
New Brunswick Contingency Plan for Pandemic Influenza

A Summary

What is pandemic influenza?

Influenza is a viral respiratory infection that spreads easily from one person to another.

Most New Brunswickers are familiar with the symptoms that inevitably accompanies the “flu”. Vaccination, hand washing and just staying home when you are ill are measures that reduce the possibility of influenza being transmitted from one person to another.

However, despite these measures we remain vulnerable to this illness. Most will recover from influenza after 10 days or so, however, others, particularly the elderly and the very young may develop severe medical consequences such as pneumonia or bronchitis that can result in death. It is important that all New Brunswickers understand that influenza can be a serious illness.

Influenza viruses are very adaptable and change their genetic makeup slightly every year. That is why we require an influenza vaccination annually to protect us against these emerging new strains.

However, what would happen if a totally different type of influenza virus were to emerge in our communities – one which could cause high rates of illness and even death? Since people have no protection against the new strain, it could spread rapidly around the world, causing severe complications, such as pneumonia and death in previously healthy individuals. This is called an influenza **pandemic**.

When will the next influenza pandemic hit?

There have been pandemics in the past which caused high rates of illness and death and, according to medical experts, the next pandemic influenza could occur at any time.

Historic evidence suggests that pandemics occur three to four times a century.

There were three influenza pandemics in the 20th century: the 1918 Spanish flu, the 1957 Asian flu, and the 1968 Hong Kong flu. The Spanish Influenza pandemic is by far the most devastating disease outbreak recorded in the last century; over 20 million people died and more than 200 million were affected.

The New Brunswick influenza situation was described in 1918:

“I think, without doubt, that so far as the mortality caused by it is concerned, it has been the most severe epidemic which has ever visited the Western Hemisphere in historic times, and, perhaps also, the Eastern world, since the bubonic plague ceased to ravage Europe”

Dr. G. Melvin, New Brunswick’s first Chief Medical
Officer of Health

What should we expect?

It is not easy to predict what will happen during an influenza pandemic. Projecting how many people may be ill or may die is very difficult unless the virus causing the pandemic is known. Typically, 5 – 10% of a community is affected during “ordinary” flu season. Imagine what could happen if 25% and more of the people in your communities were to become ill. This means your doctor, your mayor, the people who ensure our communications network and electricity is maintained and the people who care for our children may be ill and unable to work.

Imagine in your small community of 1000 there are 250 people that are ill and probably unable to work for 10 days due to their illness. Perhaps one of those affected is a fire fighter, a police officer, a doctor or a nurse. Or perhaps, they have a spouse, a parent or a child who is ill and requires care at home. How would we cope? Just as we plan for hurricanes, for floods and other disasters that may interrupt our society as a whole we must also prepare for a disease outbreak such as influenza.

Who does what during a pandemic?

Even though there is currently no pandemic influenza in Canada or the world, planning for a pandemic influenza is crucial for all levels of government and organizations. Planning is occurring at the international level with the World

Health Organization which monitors global influenza illness. In Canada, pandemic planning is overseen by the National Pandemic Influenza Committee on which New Brunswick is represented to develop national preparedness. All provincial governments are responsible for developing pandemic plans. Regionally, public health departments, regional health authorities, in conjunction with many community partners are actively developing regional response plans. Municipalities are responsible for ensuring essential services can be delivered during a pandemic and, in some cases, offering assistance to the health care sector on request. This collaborative planning process, particularly at the local level, is absolutely essential to ensure a coordinated response to a pandemic and its consequences.

The plan for pandemic influenza will be part of an overall health emergency management response within the province. Plans are underway to increase training, establish integrated health emergency incident command systems, and conduct exercises to plan for disaster contingencies, as well as refurbishing emergency supplies around the province.

What are the Components of the New Brunswick Plan?

The provincial plan is an evolving document and will change as new information comes to light. The following five components, modeled after the national plan and are considered to be the most crucial areas in planning for an influenza pandemic. They are:

Surveillance

The goal of the provincial surveillance and monitoring program is to develop, improve and maintain a system for the ongoing collection, analyses, interpretation and timely dissemination of health data essential for measuring changes in population health. Effective surveillance programs are essential for studying the course of the disease and are crucial in the development of vaccines. Since the influenza A virus constantly changes its antigenic properties causing yearly epidemics and pandemics at unpredictable intervals, surveillance is essential to provide timely and sufficient information on the influenza activity in order to make adequate public health decisions. Influenza surveillance occurs year round in New Brunswick.

