scenario A, No Interventions** – In Scenario A, which anticipates no human intervention to slow or counteract the natural course of influenza, time “0” is

assigned to the point when the pandemic virus is identified. Assuming the virus first develops outside Canada, it could take about one or two months before cases first appear in this country, and another few weeks for B.C. to record a significant number of cases in this scenario. In the first wave and over an intense eight-week period beginning in month 3, the number of concurrent cases rises rapidly, reaches a peak, and falls again in a typical “bell curve.” Months later, a second wave hits and results in an equal impact on the population. New cases of influenza continue to be reported between the waves, but are much fewer in number than during the wave peaks. The total impact from such a scenario on a community population of 100,000 could include 50,000 cases and 500 deaths, assuming a 25 percent attack rate per wave and a 1 percent fatality rate.

**Scenario B, With Interventions** – Scenario B represents the same viral attack conditions as Scenario A, but assumes three successful interventions. First, efforts to slow the initial rate of spread in the first wave serves to distribute the cases over a longer time period, allowing hospitals and other health care facilities to cope with the demand. Second, efforts to care for those affected reduce the number of people who succumb to the virus and to complications, again relieving health care systems of the number of patients requiring medical care. Third, an effective vaccine is developed and distributed beginning in month 6. This greatly reduces the number of cases in the second wave. The effects of these interventions reduce the total number of cases in a population of 100,000 to 30,000 and reduce the number of deaths to 275.

Although the exact nature of the coming pandemic will certainly differ from the fictitious scenarios explored above, the implications for businesses are clear:

**Interventions can work to protect workers and your business.**

## ***Secondary Consequences of Pandemic influenza***

Depending on the nature of the virus that presents the threat, secondary consequences of pandemic influenza of relevance to industry and commerce may include the following:

**The consequences of pandemic influenza will differ greatly from other types of emergency.**

**High Absenteeism** – Workers will be exposed to the influenza virus like any other community member. Inevitably, some employees will become ill and fail to report to work. Some may be able to return to work after a short time, perhaps four days of illness. Most would take a week or two to recover, but some may develop complications and a few may die. Even employees who escape the illness could be absent while caring for ill family members. Some employees may refuse work they feel presents an unreasonable exposure to the chance of infection. Overall, your business may experience absentee rates exceeding any previous event.

**Interruption of Essential Functions** – Absenteeism could mean an interruption of essential business functions, defined as those activities that must take place in the short term to support business survival. These interruptions could quickly

lead to untenable losses for the enterprise and require innovative trouble-shooting to maintain critical operations.

**Reduced Community Services** – A pandemic will challenge many community elements we normally take for granted. Health care workers, fire personnel, police, and other responders may be incapacitated by the disease. Illness among workers in supply chains could result in shortages in essential goods. Security of some business facilities could become an issue. Transportation systems could be impaired by absenteeism.

**Social Disruption** – Fear could well dominate human behaviour during a pandemic. Citizens will likely avoid some places of business if they perceive them to present a risk of infection. If required, orders to close schools will mean parents need to find alternative child care or to stay home from work. Fear of infection may isolate many in a community, closing normal channels of information.

**Psycho-Social Effects** – A pandemic will have an emotional toll on the community. Survivors may suffer psychological trauma from dealing with illness or death among family members, interruption of critical community services, loss of employment, and financial disruption. Businesses will play a crucial role in focusing on the needs of workers during and following pandemic, and providing stability in a time of crisis.

**Economic Effects** – Demand for your organization's goods or services may drop

substantially. For example, fear of social contact could impact the service sector, including restaurants, hotels, entertainment venues, and other tourism industries. Reduced cash flow within the community will have ripple effects on surviving businesses.

**How people react in a pandemic will have more influence on business activity than the illness.**

It is important to note that business response and recovery aspects of pandemic influenza will differ greatly from other types of emergency.

- While a **flood** may impact a predictable quadrant of a community and damage specific business premises, pandemic influenza can reach every workplace. All segments of a worker population could be affected, including satellite offices in other cities or countries.
- A structural **fire** may require an intense period of response, followed by a distinct time of recovery for the affected facility. Influenza, on the other hand, could require a blend of concurrent response and recovery efforts throughout an extended pandemic period.
- Whereas an **earthquake** occurs suddenly, a pandemic will develop over time, and may affect your business and the entire community in two or more waves over a period of many months or years.

It takes planning to effectively manage business risks from pandemic influenza. The remainder of this Guide offers specific ideas on how businesses of all types and sizes can cope.

