



CANADIAN  
PHARMACISTS  
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DU CANADA

# PANDEMIC INFLUENZA

## **A PHARMACIST'S GUIDE TO PANDEMIC PREPAREDNESS**

Updated: October 2009

# Purpose

**Refer to CPhA's Pandemic  
Influenza resources for  
up-to-date information.  
[www.pharmacists.ca/pandemic](http://www.pharmacists.ca/pandemic)**

As front line health care practitioners, pharmacists play key roles in patient care and are integral members of health care teams. The onset of a pandemic will significantly affect morbidity and mortality of the general public which will result in increased demands on pharmacists. This guide addresses the top concerns of pharmacists in the event of a pandemic.<sup>1</sup>

- How to keep your family, friends and staff healthy
- The role of a pharmacist in the event of a pandemic
- Supply chains: dealing with drug shortages
- How to deal with the backlog of patients flocking to the pharmacy
- How to create your own plan
- Infection control in the pharmacy setting

Pharmacists must become educated and receive appropriate training in order to be fully prepared for an emergency. Use your professional judgment and apply the steps and tools suggested in this guide to implement a plan for your practice sites.

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**DISCLAIMER:** Please note the materials in this document are intended to be used in planning for pandemic emergency preparedness. The content and information provided in this document was current at the time of publication. Each province, territory, city or organization may have its own policies and guidelines. Please familiarize yourself with your local plans and policies.

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# 1. Understanding Pandemic Influenza

## 1.1 What is influenza?

Influenza is an acute, contagious respiratory illness caused by influenza A or influenza B viruses. In humans, type A appears to be the more serious of the two, as only influenza A viruses are associated with pandemics.<sup>2-3</sup> Influenza A viruses are classified based on two surface antigens: hemagglutinin (H) and neuraminidase (N). The virus undergoes periodic antigenic shifts in the H antigen and/or N antigen resulting in a new viral subtype). This is the most likely cause of a pandemic influenza.<sup>2,4</sup> The influenza B virus tends to be more stable with antigenic shift occurring less frequently.<sup>4</sup>

## 1.2 What is pandemic influenza?

An influenza pandemic occurs when a mutation in the influenza virus produces a new subtype to which humans have little or no immunity.<sup>2,4-5</sup> The new strain spreads easily and rapidly through many countries and regions and affects a large percentage of the population as it spreads.<sup>6</sup> Depending on how easily the emerging strain of influenza spreads and how effectively we respond, approximately 15–35% of Canadians are expected to become ill over the course of the pandemic.<sup>4-5</sup>

It is expected that a pandemic will last for 12–18 months with 2 or 3 waves of infectious activity lasting 6–8 weeks.<sup>4</sup> Waves will peak at different times in different parts of the country. The majority of those that become ill will become sick during the first wave of the pandemic—plan for a 25% illness rate over 6 weeks during the first wave.<sup>4</sup> For a mild to moderate pandemic influenza, up to 50% will seek out care in outpatient facilities; 1% will become hospitalized and 0.4% of the clinically ill will die.<sup>3-4</sup>

For pharmacists, this will translate into at least 25% of employees being absent during the peak two weeks of a wave as people stay home due to personal illness or the need to care for ill family members.<sup>7</sup> Strategies to combat staff absenteeism include staff education and simply asking employees what their intentions would be during a pandemic. At the same time, demands on the pharmacist will increase as those who are ill, or their caregivers, will seek advice and assistance, and those who are healthy will seek information on ways to stay healthy.

## 1.3 What are the criteria for a pandemic?<sup>2:7</sup>

Three criteria must be fulfilled to signal the start of a pandemic:

1. the emergence of a new influenza A virus for which humans have little or no immunity;
2. evidence that the virus is able to infect humans and cause disease, and
3. evidence that the virus is efficiently transmitted from human to human and is spreading.

