



Community Health Nurse Leadership in Shaping Canada's Pandemic Preparedness for the Health Sector

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Objectives

- To showcase nursing leadership in the context of federal public health, and
- To provide an overview of national health sector pandemic preparedness activities in Canada.

Blueprint for Action

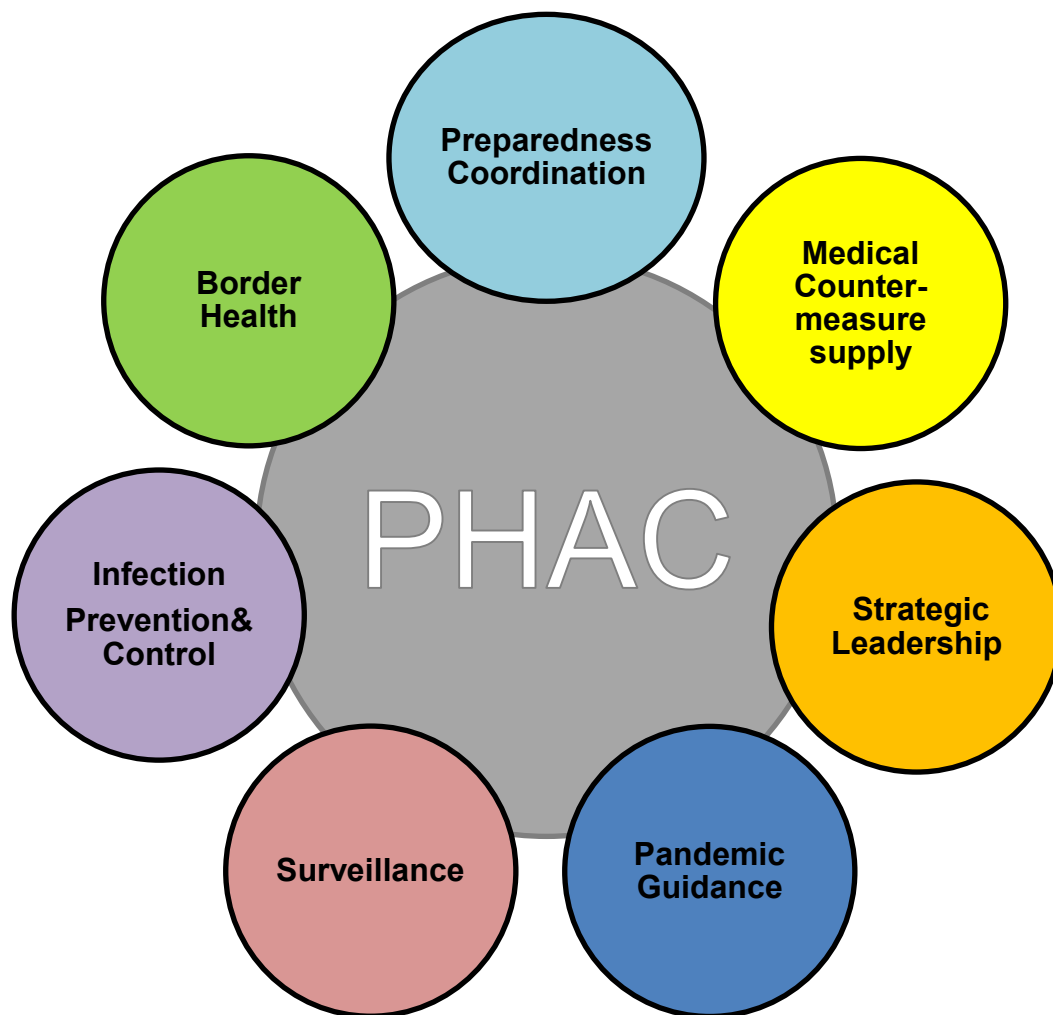
This presentation corresponds to the *Blueprint for Action for Community Health Nursing in Canada* sub-themes:

- Community Health Nurse Leadership and Voice
- Interprofessional & Intersectoral Partnerships

Pandemic Preparedness in Canada

- 1997: First avian influenza H5N1 outbreak in humans in Hong Kong caused concern about potential for pandemic.
- 2003: Severe Acute Respiratory Syndrome (SARS) outbreak highlighted vulnerabilities in Canada's health emergency response system.
- 2006: Creation of the Public Health Agency of Canada; mandate includes public health emergency preparedness and response.
- 2006: Concern over avian influenza H5N1 led the federal government to invest \$1B over 5 years to strengthen federal pandemic preparedness/response capacity.
- 2009: H1N1 pandemic provided the first real test of Canada's pandemic preparedness planning efforts.
- Post-H1N1: Pandemic preparedness activities continue to evolve based on the H1N1 experience and best practices.