### 3. Principles in Pandemic Planning

Early and thoughtful planning by business leaders can reduce the impacts of pandemic influenza, protect essential business functions, and minimize financial losses for the enterprise over the long term.

Every organization will benefit from applying a number of key principles to the planning effort highlighted in this section.

#### ***Understand the Risk***

Business managers should make decisions with a good comprehension of the **science** underlying an influenza pandemic and the risks involved. To be able to execute with confidence the actions needed to reduce the risks, business leaders must understand the factors contributing to the spread of the disease.

Businesses that have access to **reliable data** will secure an advantage. In particular, information available through the Provincial Health Officer website on pandemic influenza addresses the nature of the virus and the value of specific interventions.

It is also imperative that senior officers, administrators, and business unit managers have a clear perception of the likelihood and consequences of influenza throughout the pandemic period. Internal monitoring of illness (surveillance) will be important to track employee absenteeism and to help plan immediate business decisions.

#### ***Focus on Actions***

While knowledge about risk is important, only **actions** can help manage the threat of a pandemic. Businesses are encouraged to take steps to help overcome the consequences of influenza, before, during, and after a pandemic episode.

As with other natural hazards, business planning for pandemic influenza will require thoughtful research on available options, informed decision-making, and documentation of key policies and procedures. An **implementation** schedule for selected actions would help ensure the business takes the essential steps in protection.

## ***Raise Worker Awareness***

Offering **awareness and education** sessions, brochures, and other materials in cooperation with local health authorities will help employees respond to the influenza threat with reason instead of fear. Well before a pandemic arrives in the province, employees need to know how they can protect themselves at the workplace, at home, and elsewhere in their communities. They would benefit from knowing basic facts on how the influenza virus spreads and how to avoid acquiring the disease in the workplace.

**Strict adherence to hand-washing protocols is the cornerstone of an infection countermeasures plan and may be the most successful preventative action during a pandemic.**

Informing and protecting the workforce will help avoid interruptions in essential functions, and may be the most important step any business can take in managing pandemic risk. Information materials on protecting employee health are available on the Provincial Health Officer's pandemic website at:  
[www.healthservices.gov.bc.ca/pho/pandemic.html](http://www.healthservices.gov.bc.ca/pho/pandemic.html)

## ***Keep Your Business in Business***

For hazards of all types, business leaders should identify the **essential functions** that are absolutely critical to enterprise survival. These are more likely to be time-sensitive functions that demand specific skills and knowledge. Many businesses have prepared Business Continuity Plans (BCP) that could serve well in a pandemic situation.

Managers should identify the **core resources** required in each function, such as skilled personnel, utilities, raw materials, equipment, or data, and contemplate the loss of these resources with several pandemic scenarios in mind. In the event of pandemic, core resources at risk first and foremost include the employees. Inasmuch as the influenza virus attacks people, skilled workers in essential organizational functions should be considered in plans to continue operations. In addition, every business should anticipate impairment among suppliers, utilities, and contracted services, including transportation and financial services.

The success of any business continuity plan depends on ready access to **alternate resources** in the face of adversity. During a pandemic, businesses that can temporarily replace ill workers will have an advantage. Businesses may want to consider succession planning, cross-training, and alternative ways that employees can work from home (e.g., telecommuting). Replacement workers could come from other business units, or from a pool of recently retired workers and contractors.

In addition to interruptions to the supply side of your business, it would be wise to anticipate impacts on **demand** for products or services. Depending on how the general public reacts to the threat of pandemic when it arrives, consumer confidence may be affected, with corresponding changes in consumption and social patterns. Businesses in the service sector, for example, may experience a drop in demand. Due to the unknowns surrounding pandemic events, businesses should be prepared to adjust operations to meet the demands of different situations.

Organizations that have prepared for and can quickly adapt to new situations will have a better chance of continuing operations and survival.

### ***Collaborate with Others***

Effective planning depends on consultation and collaboration with other community members and stakeholders. Plans prepared in isolation often fail. It is worth the effort to check assumptions and let others know your intentions and expectations.