The **World Health Organization (WHO)** has proposed two mechanisms for the emergence of the pandemic influenza:

- Antigenic shift (genetic reassortment)
  - This occurs when two different viruses combine and exchange genetic material, forming a mosaic virus.<sup>8</sup> The new virus can then infect humans to cause serious disease. Since viruses emerging from antigenic shift appear suddenly, and humans have no immunity, it can result in a virus with pandemic potential.<sup>8</sup>
- Antigenic drift (adaptive mutation or stepwise changes)
  - This is the random accumulation of mutations to the influenza virus that occurs during infec-

**Table 1: The WHO has developed various levels of alerts to describe a pandemic:<sup>2,8</sup>**

Pandemic period	Description	Phase
<b>Inter-pandemic phase*</b> <b>New virus in animals, no human cases</b>	Low risk of human cases	1
	Higher risk of human cases	2
<b>Pandemic alert**</b> <b>New virus causes human cases</b>	No or very limited human-to-human transmission	3
	Evidence of increased human-to-human transmission	4
	Efficient and sustained human-to-human transmission in the general population	5
<b>Pandemic</b>	Efficient and sustained human-to-human transmission in the general population	6

\* Distinction between phase 1 and 2 is based on the risk of human infection or disease from circulating strains in animals  
 \*\* Distinction between phases 3, 4, and 5 is based on the risk of a pandemic<sup>2</sup>

tion of humans to slowly become more transmissible in humans during sequential transfer. Antigenic drift is what allows a virus to cross from one species to the next, and can lead to resistance against the neuraminidase inhibitor antivirals.<sup>8</sup>

### 1.4 What are the symptoms of influenza-like illness?

Influenza-Like Illness (ILI) is a term used by public health programs for influenza, which refers to any acute respiratory illness presenting with typical influenza symptoms.<sup>3</sup> Influenza can cause mild to severe illness, but it usually involves the sudden onset of respiratory illness. Common symptoms may include:<sup>2</sup>

- high fever ≥ 38°C (lasting 3 to 4 days)
- headache (often severe)
- aches and pains (often severe)
- fatigue and tiredness (lasting 2 to 3 weeks)
- extreme exhaustion (very common at the start)
- cough, chest discomfort, sore throat, stuffy nose, sneezing
- nausea, vomiting and diarrhea (common in children under 5).

*Patients under 5 years of age and over 65 years may not present with a fever.*

### 1.5 Why the concern about birds and pigs?<sup>9</sup>

Wild aquatic birds are usually the natural reservoirs for all influenza A viruses, which infect other species.<sup>9</sup> There are 15 subtypes of the influenza A virus that affects birds. Usually these “avian flu” viruses are harmless to wild birds, but A1 subtypes including H5 and H7 do have the potential to cause illness in birds once introduced to commercial poultry (like chickens and turkeys).<sup>10</sup>

Pigs can also get these viruses from wild birds and pass them on to other poultry and animals.<sup>11</sup> Since swine can be infected by swine, avian and human influenza viruses, they are thought to be a possible “mixing vessel” for genetic reassortment to take place, which could result in the potential for a pandemic influenza virus to emerge.<sup>8</sup> Humans and animals can pass strains of flu back and forth through direct, close contact.<sup>5</sup>

**Outbreaks** of the avian flu have occurred mostly in poultry and duck farms in Asia (Cambodia, China, Indonesia, Japan, Thailand, Vietnam). **Human cases** of infection have been reported in Thailand, Vietnam, Indonesia and Cambodia.

It is important to monitor outbreaks in domestic poultry because:

- the influenza virus undergoes spontaneous and rapid change;
- the close proximity of poultry to humans, and
- the density of poultry population allows for accelerated evolution of the virus.

### 1.6 What is the difference between the seasonal and pandemic influenza?<sup>2:4-7:12</sup>

Symptoms of pandemic flu may appear very similar to the seasonal flu.<sup>6</sup> Because humans will have little or no immunity when the pandemic flu hits, the spread of the disease will occur much faster than the seasonal flu. There are several differences and similarities between seasonal flu, and pandemic flu.

#### What is it?

##### SEASONAL FLU

A contagious respiratory illness that occurs in humans every year.