Enhancements to the current surveillance systems will increase the probability for adequate warning and better monitoring of the novel virus activity. The

enhanced plan will augment the already existing Severe Respiratory Infection surveillance in hospitals.

Surveillance is a crucial component of the contingency plan and surveillance activities will be “ramped up” by phase in response to international, national and local events.

Emergency Community Response

An influenza pandemic will undoubtedly constitute a health emergency in New Brunswick. Typically, emergencies have been perceived as disasters, e.g. plane crashes, hurricanes, floods or other phenomena that may last hours or days. They may result in many casualties creating a one time demand on health services. A health emergency like pandemic influenza, however, can be expected to be prolonged with two or more successive waves creating multiple demands on multiple sectors. Each wave is expected to last approximately six to eight weeks each. The resulting impact on human resource infrastructure can, potentially, be staggering.

The emergency community response components of the plan are intended to provide guidance to the non health sector in terms of planning for pandemic influenza. Planning for any emergency is crucial for any business or municipality. The human resource impact alone creates a potential for disastrous consequences. Key personnel in operational or leadership capacities may become ill. As a result municipalities and local service districts must plan for redundancy in key positions, prepare plans for significantly reduced staffing as well as continue to provide essential services. Planning is happening now in the non health sector to ensure that all sectors of our society are prepared.

Public Health Measures

Historically, public health authorities have used the notion of “social distance” to assist in the control of a communicable disease. It is an action that limits the mingling of persons in a community, thus, decreasing the risk of exposure to a disease like influenza. Decisions like canceling public gatherings or closing schools would be included in social distance measures. When a pandemic alert happens decisions will be made regarding these types of community wide measures.

Vaccine and Anti-Virals Management

Since their discovery more than half a century ago influenza vaccines have been the most important development in decreasing illness and death from influenza. Promoting an annual flu shot has become a routine public health activity across Canada. This is because the flu vaccine is 70% - 90% effective in preventing the flu in healthy adults. The protection generally lasts for 4-6 months.

The components and subsequent production of the annual vaccine is based on circulating virus strains identified through a network of worldwide surveillance. In Canada, the annual influenza vaccine available is a trivalent vaccine, composed of two Influenza A and one influenza B subtypes. It must be recognized that because vaccine production is dependent on the identification of circulating strains delays will be experienced in the event of an emerging novel virus as in a pandemic. The vaccine supply will be limited and may be available only in countries capable of production.

Anti Viral Medications

While vaccines, when available, will become the primary public health intervention during the pandemic. However, there is a role for anti-viral drugs in the plan but has not been fully developed. Anti-virals are considered effective for the prevention and treatment of Influenza A. Assuming that a vaccine will not be available within the first several months of an existing pandemic, the use of anti-virals is considered important within any plan. There are two classes of antiviral drugs currently available in Canada: M2 ion channel inhibitors (Amantadine and rimantadine) and neuraminidase inhibitors (Zanamivir and oseltamivir).

The national Anti Virals Working Group has developed strategic options on the use of antiviral drugs during a pandemic. The options include identification of priority groups for receipt in the event of a shortage. New Brunswick will adopt those national recommendations.

Communications

The goals for the communications component of the plan include:

- Creating a rapid transfer of information (from local to regional to provincial to federal levels and vice versa) and updates

- Creating the ability to assimilate rapid information related to illness, vaccine uptake, adverse events, etc.
- Effective distribution of information, for instance, information packages to the medical community, the media, and the public.

Health Services

Because the scope of Health Services is so broad there must be discussion as to what is encompassed in “Health Services”. For purposes of this plan Health Services encompasses the responsibilities both regionally and departmentally and refers to a) RHAs (delivery of services); b) Institutional Services (Hospital Services, Extra Mural Program, Tele-Care, Ambulance Services; and c) Mental Health Services. Imagine the demand for health services during a pandemic with much higher than usual rates of illness. The health sector is currently planning to deal with a surge in the numbers of patients that may require treatment. The Department of Health and Wellness are currently developing strategies along with the regional health authorities to maintain services during a pandemic influenza. Any deviations from regular delivery of service that may need to occur will be communicated to the public.

For further information:

Office of the Chief Medical Officer of Health
New Brunswick Department of Health and Wellness
Carleton Place
520 King Street
Fredericton, New Brunswick E3B 6G3
506-453-2323

Or

Contact your local public health office

Or

www.gnb.ca, keyword: Health, for detailed information on pandemic influenza and links to other reliable sources