Successful businesses recognize the potential benefits of cooperative pandemic planning with others, and will make deliberate efforts to involve key organizations at all levels. Connections to consider include:

- Employees, unions, occupational health and safety committee
- Customers, especially significant client organizations
- Suppliers and service providers
- Regional Health Authority, i.e., the local Medical Health Officer
- Local government, especially the emergency program office
- Chamber of Commerce and other partner businesses

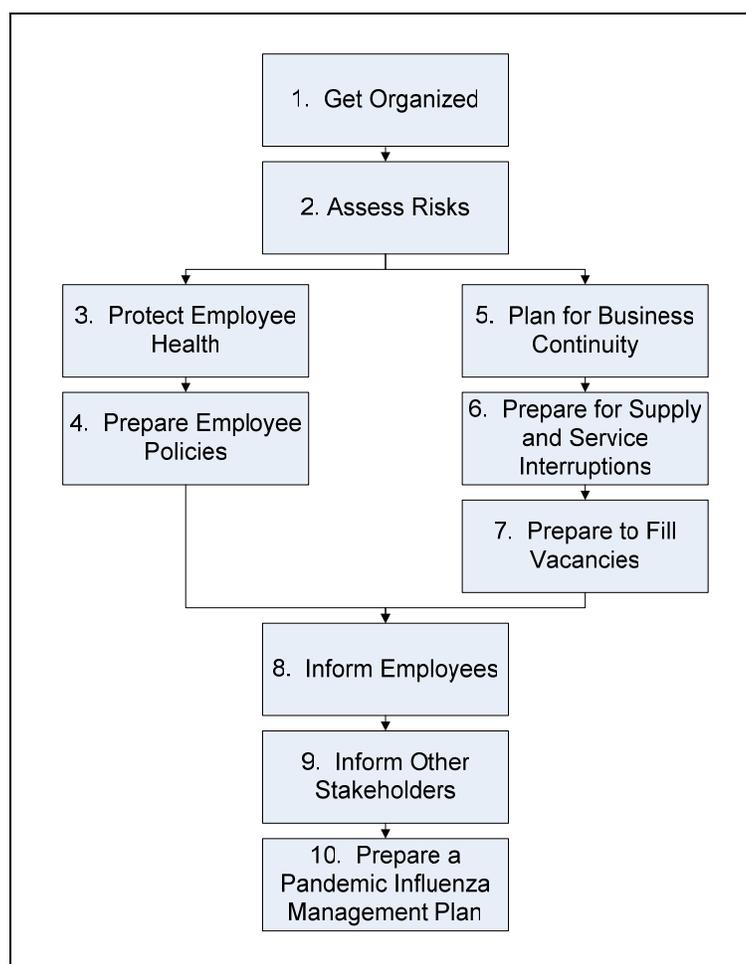
Refer to the **Annotated Index** for more information on these principles and other related topics.

## 4. Planning for Pandemic Influenza

With the foregoing principles in mind, the remainder of this guide offers actions that B.C. businesses should consider in planning for a pandemic. The purpose of this section is to summarize in ten straightforward steps the core activities in the planning process. Consult the Annotated Index for additional details on specific topics of interest.

### ***Objectives in Pandemic Planning***

Businesses can take action in a number of areas to manage the risks of pandemic influenza. Although there are many ways to organize the overall effort, actions can serve the ten basic objectives illustrated in Figure 4, drawn from the principles of Enterprise Risk Management and Emergency Management.



*Figure 4. Ten Objectives in Pandemic Planning*

The tables that follow summarize action plans for each objective that can be adapted, assigned, implemented, and monitored for progress.

## Objective 1. Get Organized

### Core Concepts

**Pandemic Planning Team** – The first step for any business in preparing for pandemic is to establish an internal planning group. This may mean assigning responsibility for preparedness to a few managers in a small business, or to an existing committee in a large corporation. In all cases, it is advisable to assign responsibility for leading the planning process to one person, and ensure this “pandemic manager” has the authority to get things done.

**The Planning Process** – As with other business aspects, planning for pandemic relies on an understanding of the organizational objectives, solid research on the risks, creative alternatives to unique challenges, and a reliable decision process. The purpose of pandemic planning is to identify actions to undertake 1) Ahead of time, 2) During an outbreak of the disease, and 3) Afterward to recover from the event. This requires information and evaluation. The planning process should also be documented so decisions are recorded in a “Pandemic Influenza Management Plan.” Refer to Objective 10.

**Monitoring** – When influenza appears in the community, your business will want to identify sources of reliable information on such items as the status of the disease where you have facilities and personnel. Monitoring includes tracking staff health to identify cases of influenza early so you may take steps to reduce the internal spread of the disease.

### Consider These Actions

#### A. Appoint a “pandemic manager.”

- Assign responsibility for pandemic planning to a senior manager with authority to lead a small internal group.

#### B. Assemble a pandemic planning team.

- Identify team members and provide terms of reference.
- Consider an existing committee, such as your current risk management or business continuity planning group.
- Include staff members who are familiar with labour, emergency management, and occupational health and safety issues.