##### PANDEMIC FLU

- A global outbreak that occurs when a new strain of influenza virus emerges.
- Humans have little or no immunity.
- Carried and spread easily among humans, and has the capacity to cause serious human illness.

### 1.7 What should pharmacists be prepared for?

In a typical *community pharmacy* setting, the onset of pandemic influenza will mean increased demand for pharmacists' time due to:

- increased questions about influenza symptoms, treatment and prevention;
- increased requests for consultation on symptomatic relief products;
- triage role and referral to appropriate health care facility;
- increase in the inappropriate prescribing of antivirals;

- increased prescriptions for respiratory complications of influenza;
- increased requests for refills from people attempting to stockpile medications;
- increased questions about counterfeit and unapproved flu virus products;
- increased workload for all staff due to absences as staff either become ill or stay home to provide care for ill family members, and
- increased workload if pharmacy is involved in distribution of vaccines or antivirals.

In a typical *hospital pharmacy* setting, the onset of pandemic influenza will mean increased demand for pharmacists' time due to:

- increased patient load as patients with complications are admitted to hospitals;
  - increased prescription volume;
  - increased requests for consultations, especially infectious diseases and drug monitoring services;
- changes in traffic patterns as access to health care facilities may be restricted in whole or in part;
- increased workload for all staff due to absences as staff either become ill or stay home to provide care for ill family members;
  - changes in responsibilities may result if services are suspended due to staff shortages or restrictions on movement within institution, and
- increased workload if hospital is involved in distribution of vaccines or antivirals.

### 1.8 What will affect the impact of a pandemic on the general public ?

The impact of a pandemic depends on various factors:

- Virus effects:
  - Virulence will determine the severity of illness as well as the segment of the population most severely affected.
- Characteristics of the population:
  - The local population may have a higher than average segment of more susceptible persons,

<b>Table 2: Seasonal Flu Compared to Pandemic Flu</b>		
<b>Characteristics</b>	<b>Seasonal flu</b>	<b>Pandemic flu</b>
<b>What is it?</b>	A contagious respiratory illness that occurs in humans every year.	A global outbreak that occurs when a new strain of influenza virus emerges. Humans have little or no immunity. Carried and spread easily among humans, and has the capacity to cause serious human illness.
<b>How does it spread?</b>	Breathing droplets that have been sneezed or coughed into the air by someone with the flu, or having the droplets land on the surface of your eye. Shaking hands with an infected person or touching a contaminated surface, and then touching your own eyes, nose or mouth.	Same as the seasonal flu.
<b>Frequency</b>	Occurs every year.	Occurs two to three times a century.
<b>Duration of flu activity</b>	Usually lasts from November to April.	May last 12–18 months with more than one wave occurring in a 12 month period. Each wave lasting ~ 6–8 weeks.
<b>How long will I be sick?</b>	Those infected with the seasonal flu will become sick and tend to recover in about a week.  Generally, the flu and its complications lead to about 20,000 hospitalizations and 4,000 deaths every year in Canada.	Similar to seasonal influenza, most people will recover completely in 1–2 weeks.  Half of those who get pandemic flu will become ill. Most will recover, but it may take a while. One percent will be hospitalized; 0.4% of the clinically ill will die.
<b>Who is most at risk?</b>	Those with weak immune systems (elderly, children and the immunocompromised).	Everyone is susceptible. Depending on the strain of the virus, young healthy people are also a target.

- such as children, seniors, or immunocompromised.
  - Effectiveness of the response:
    - It is assumed that antivirals will be effective against pandemic influenza; the degree of clinical impact of medications cannot be predicted.
    - Infection control will depend on the public's response and adherence to these measures.
  - Public attitudes and behaviours:
    - Different segments of the population may be more able and likely to comply with any restrictions on activities.
    - Economic loss may be a driving factor behind people's decisions to return to work earlier than recommended.
- As front line health care professionals, the public will turn to pharmacists for easily accessible and credible information. Pharmacists will have an important role to play during a pandemic.