Nursing Roles in Pandemic Preparedness



Nursing Leadership in Health Sector Pandemic Preparedness

- Canada's pandemic preparedness requires a multifaceted approach.
- Nurses at the PHAC provide leadership for the health sector on overall coordination of national level pandemic preparedness activities, including:
 - Guidance development;
 - Vaccine supply assurance;
 - Antiviral stockpiling;
 - Influenza surveillance data awareness;
 - Partner and stakeholder engagement.

Guidance Development

Nurses lead the development of guidance for:

Preparedness

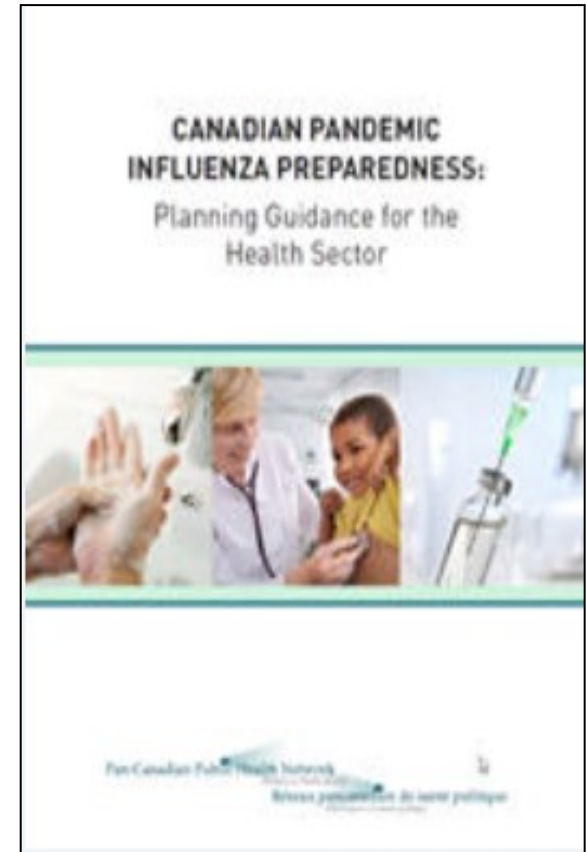
Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector (CPIP)

outlines how federal, provincial and territorial (FPT) health sectors will work together on pandemic preparedness and response:

- Target audience: FPT ministries of health
- Provides strategic guidance and operational advice
- Supports a risk management approach
- Considers Canada's diversity

Response:

- Public health: management of cases and close contacts.
- Clinical care: use of antiviral drugs and management of severe infection.



Pandemic Vaccine Strategy

Nurses provide strategic direction and coordination on pandemic vaccine readiness.

- Vaccine is the cornerstone of Canada's pandemic preparedness.
- The objective of Canada's vaccine strategy is to have a safe and effective vaccine, made available as early as possible.
- Canada has a 10 year primary supply contract with a domestic manufacturer for priority access to enough vaccine for everyone in Canada in a pandemic;
 - a back-up supply contract is being tendered.
- At present, it takes about 19 weeks for pandemic vaccine to be produced and the first shipment delivered.
- Research is currently underway into production technologies that may reduce this timeline.
- Guidance has been developed for mass vaccination clinics.

Antiviral Strategy

Nurses provide facilitate and coordinate antiviral stockpile decision making.

- Canada has stockpiles of antiviral drugs to ensure equitable access to a secure supply at the time of a pandemic.
- Antiviral drugs are the only influenza-specific pharmaceutical intervention that can be used from the start of a pandemic.
- Antiviral stockpiles are held in each province and territory (PT) for distribution in the event of a pandemic; a back up supply is held federally.
- Stockpiles contain oseltamivir and zanamivir.
- Experts recommend that the PT stockpile hold enough antivirals for all Canadians who may need treatment during a pandemic.
- A process is underway to update the recommendations for antiviral stockpiles to support governments to make purchasing decisions.