#### C. Prepare to monitor the situation.

- Assign responsibility for monitoring to a small team of managers.
- Establish links with reliable sources of pandemic information, such as the Ministry of Health website.
- Prepare to monitor employee health in each business unit, such as taking daily temperature checks during a pandemic prior to entering the workplace, and sharing results with senior managers.

#### D. Begin pandemic plan.

- Develop a detailed outline of a plan, addressing the topics covered in the 10 objectives in this section.
- Assign responsibility for recording planning deliberations.

### Tips for Success

- \* Consider the sample outline for a pandemic management plan shown in the Annotated Index.

## Objective 2. Assess the Risks

### Core Concepts

**Know the Risks** – Effective action depends on a factual understanding of the probability and consequences of adverse events. In assessing the risks of pandemic influenza, your business should identify the people, facilities, and operations most likely to be affected, and gauge their vulnerability. Management and staff need to have a clear sense of the potential risks they face in the workplace. It is important for the Pandemic Planning Team to comprehend the nature of the disease, how it spreads, and potential effects.

**Anticipate the Consequences** – Some business facilities may be ordered closed by a Medical Health Officer to assist in controlling the spread of infection. Closures could require the delivery of products or business services through alternate means.

**Delivering Essential Services** – Your business may play a role in maintaining essential public health or safety services in B.C. communities, such as utilities, pharmaceuticals, food delivery, and health care. For example, health care services depend on energy, communications, and other services. Where a business provides products or services that support the health and safety of the community, it could have a legislative or regulator responsibility to maintain these services (e.g., electrical power, telecommunications, or utility services).

### Consider These Actions

#### A. Meet health authority, local government.

- Meet with health and local government reps to learn more about influenza and safety measures specific to your business.
- Review available literature and web-based information on influenza.

#### B. Identify exposure points for employees.

- Identify internal and external contacts points where workers could be exposed.
- Involve worker groups in identifying risk exposures, considering such factors as distance, the number of people encountered, and the time of exposure.

#### C. Identify facilities that could be closed.

- Identify buildings that could be ordered closed by a Medical Health Officer. Identify the likely time period for the closure.
- For each facility that could be closed, prepare site-specific notification for closures of business facilities.

#### D. Identify business's role in essential community services.

- Identify the role your business could play in supporting essential public health and safety services.
- Work with the health authority and local government to assess the impacts of a possible interruption of your business on essential community services.

### Tips for Success

- \* Members of the Pandemic Planning Team should meet directly with representatives from the health authority to learn about influenza, its effects, how it is transmitted, and safety measures.

## Objective 3. Protect Employee Health

### Core Concepts

**Workplace Safety** – Taking reasonable precautions to safeguard workers from predictable workplace hazards is an obligation of every B.C. business. Protecting the health of employees not only reduces potential organizational costs, it helps forestall critical workforce disruptions.

**Infection Countermeasures** – The term “countermeasures” refers to specific actions in design, administration, or awareness that reduce the chance that employees will acquire influenza in the workplace. Ideally, countermeasures reflect the risks for each business facility, such as the points of employee exposure identified in Objective 2. Some organizations may benefit from a written *Infection Countermeasures Plan* for organizational facilities, and the assignment of implementation supervisors in all business units.

**Social Distance** – Knowing that respiratory diseases are spread by close proximity, businesses should address the requirement to increase social distance in the workplace. One method of social distancing to protect essential business services is to shield teams of healthy workers from potential exposure through “sequestering.” Social distancing should also anticipate methods for separating workers from customers and suppliers who could be contagious.

### Consider These Actions

#### A. Develop infection countermeasures.

- Promote hand-washing practices and provide washbasins, soap, paper towels.
- Regularly clean common touch surfaces within the workplace, e.g., doorknobs.
- Remind staff of cough and sneeze etiquette and other hygiene measures.
- Provide first aid services on site, with protective equipment for responders.

#### B. Increase social distance at the workplace.

- Consider design elements that increase the physical distance between employees.
- Create administrative measures to increase social distance, such as staggered shifts.
- Plan to enhance social distance, such as holding meetings by conference call.

#### C. Identify ways to separate staff from customers.

- Design workspaces to increase distance and reduce time of exposure.
- Install barriers to separate workers from potentially infected customers.
- Develop service delivery alternatives to limit employee contact with public.

#### D. Prepare to sequester essential staff.

- Identify essential staff to sequester in one or two teams to avoid exposure.
- Plan support for sequestered workers, such as food, water, and information.

#### E. Offer annual immunization.

- Encourage and facilitate routine annual influenza vaccinations of staff.
- Advise at-risk employees to talk with their physicians about the pneumonia vaccine.