## 2. Roles

### 2.1 What is the role of the pharmacist?

#### Front line surveillance and alert

As the most accessible health care professional, pharmacists have an important role to play in planning communications to the public in the event of a pandemic.<sup>7</sup> It is important that the pharmacist convey concise and up-to-date information to the public. Pharmacists will also play a role in alerting public health officials of potential outbreaks.

The Ontario Pandemic Plan has developed various **data collection** tools to assist with influenza surveillance.

#### Triage and patient referral

Pharmacists will play an integral role in ensuring that the 'sick' stay away from the healthy in order to prevent the spread and transmission of the virus.

You may be the first line of contact for patients who are currently experiencing flu symptoms and are awaiting diagnosis. Patients who have been sent from the hospital to rest will also likely flock to pharmacies for answers to their health concerns. The Canadian Pandemic Influenza Plan encourages the public to consult pharmacists.

- One of the most important roles of the pharmacist will be to manage patients with mild illness so that they do not need to access the overburdened acute care settings.
  - Please see **Annex G, Section 3: Clinical Response and Appendix 1: Pandemic primer for front line health care professionals**, of the **Canadian Pandemic Influenza Plan for the Health Sector**

- Pharmacists will be required to counsel and educate on symptom identification, supportive management and when and where to seek medical assistance.
- Increased workload and influx of patients into pharmacies will require reassessment of the dispensing process to allow technicians to take care of the distribution of pharmaceuticals and allow pharmacists to provide direct patient care.<sup>13</sup>
- Pharmacists may also be required to participate in decision-making, therapeutic management and delegated prescribing of vaccines, antivirals and antibiotics.<sup>14</sup>
- The pharmacist may be the only health care professional in the community (especially remote and rural communities), in which case you may be required to take on additional duties and responsibilities during the pandemic. Make sure you are well informed and aware of what these responsibilities may entail by making early contact with local emergency organizations and public health officials.
- Pharmacists may be involved in conducting mass vaccination clinics and may be called upon to assist at non-traditional sites (e.g., community centres, schools). Pharmacists may be asked to participate in the distribution and storage of vaccines and various other pharmaceuticals.

#### Communication

Pharmacists will be required to establish and maintain relations with government, pharmacy associations, pharmacies (both community and hospital) and other groups within the community so that essential services of the pharmacy can still function in the event of a pandemic. Pharmacists must also maintain an open line of communication with



public health bodies, government, and pharmacy associations to provide concise, key messaging, and ensure that accurate information is being disseminated to the public.

Pandemic planning should also involve members of your staff to ensure that everyone understands their role and responsibilities before, during, and after, the pandemic. These communications should also include prevention measures and a discussion of your business continuity plan.

Messaging must be consistent, accurate, appropriate and up-to-date when being communicated to the public. Maintain an up-to-date list of provincial and local pharmacies; and other relevant contacts.

### **Participate in planning**

Take the initiative and become informed on local planning initiatives within your community. National and provincial pharmacy associations; public health regions; universities; and governments are bodies that may be developing plans. Make sure you are aware of the plans in your community and become familiar with how your pharmacy and staff will be involved in these plans.

Planning is essential to ensure that your pharmacy services will be carried out, even if you may be required to provide help in a different area. The more you prepare, the better able you are to cope with the economic, social and environmental strains when the pandemic influenza strikes.

### **2.2 What is the role of other health care professionals?<sup>15</sup>**

Family physicians, nurses and other health care professionals all have a role to play in the event of a pandemic. Similar to how pharmacists will act as sentinels, other health care professionals will play a role in disease prevention, surveillance, health promotion, chronic disease screening and prevention.

In addition to providing acute and continuing care to patients, health care professionals will be required to collaborate and work with each other in various settings. These health care practitioners also have a role in planning and preparing for the additional load of patients who will flock to their practice sites. These plans should be coordinated among other health care professionals (including pharmacists) to ensure that there is an adequate and appropriate response in the event of an influenza pandemic.

The degree of cooperation between these various groups and professionals and the level of preparedness will play a significant role in determining the success of Canadians in dealing with the pandemic.