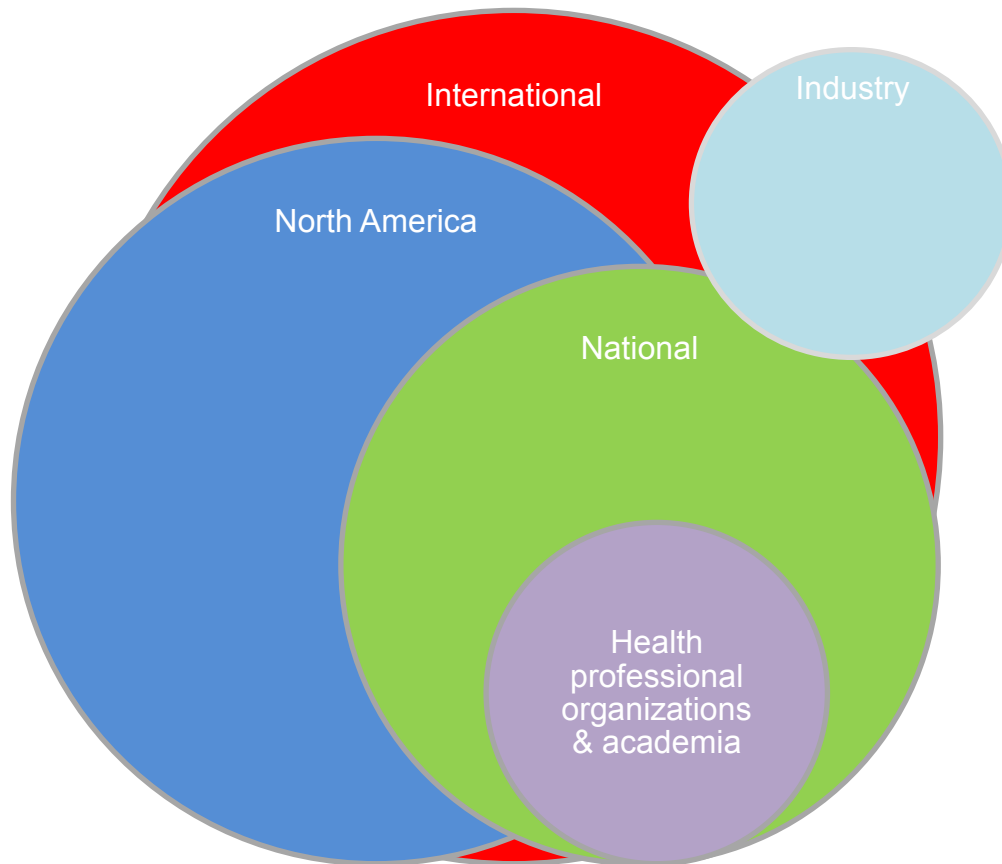
Surveillance Strategy

Nurses work closely with epidemiologists on preparedness for emerging respiratory pathogens.

- Canada conducts ongoing surveillance on influenza and emerging public health threats.
- Pandemic surveillance is built on existing seasonal influenza surveillance.
- FluWatch:
 - Canada's national influenza surveillance system;
 - Monitors the spread of influenza and influenza-like illnesses as well as antiviral resistance, throughout the year.
- National Microbiology Laboratory:
 - Tests influenza specimens for strain characterization and antiviral resistance.
- Vaccine Safety Surveillance:
 - The Canadian Adverse Event Following Immunization Surveillance System detects vaccine safety signals for all vaccines, including new pandemic influenza vaccines.

Partnerships in Pandemic Preparedness

- Collaboration between all levels of government and stakeholders is central to effective pandemic planning.
- Nurses foster partnerships and lead collaborations.



Pandemic Preparedness in Canada: Key Elements

Pandemic Preparedness in Canada: Key Elements

Milestones

1990s-1990s	Pandemic plans developed by the Canadian Federal/Provincial/Territorial governments
2001	10-year contract (2001-2010) established with a domestic supplier to produce a pandemic influenza vaccine in Canada in the event of a pandemic
2002	SARS outbreak highlighted the need for global preparedness for communicable diseases
2004	Antiviral stockpiles established across Canada
2005	Public Health Agency of Canada and Federal/Provincial/Territorial Public Health Network created
2006	Canadian Pandemic Influenza Plan for the Health Sector (CPIP) updated
2009-10	H1N1 Influenza pandemic (swine origin) tested pandemic plans
2011	New 10-year (2011-2021) contract established for primary domestic pandemic influenza vaccine; short-term back-up vaccine contract also established
2011	Antiviral stockpile replenished
2012	CPIP Main Body and 5 annexes (vaccines, antivirals, surveillance, laboratory and communications) prioritized to be updated to reflect lessons learned during 2009 H1N1
2014	Pandemic vaccine "fill-line" manufacturing capacity improved to be able to produce more pandemic vaccine/week
2014	CPIP Main Body revised
2014	Canadian Immunization Research Network (CIRN) established
2015	Government of Canada's website (www.Canada.ca/flu) launched
2017 & beyond	<ul style="list-style-type: none"> National antiviral strategy renewal underway Remaining CPIP Annexes (Public Health Measures, Health Services, First Nations, Psychosocial) underway Enhanced knowledge sharing and innovative approaches to pandemic planning in Canada underway