### Tips for Success

- \* Discuss options for infection countermeasures and social distancing with your health authority.

## Objective 4. Prepare Employee Policies

### Core Concepts

**Coping with Illness** – Situations may arise during a pandemic that challenge your organization's regular employee policies. While workers are expected to understand and follow established rules of employment, there could be both a moral and practical rationale for exceptions. New or revised policies may be needed to address issues that could arise, including extended medical leave, leave to care for sick family members or bereavement. Concern about lost wages is the largest deterrent to self-quarantine.

**Replacement Workers** – A special category of policies could address temporary workers needed to keep the business operating. Examine current provisions for hiring, paying, and offering benefits to temporary workers. Consider temporary employees for extended periods.

**Business Support** – Plans may be needed for employees who are dedicated to critical business operations, and to sustain workers throughout the pandemic period. Questions may arise among some workers on payment for overtime required to support the business. Special provisions may be in order for employees expected to sequester themselves during the threat.

### Consider These Actions

#### A. Develop employee leave policies.

- Develop policies for absences due to:
  - \* Personal or family member illness
  - \* Quarantine or school closure
  - \* Closure of your business facilities
  - \* Bereavement

#### B. Develop employment policies for use during pandemic.

- Develop policies to maintain essential services through such means as:
  - \* Cancellation of vacations
  - \* Approval of overtime
  - \* Redeployment of staff
  - \* Use of part-time or retired staff
  - \* Contracting out
- Develop policies for temporary staff working longer than one year.

#### C. Prepare plans to support workers during pandemic.

- Consider the following worker support services:
  - \* Identification for critical employees if your business supports critical community infrastructure.
  - \* Register critical workers with local emergency and health authorities for priority medications.
  - \* Transportation for critical employees to and from the workplace, if required.
  - \* Child-care when schools are closed.
  - \* Mental health, stress counselling, and social services for staff and family members. Help employees tell their stories.
- Develop plans to sequester essential staff, if necessary, at a work location or alternate site.

### Tips for Success

- \* Consult your insurers, Enterprise Risk Management department, unions, occupational health and safety professionals, and solicitors in devising employee policies.

## Objective 5. Plan for Business Continuity

### Core Concepts

**Supply vs. Demand** – Businesses will differ in the consequences they experience during a pandemic. Some could lose business through a failure on the supply side, including workforce or supplier interruption. Others may be affected more by effects on the demand side. Preparing for business continuity requires a solid understanding of where threats could arise.

**Priority Functions** – The most important organizational functions to protect during a disease outbreak are those that must occur in the short-term to keep the business going. A six-week interruption of direct service delivery functions, for example, could have a great impact on an organization, whereas a similar disruption of the marketing function may have minimal effect. Response plans should address the coordination of business units, support services, suppliers, and contractors.

**Existing Business Continuity Plans** – Many businesses have developed Business Continuity Plans in anticipation of threats to information systems and facilities, such as those arising from earthquakes, floods, or structural fires. These plans should also account for workforce attrition and other consequences of pandemic influenza.

### Consider These Actions

#### A. Identify critical business functions.

- List functions that could lead to business failure if not performed in a specified time.
- Identify the skills required to perform essential services / functions.
- List personnel that are critical to business continuity.

#### B. Develop pandemic scenarios.

- Anticipate supply situations that could reduce business capacity, e.g.:
  - \* High absenteeism
  - \* Facility closure
  - \* Quarantine or border closures
  - \* Interruption of supplies
- Develop pandemic scenarios that could decrease demand for products / services.
- Examine the potential surge in demand for your business's products or service areas.

#### C. Analyze potential business impacts.

- Consider specific effects, such as:
  - \* Absenteeism, including temporary loss of highly specialized workers.
  - \* Increased expenditures associated with sick-leave, death, and re-staffing.
  - \* Reduced income due to a drop in capacity and / or demand.
  - \* Reduction in any essential service/function.
  - \* Restrictions on business-related travel, e.g., border closures and quarantines.

#### D. Prepare to adapt operations.

- Identify the organization structure that will serve in coordinating response.
- Develop a plan to modify, reduce, or halt specific functions to cope with the impacts of a pandemic.
- Consider the conditions for suspending operations altogether.

### Tips for Success

- \* Recall that your organization's plan for the Y2K event prior to 2000 may prove useful.

## Objective 6. Prepare for Supply and Service Interruptions

### Core Concepts

**Understanding Needs** – Community infrastructure has become so reliable these days that we take for granted the complex networks of utilities, telecommunications, transportation and other systems. Many businesses rely on “just-in-time” delivery of essential raw materials and supplies, even for resources that are critical to organizational survival.