For more information on the role of the family doctor and nurses in public health and emergency preparedness, visit the [Canadian Pandemic Influenza Plan](#).

### **2.3 What is the role of the federal government?**

The Public Health Agency of Canada (PHAC) was established by the federal government to provide federal public health leadership. In response to the SARS (Severe Acute Respiratory Syndrome) outbreak in 2003, Canada, with direction from the WHO, prepared the Canadian Pandemic Influenza Plan, a national strategy for emergency preparedness. This strategy was developed to assist all levels of government and jurisdictions in preparing their own emergency response plans.<sup>7</sup> The Canadian Pandemic Influenza Plan provides leadership and direction to provincial and territorial governments during pandemic influenza response, surveillance, international liaison and coordination of vaccine response.

A key role of the PHAC and public health regions during the pandemic is to deliver accurate and consistent information to pharmacists and other front line health professionals to disseminate to

the public.<sup>15</sup> Public health regions will be expected to communicate and participate in surveillance at the community level. It is important that open lines of communication are maintained with provincial governments in order to provide appropriate influenza prevention and treatment information to the public.<sup>7</sup>

There are various national surveillance programs that are in place to monitor and facilitate early detection of the influenza virus.

- **FluWatch**: A national surveillance network, which involves provincial/territorial reporting of influenza activity.<sup>16</sup> FluWatch produces reports for early detection of influenza, provides timely information regarding influenza activity, and monitors circulating strains of influenza virus for new subtypes and the development of resistance.<sup>16</sup>
- Other public health programs include the **Canadian Integrated Public Health Surveillance (CIPHS)**.

Other international surveillance programs to monitor:

- **Centre for Disease Control and Prevention (CDC)**
- **World Health Organization (WHO)**

While pharmacists are playing a stronger role in federal and provincial pandemic plans, this information may not translate into local level planning. Pharmacists should take the initiative and find out about local plans.

## **2.4 What is the role of the provincial government?**

With leadership and guidance from the federal government, provincial governments have also developed their own pandemic influenza plans. Provincial and territorial governments have an important role to play in acting as a liaison between local and federal jurisdictions. An open line of communication is essential to conveying consistent and current key messages to public health regions and the pub-

lic. Provinces and territories will be responsible for distribution of influenza vaccines and for providing influenza prevention, treatment and control.<sup>17</sup>

Refer to this list of provincial websites for more information:

**British Columbia**

**Alberta**

**Saskatchewan**

**Manitoba**

**Ontario**

**Quebec**

**New Brunswick**

**Nova Scotia**

**Northwest Territories**

**Newfoundland and Labrador**

**Prince Edward Island**

**Yukon**

**Nunavut**

## **2.5 What is the role of associations and non-government organizations?**

Non-Government Organizations (NGOs) and associations play an active role in pandemic preparedness planning. Associations can participate in opening up dialogue on a national and/or provincial level. Professional organizations and NGOs such as St. John's Ambulance and Red Cross will be key players in the dissemination of information. NGOs will also participate in providing health services, vaccinations and deployment of volunteers and health care workers to various sites. Professional organizations must establish strong communication networks with these organizations in order to maintain the ongoing exchange of key messages, information and products.<sup>17</sup>

The Canadian Pharmacists Association (CPhA) and other pharmacy associations are also taking an active role in pandemic planning and communication activities.<sup>18</sup>

Examples of these initiatives include:

- CPhA is represented on the **Canadian Coalition for Immunization Awareness Program (CCIAP)**, the National NGO Emergency Communications Network and the National Antivirals Working Group.
- The Alternative Surveillance Alert Project is also in effect in the majority of Canadian Association of Chain Drug Stores member pharmacies, which is linked to the Canadian Network for Public Health Intelligence and its Canadian Early Warning System.
- The system is in place to track over-the-counter sales of gastrointestinal and respiratory products. The system will allow for the identification of an outbreak within two to seven days based on trend maps and charts of normal and aberrant sales.