Antiviral Strategy

Canada's national antiviral strategy includes a stockpile of antiviral drugs to be used during a pandemic. Antivirals are the only influenza-specific pharmaceutical intervention that can be used from the start of a pandemic (until a vaccine is available). Antivirals are safe and effective, and are used to shorten the duration and severity of illness, especially when they are used early. Stockpiling antivirals in Canada ensures there will be equitable access to a secure supply of drugs should an influenza pandemic emerge.

- Since 2004, there have been two stockpiles of antivirals in Canada: the National Antiviral Stockpile (NAS), held in each province and territory and the National Emergency Strategic Stockpile (NESS) which provides surge capacity for the provinces and territories.
- The antiviral stockpiles are comprised of oseltamivir and zanamivir.
- Experts recommend that the NAS hold a sufficient number of antivirals for all Canadians who may need treatment during a pandemic.
- The updated recommendations on the use, use and composition of the NAS will support federal, provincial and territorial decision-makers with respect to their procurement plans and stockpile management options in the coming years.

Pandemic Vaccine Strategy

Canada's pandemic influenza vaccine strategy is a fundamental aspect of Canada's pandemic preparedness. A safe and effective vaccine made available as early as possible is the most effective way to prevent illness and death from pandemic influenza.

- Canada has a 10-year contract (2011-2021) with a domestic manufacturer to produce enough vaccine for everyone living in Canada should a pandemic occur.
- Canada's pandemic vaccine strategy also includes a back-up vaccine supply contract, in the event of a supply disruption with the primary domestic supplier.
- Pandemic vaccine typically takes 19 weeks from seed strain identification to delivery. Canada is monitoring research underway to reduce this timeline with new vaccine technologies (cell and plant-based vaccines).

Surveillance

Canada conducts surveillance on influenza and emerging public health threats.

- FluWatch is Canada's national surveillance system used to monitor antiviral resistance and the spread of seasonal flu and flu-like illnesses throughout the year.
- The National Microbiology Laboratory tests influenza specimens for strain characterization and antiviral resistance.
- Vaccine Safety Surveillance is a system used to detect vaccine safety signals for all vaccines, including new pandemic influenza vaccines.

Planning Guidance

The Canadian Pandemic Influenza Preparedness Planning Guidelines for the Health Sector (CPIP) is guidance for Federal/Provincial/Territorial health sectors outlining how we work together to prepare for and respond to an influenza pandemic.

The CPIP...

- ...has a main body, which provides overall strategic guidance;
- ...includes several annexes which include operational and technical advice;
- ...is flexible so that users can adapt it for their own planning;
- ...is evergreen and updated to reflect new evidence and best practices;
- ...includes considerations for Canada's most vulnerable people;
- ...is based on a risk management approach to provide a flexible approach based on the impact of the pandemic.

International Collaboration

Canada works with international health partners on pandemic preparedness initiatives.

- Global Surveillance is conducted to detect and monitor novel viruses so that Canada can respond to emerging health threats.
- Trilateral Cooperation with the United States and Mexico allows for a North American response, as described in the North American Plan for Animal and Pandemic Influenza (NAPAPI).
- International Cooperation with the World Health Organization (WHO) and the Global Health Security Action Group (GHSAG) strengthens public health pandemic preparedness worldwide.

Research

Canada supports research to advance our understanding of pandemic influenza. The Government of Canada has identified influenza research among its highest research priorities.

The Canadian Immunization Research Network (CIRN) is a "network of networks" that addresses diverse immunization research requirements in Canada, such as:

- Vaccine and antiviral effectiveness
- Rapid evaluation of safety of candidate vaccines
- Modelling and economic analysis
- Interventions that can help improve vaccine acceptance & uptake

The National Microbiology Laboratory conducts influenza research, including the study of novel viruses and antiviral resistance to influenza.

Conclusion

Nurses working in federal public health:

- Play an important role in public health policy development and programs at the federal level;
- Have established partnerships both internationally and in Canada;
- Make a strong contribution to Canada's readiness for the next influenza pandemic.