**Stockpiles** – Businesses that can cope with delayed supplies in a pandemic will have a substantial advantage. Businesses should list the items needed to continue critical business functions if supply flows were interrupted for several weeks, including materials, supplies, and equipment, and identify where items could be stored.

**Supplier and Service Duplication** – “Don’t put all your eggs in one basket” is an obvious wisdom that applies in a pandemic situation. This means making an effort before a pandemic arrives to find alternate sources of the supplies and services your business depends on. Contact alternate suppliers to establish working relationships ahead of the need.

**Contingency Funds** – If your business could face a significant income disruption during and after an influenza event, your organization may require contingency funds for such ongoing expenditures as employee wages and equipment maintenance.

### Consider These Actions

#### A. Identify sources.

- List the sources of critical raw materials, supplies, services, and information.
- Identify utilities and local government services required for business operations:
  - \* Water, waste disposal, sanitation
  - \* Electrical power, telecommunications
  - \* Fire and police services
- Determine contracted services that are critical to business continuity (e.g., courier, transport, and financial services).

#### B. Stockpile critical resources.

- Acquire and store essential raw materials for critical functions, where feasible.
- Store infection countermeasure supplies.

#### C. Arrange for alternate suppliers and service providers.

- Identify alternate suppliers for critical supplies, utilities, and services.
- Establish tentative agreements with alternates for easy activation, if needed.

#### D. Develop access to contingency funds.

- Develop a financial plan to continue payroll and to meet debt obligations in extreme situations.
- Set aside contingency funds or obtain access to sufficient credit for emergency application.
- Examine the organizational insurance coverage to determine if continuity of business/loss of income coverage applies in pandemic situations.

### Tips for Success

- \* Ask suppliers to share their plans for business continuity during a pandemic.

## Objective 7. Prepare to Fill Vacancies

### Core Concepts

**Impacts of Workforce Attrition** – For some businesses, workforce attrition could be the single most significant impact of a pandemic. The loss of many workers at one time could affect mission-critical operations. For other enterprises, the loss of a few specialists (such as IT technicians) could directly impact critical business functions, such as service delivery and billing. Plans for duplicating staff capabilities would help overcome the effects of absences.

**Hierarchy of Resources** – To protect the current workforce, consider re-allocating existing staff first, then perhaps using recently retired personnel and other past employees. If other workers are still needed, consider sources from staffing agencies or professional contractors for short term allocation. As a last resort, replacement workers may be hired to fill key positions.

**Training** – Simply placing people at a work station may not be enough in some businesses. Many functions today are complex and require at least some orientation for a new person to be moderately effective. Training may be essential. It would be wise to gather training materials ahead of time, with the cooperation of current workers, such as job descriptions, procedure manuals, and cheat-sheets of special information, such as passwords.

### Consider These Actions

#### A. Identify critical employee capabilities.

- Identify the number of staff by classification required to maintain critical business services, e.g., machinists, customer service agents, or accountants.
- Identify special qualifications needed to perform critical services / functions, e.g., license to operate heavy machinery.

#### B. Arrange for alternate workers.

- Plan to redistribute internal human resources temporarily, as appropriate.
- Identify retired staff who could be re-activated to work in critical areas.
- Identify the positions that could be covered by temporary contract workers and ensure contracts with staffing agencies are up to date.

#### C. Plan to support replacement personnel.

- Develop training requirements for critical positions, and train staff in multiple skills to allow them to transfer into work areas.
- Develop just-in-time training materials to help workers learn positions new to them.
- Train ancillary workers, e.g., employees in other positions, retirees, and contractors.
- Manage security codes, access and passwords to reduce frustration for re-deployed or replacement personnel.
- Identify services that could be contracted out and prepare plans, including contracts.
- Develop a hiring plan to replace lost or incapacitated employees.
- Resolve with employee unions any issues related to temporarily filling positions vacated by prolonged illness or death among staff.

### Tips for Success

- \* Prepare a list of potential replacement personnel by priority and include contact information.

## Objective 8. Inform Employees

### Core Concepts

**Knowledge is the Cornerstone of Protection** – People are empowered when they comprehend risks and how to manage them. In preparing for pandemic influenza, informing employees of the threat and planned infection countermeasures helps workers understand how they can protect themselves. Clear messages and frequent communication are essential.

**Consider the Audience** – Risk communication methods should account for the workplace opportunities for communication. Newsletters could deliver common safety messages to all employees, whereas posters may be more appropriate for specific business units. Message content should match interests, and cover general information on influenza (e.g., signs and symptoms) and business-specific issues (infection countermeasures, organizational policies).