**Refer to CPhA's Pandemic  
Influenza resources for  
up-to-date information.  
[www.pharmacists.ca/pandemic](http://www.pharmacists.ca/pandemic)**

# 3. Keeping Healthy

## 3.1 Recommended priority groups

As front line health care workers, pharmacists will be exposed to pandemic influenza. Pharmacists are listed in the priority list of health care workers to be vaccinated first when a pandemic hits. PHAC outlines the recommended priority groups. It is important to note that priority groups may change upon identification and/or arrival of the pandemic strain.

Provinces and/or jurisdictions are encouraged to develop estimates for each respective group to guide their planning.<sup>7</sup>

## 3.2 Personal measures

There are several personal measures all persons should take to prevent the spread of the virus. Start incorporating these activities into your daily routine now so they become second nature.

### Personal Measures

- 1) Get an annual flu shot
- 2) Wash your hands frequently (for 20 seconds).
- 3) Cough into your sleeve, not your hand
- 4) Keep shared surface areas clean.
- 5) If you get sick, stay home.
- 6) **HANDWASHING** is the single most effective measure to reduce the risks of transmitting infection.<sup>5</sup>

- Get enough rest.
- Keep hydrated – drink plenty of fluids.
- Take acetaminophen or ibuprofen for fever or pain.
- If you are experiencing symptoms of the flu,

reduce your contact with others, especially seniors, children and those with chronic diseases or weakened immune systems.

- Avoid sharing food, utensils, towels or handkerchiefs in the workplace.
- Establish policies that people with a cough or fever should not come to work.
- Keep alcohol-based (60–90%) hand sanitizer (gel or wipes) at work, home and car.
  - Use before and after direct contact with a patient.
  - Make this available to staff with frequent contact with public and payment methods. (e.g., cash, credit and debit cards.)
- Keep workplace and commonly touched surfaces and items (sinks, countertops, door handles, cash registers) clean. The influenza virus can live on hard surfaces for up to two days, but are inactivated by regular household disinfectants (e.g., alcohol, bleach, ammonia, or vinegar to kill germs).
- Host an influenza vaccination clinic.
- Use Personal Protective Equipment (PPE) to prevent contact with patient blood, body fluids, non-intact skin or mucous membranes.

## 3.3 Droplet precautions and personal protective equipment

Refer to the PHAC's website for the most current and up-to-date information on appropriate personal protection equipment.

Health care professionals will be advised about the need for PPEs but pharmacists should be knowledgeable on how to apply, use, remove and dispose of PPEs properly.

## 4. Your Plan

### 4.1 Why should pharmacists plan?

The common phrase, “you can only predict the future by what has happened in the past,” clearly applies to influenza pandemics. History has shown that on average an influenza pandemic takes place every 10 to 25 years. From the initial onset of the pandemic to the production and dissemination of an effective vaccine, there will be enormous strain on all medical, social, and economic resources. A pandemic wave will generally last for about six to eight weeks in a local community.<sup>19</sup> Consider the impact a pandemic will have on your patients, business, staff, and your family’s health. Schools may be closed and disruptions in the mass transit system may occur. Patients will flock to your pharmacy for assistance and answers.

Pharmacists have had to play an integral part in various other disasters to date. The SARS outbreak in Toronto in 2003 tested all aspects of social, economic, and health care systems. The outbreak required pharmacists to not only respond to series of questions about the use of masks and gloves, but also to inappropriate prescribing of drugs, and the monitoring of drug utilization.<sup>4</sup>

The development of efficient and effective interventions and plans will allow you to anticipate, prepare and plan for an influenza pandemic. You will be able to better prepare for **drug supply shortages** and a massive influx of patients. Each influenza season should be used as an opportunity to refine and practice your plan.<sup>14</sup> By preparing for an impact, the individual, organization or community increases their ability to cope and free up limited resources to be applied as needed.<sup>7</sup> Learn and familiarize yourself with your institution’s plans and policies.