**Work with Health Authority** – Work with your health authority representative to develop messages for employees on pandemic influenza, the importance of hand-washing and cough etiquette, and that staying home when they are ill will protect jobs. Obtain brochures and sample health information from the health authority for distribution to employees, or use materials provided on the Provincial Health Officer's pandemic influenza website at [www.health.gov.bc.ca/pho/pandemic.html](http://www.health.gov.bc.ca/pho/pandemic.html)

### Consider These Actions

#### A. Develop communication methods.

- Develop means to communicate with employees about pandemic.
- Develop materials for employee awareness, such as workplace signs and pamphlets.
- Develop a series of information sessions to educate staff about pandemic.

#### B. Share risk information.

- Inform staff on the nature and consequences of pandemic influenza.
- Inform employees in high risk positions of their exposure. Work with health authority.
- Educate staff on the importance of staying away from the workplace if they or members of their household become ill.

#### C. Advise staff of infection countermeasures and policies.

- Emphasize the importance of good hygiene and hand-washing.
- Explain infection countermeasures, immunization, and health policies.
- Explain the rationale for building closures, isolation, quarantine, travel restrictions.

#### D. Plan to keep staff informed during pandemic.

- Keep up-to-date a contact list for all employees, including next of kin.
- Respond to rumours with facts.
- Develop an employee information call service, e.g., phone lines dedicated to keeping workers informed.
- Provide staff with the location of health clinics and designated influenza hospitals.

### Tips for Success

- \* Involve employees in planning for pandemic communication.
- \* Consider the need for information materials in different languages to reach all workers.

## Objective 9. Inform Other Stakeholders

### Core Concepts

**Maintaining Confidence** – Considering the integrated nature of most business enterprises these days, the importance of sharing timely information with your partners and stakeholders cannot be overstated. At a time of uncertainty, anyone dealing with your company will appreciate accurate messages on the status of your operations. Communicating the infection countermeasures and backup plans to deal with illness and its effects will help maintain confidence in your business and its management. It is especially important to share information on the operational status of your business if you offer essential community services, such as pharmaceuticals, food, gasoline, and other commerce deemed necessary.

**Frequent Communication** – Because the pandemic situation could change daily for any organization, it would be beneficial to communicate with stakeholders frequently. For example, it is important to inform local suppliers, customers, and business partners of any plans for temporarily reducing or halting services. A website may be the most cost-effective way of informing large numbers of stakeholders about your operational status.

**Information Strategy** – To maximize collaboration among partners, suppliers, and customers, each business should consider the information to be shared with others, and develop a formal *Information Strategy* for use during a pandemic. Such a strategy should address the information needs of external stakeholders, and communicate the status of operations, including any shutdowns, timelines for re-start, and alternative means of production and service delivery.

### Consider These Actions

#### A. Identify key stakeholders.

- Create an information contact list of external suppliers, key customers, client and partner agencies, and keep the list up to date.
- Develop an email and fax distribution list.

#### B. Confirm assumptions.

- Confer with primary customers and suppliers to determine their information requirements about your organization during a pandemic.
- Monitor the news media for information released about your organization.

#### C. Advise stakeholders of your preparedness plans.

- Develop technologies for keeping stakeholders informed on the status of your business, such as the use of a call centre, email distribution list, or website.
- Inform external stakeholders of your preparations for pandemic and potential limitations.
- Jointly distribute publications and other written material.

#### D. Plan to keep stakeholders informed during pandemic.

- Provide organizational status information via news media, call centres, and website.

### Tips for Success

- \* Work with your organization's public relations office to develop an *Information Strategy*.

## Objective 10. Prepare a Pandemic Influenza Management Plan

### Core Concepts

**Record of Decisions** – As noted in Objective 1, a Pandemic Planning Team will want to document the effort devoted to each of the previous steps. A *Pandemic Influenza Management Plan* records the policies and procedures developed to serve the organization in preparing for and responding to a pandemic. The Plan need not be long, but it should address key items that will guide decisions during a pandemic. Such a document may form part of an existing plan, such as a *Business Continuity Plan*, *Risk Management Plan*, or *Emergency Management Plan*.

**Communicate Policies with Others** – A written plan communicates your organization's assumptions and essential decisions to customers, suppliers, and other stakeholder groups. This helps to integrate preparedness plans and promotes collaboration.

**Implementation** – The Pandemic Planning Team will inevitably identify suitable actions for protecting the organization, and may wish to set out an implementation schedule in the Plan. Actions should address any changes to the physical work environment, employee training requirements, and opportunities to exercise the Plan.

### Consider These Actions

#### A. Prepare a Pandemic Plan.

- Prepare a detailed outline of the *Pandemic Influenza Management Plan*. Consider the example in the Index.
- Record results of planning decisions and collected information in a draft Plan.
- Assemble and edit the draft Plan, and prepare copies for consultation with others

#### B. Consult with others about the Plan.

- Facilitate an internal review of the Plan by senior managers, business unit leaders, and worker representatives.
- Request an external review by key customers, partners, suppliers, health authority, and local government officials.
- Consider comments and revise the Pandemic Plan accordingly.

#### C. Exercise the Plan to further improve.

- Develop a few scenarios to represent the range of situations that could arise for your organization during a pandemic.
- Lead a discussion of the Pandemic Plan response elements to test the feasibility of key tenets, involving senior executive and business unit managers.
- Conduct a table-top exercise of the Plan with critical business units, using a range of pandemic scenarios.

### Tips for Success

- \* Lessons learned during the initial wave of influenza should be recorded in the Plan to help guide response during subsequent waves.

## 5. Additional Information on Pandemic Planning

This Guide offers a number of suggestions on how B.C. businesses can manage the risks of pandemic influenza. To support the basic concepts presented here, the Ministry of Health has prepared a webpage devoted to additional information on pandemic influenza issues. Working through an **Annotated Index** on the Ministry's website, readers can access more details on specific topics of interest.

The Annotated Index also provides additional guides, forms, and templates for use in pandemic planning and implementation. Figure 5 illustrates the three levels of detail on recovery information available from the Ministry.

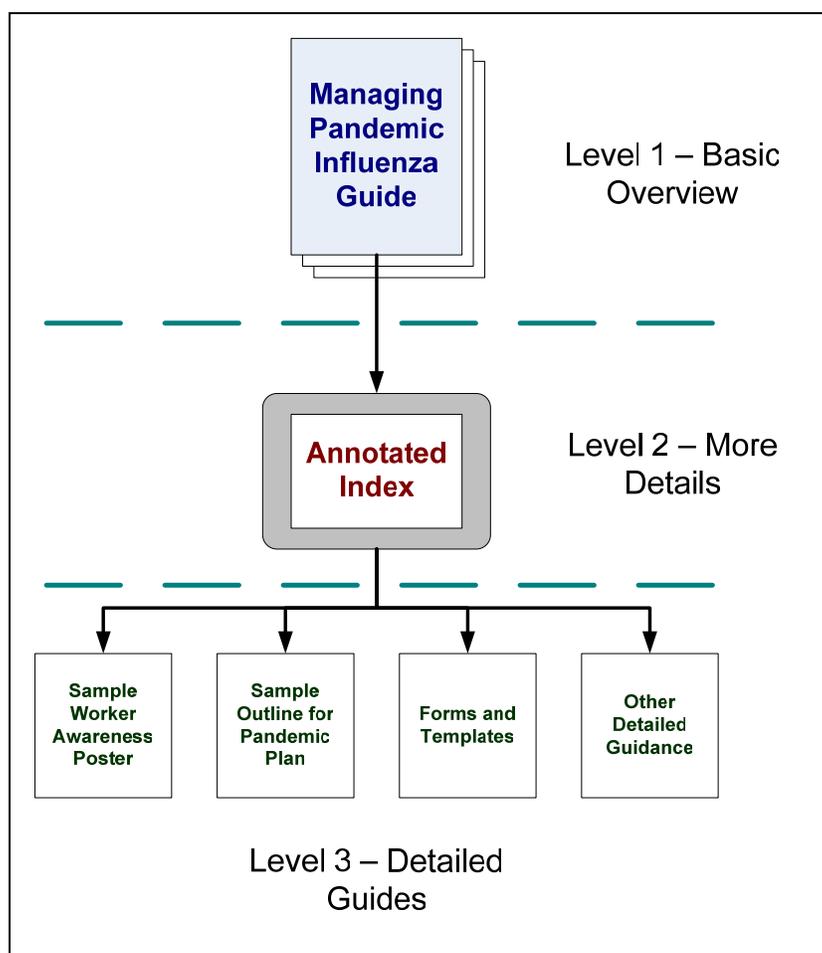


Figure 5. Levels of Detail in Pandemic Planning Information

Readers can access the Guide and Annotated Annex on the Ministry of Health webpage at: [www.health.gov.bc.ca/pho/pandemic.html](http://www.health.gov.bc.ca/pho/pandemic.html)

References for this document are available in the Annotated Index.