In the event of a pandemic, pharmacists will be dealing with a global crisis that will require their expertise. Both the sick and the healthy will flock to pharmacies for answers or to stock up on medications and seek advice on prevention. A practice without a plan is bound to fail and be overwhelmed in the event of a pandemic.

To aid in planning for all stages of a pandemic, the province of British Columbia has developed a **checklist** outlining various steps to deal with public education, vaccines and anti-virals for each pandemic stage.

### 4.2 Pre-pandemic

Pharmacists have a responsibility to both the public and their provincial college in the event of a pandemic. Participating in national and local preparedness activities will allow you to fulfill these responsibilities to the best of your ability.

It is important to be part of a plan or to create your own plan. Identify key players and ensure that each individual and/or organization is aware of their roles and responsibilities within the plan.

Assess your networks, readiness of your staff, and ability of your business to stay open.

- Establish strong communication networks (such as with local pharmacies, hospitals, public health offices, provincial and territorial emergency plans) in order to encourage the ongoing exchange of consistent and factual information, key messages and products to the public.
- Make sure you have the appropriate contact numbers of important local, provincial and public officials in the event of a pandemic.
- Practice sites may be asked to participate in the

distribution and storage of vaccines and various other pharmaceuticals.<sup>14</sup>

- Subpopulations (e.g., rural, First Nations, small communities) need to be taken into consideration during planning.
- Develop and test your **business continuity plan** to ensure that you have the ability to provide care and services, and survive a pandemic.

### 4.3 Supply chain, monitoring drug-utilization and facilitating drug supply

In the event of a pandemic, pharmacists will be required to deal with not only staff shortages, but shortages in drug supply. There may be an increased use of antibiotics, antivirals and cough/cold/fever products. Pharmacists must prepare and anticipate the increase in medication needs and deal with possible drug supply shortages.

The greatest challenge for pharmacists will be to continue to provide seamless, equivalent therapy at comparable costs during a pandemic. Disruption to the drug supply chain of pharmaceuticals may be due to:

- road closures;
- decrease in the number of staff due of illness;
- increased demand because of the public panic;
- decrease delivery from wholesalers due to staff shortages or restrictions on mobility, and
- inappropriate stockpiling of medications;

It is important that pharmacists continue to adhere to normal ordering patterns and avoid stockpiling medications. All pharmacists should continue acting responsibly and professionally in maintaining stocks of medicines for the on-going treatment of their patients. Stockpiling of medications can result in reduced volume of medicines in supply chains, which could compromise the ability of our health care system to respond to a critical situation.

For more information on dealing with drug shortages, please refer to **CPhA's Drug Shortages Guide: A Guide for Patient Assessment and Management**, which provides an overview and description of what

to expect during a drug shortages crisis.

In the event of a drug shortage, it is important that pharmacists and prescribers convey reassuring and consistent messaging to the public, while continuing to ensure that patients receive seamless care.

Suggested points to share with patients in the event of a pandemic:

- Reassure patients they should be able to obtain normal supplies of medications as they require them.
- Reassure patients that in the event a pharmacy does experience a drug shortage, there are alternate sources of medication supply.
- Reinforce the stockpiling of medication is not necessary and discourage patients from obtaining prescription drugs from over the Internet.
- Reassure patients that there is a national stockpile of antivirals that will be distributed to the provinces on a per-capita basis and will be made available if needed.<sup>5</sup>
- Encourage patients to reorder medications when five to seven days of supply remain (e.g., don't let your supply run out).
  - Make sure patients are aware of alternate means of reordering and getting medications (e.g., online, fax or phone and delivery methods) in the event of a pandemic. This will prevent healthy patients from coming to the pharmacy and getting sick.
- Continue to encourage patients to keep things in perspective and to take special care in maintaining their health and reducing stress levels.
- Encourage patients to adopt basic infection prevention measures such as washing hands often and thoroughly with soap and warm water for 20 seconds or to use alcohol based (60–80%) hand sanitizer.<sup>15</sup>
- Reassure patients that the pharmacy supply chain has a demonstrated record of being resilient during many disasters.
- Maintain open lines of communications with physicians and patients.

#### 4.4 Business continuity plans

A business continuity plan ensures that the critical functions of a business can continue during and after an unexpected event. It involves planning for activities you should undertake to ensure the resumption of essential business services in the event of an emergency.<sup>20</sup>

Essential services such as health, transportation, and waste disposal should maintain a high degree of preparedness. You will need to consider whether your pharmacy should remain open or closed.

Your business continuity plan should include an assessment of your staff, your plan and network(s). Pandemics do not only affect health care systems, schools and citizens, they also have a large impact on businesses.<sup>21-22</sup>

The **Public Safety Canada** provides information on where to find information to help with business continuity planning for pandemic influenza.<sup>22</sup>

#### Assess the readiness of your business to stay open

Consider:

- Risks/impacts to remaining open or being closed must be considered in order to deliver appropriate care and treatment.
  - Will pharmacy services be delivered outside the pharmacy (e.g., in conjunction with other pharmacies, hospitals) without posing a risk to staff and the public?
  - Discuss with staff as part of preparedness planning.
- Identify essential pharmacy services and the core individuals required to carry out these services and the skills required to keep them functioning.
  - Who are the core people required to perform these essential tasks?
  - Is there is a system for clients to pre-order/order medications without having to come into the pharmacy (e.g., phone, fax, email, online)?

- Prepare an efficient system for the pick-up or delivery of medications.
- How will patients who are healthy gain access to their prescriptions?
- What are the critical staff numbers and skills required? (To minimize the spread of infection, you want to ensure that everyone remaining in the pharmacy has an essential role and understands their role as previously discussed)
- Are there alternate and/or sufficient back ups in the event of a high level of staff absenteeism?
- Consider high risk patients (e.g., diabetes, heart failure, renal dialysis)
- Other services such as specialty compounding, parenterals (home IV patients).

#### Assess the readiness of your network

- Open up lines of communication and collaborate with federal, provincial, municipal governments and/or emergency planners. Be prepared to participate in their planning process and share your own.
- Use each influenza season as an opportunity to educate staff and practice your plan.

#### Assess the readiness of your staff

The pharmacy owner/manager is responsible for the actions and safety of other staff and the public. It is important to make certain your staff is healthy before allowing them to return to work. You must ensure that a staff person's actions or inactions do not cause harm to others.<sup>23</sup>

Consider:

- Risks/impact on staff and clients/patients
  - Who is in charge ('influenza' manager)? Do they understand their roles?
- Each individual is responsible for overall workplace health and safety.
- Encourage and **promote influenza vaccination** among your staff.
- Encourage staff to return to work once they are well.

- Plan for a staff absenteeism of 20% on any given day during the peak week of the outbreak.<sup>4</sup> Ensure that staff is healthy and have completed the appropriate quarantine period before returning to work.
- Make sure staff understand the process of how to deal with sick patients coming into the pharmacy and issues relating to a drug shortage.
- Recognize the differences between a cold and the flu.

**Ensure that you have sufficient resources to protect your staff and clients during the pandemic**

- Consider risks/impact on staff and clients.
- Host a flu vaccination clinic.
- Consider infection control supplies (e.g., hand-hygiene products, tissues, gloves, masks and appropriate disposal techniques).
- Learn how to manage staff who become ill at work.<sup>23</sup>

The Public Health Agency of Canada provides a pandemic flu planning checklist to help you prepare

for your personal and staff's health. Make sure to share with staff and patients how to stay healthy by giving out **this handout**.

**Maintain open lines of communication with your staff and educate your staff**

- Develop tools and participate in training programs to create awareness about the pandemic influenza among your staff.
- Ensure that staff are aware of all aspects of the plan and each person understands their role during the pandemic.
- Provide education on prevention and protection measures.
- Establish expectations that staff with a cough or fever should stay at home.
- Encourage staff to return to work once they are feeling better.

An increased workload and influx of patients into pharmacies will require the reassessment of the dispensing process to allow technicians to take care of drug distribution and allow pharmacists to provide direct patient care.<sup>13</sup>



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