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<th>Immunization Competencies Education Program Module 12 - The Canadian Immunization System</th>
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Competency: Demonstrates an understanding of the immunization system in Canada and its impact on his/her own practice.

Learning Objectives
Upon successful completion of this section the health professional will be able to perform the following:

1. Describe how the National Immunization Strategy (NIS) is relevant to practice.
2. Distinguish between federal and provincial/territorial responsibilities as related to immunization programs in Canada.
3. List who can administer immunizations in Canada.
4. Describe the current status of immunization registries in the province or territory where practice is based.
5. Describe the process required to introduce a new publicly funded vaccine in a province or territory.
6. Explain the reasons for the variable immunization schedules among the provinces and territories.
7. Locate the current immunization schedule for the province or territory of practice.
8. Identify laws and regulations that may affect immunization delivery programs in provinces and territories.

National Advisory Committee on Immunization (NACI)

The National Immunization Strategy (NIS) was developed in Canada to address many of the issues related to immunizations. The federal government of Canada as well as provincial and territorial (F/P/T) governments launched the NIS. It is a comprehensive strategy to meet the current and future needs of all Canadians. The NIS is a means for F/P/T jurisdictions to work in partnership to improve the effectiveness and efficiency of immunization programs in Canada. The benefits of strengthening collaboration are anticipated to include:

- Reduction in vaccine-preventable diseases.
- Improved access to timely immunization programs.
- Improved efficiencies of immunization programs.
- Better vaccine safety monitoring and response.
- Enhanced affordability of vaccines.
- Improved security of vaccine supply.
- Public confidence in vaccines/response to growing anti-immunization concerns.

The NIS planned to achieve these goals through the use of five different strategies. These include:

1. National goals and objectives.
2. Immunization program planning.
3. Vaccine safety.
4. Vaccine procurement.
5. Immunization registry network.
National Goals and Objectives

The purpose of having national goals and objectives for immunization programs would be to support the following:

- Reductions in vaccine-preventable diseases.
- Improved vaccine coverage rates.
- Objective measurement of progress/program evaluation.

In the current model, national goals are determined by consensus conferences developed by Health Canada. Although these conferences have a broad level of stakeholder participants, the national goals are not necessarily endorsed by all F/P/T governments. Endorsement of national goals is crucial to allow their full integration into immunization program planning and delivery efforts. These national goals are also crucial for ensuring maximal vaccine coverage and disease rate reduction.

Proposed NIS approach: The long-term vision of this component of the NIS is to develop national goals and objectives for immunization, and the recommendation of these national goals and objectives for endorsement by all F/P/T governments, where appropriate.

Immunization Program Planning

Immunization program planning is a key component of the proposed National Immunization Strategy. The goal of this NIS component is to use common criteria to support collaborative, national assessment and prioritization of new vaccines. Currently the National Advisory Committee on Immunization (NACI) makes recommendations on the use of specific vaccines for all Canadians. Each province or territory then adapts NACI recommendations based on their regional situation. This leads to the development of 13 independent decisions on immunization.

Based on the NIS recommendations the Canadian Immunization Committee (CIC) was created to evaluate the integration of vaccines into the publicly funded immunization program. The CIC is the F/P/T body that provides leadership in immunization by giving advice and recommendations on implementation of a NIS and issues affecting immunization. The objectives of a national process for immunization program planning are to minimize duplication of effort and to move towards harmonization of immunization schedules across the country.

Vaccine Safety

Vaccine safety is an integral component of a national immunization strategy. Objectives of this component are to optimize the vaccine safety system, maintain professional and public confidence in the safety of vaccines, and address growing anti-immunization concerns by improving the vaccine safety monitoring system and the public health response.

The very success of immunization programs has proven to be their "weakness", as generations grow up in the absence of diseases that used to wreak havoc on the population and provided the stimulus for people to seek protection. There is a resulting low risk tolerance for vaccines, which has raised public expectations for vaccine safety, especially considering that vaccines are administered to healthy people. The presence of organized action groups opposed to immunization and capable of broad dissemination of information/opinions also highlights the need to address safety concerns in a more coordinated and
The NIS proposed three methods to increase vaccine safety:

1. Establish a network of dedicated F/P/T vaccine safety contacts in all jurisdictions to:
   a. Improve signal generation and surge capacity.
   b. Identify and address potential vaccine safety issues.
   c. Conduct surveillance of adverse events following immunization (AEFI) reports.

2. Improve the current system of public health response. Establish a clinical assessment/referral system to clinically assess and follow up individuals with suspected AEFIs. If physicians and other healthcare professionals require assistance in making the clinical assessment or determining the appropriate follow-up, they could contact the appropriate referral centre with expertise in this area for advice.

3. Use a vaccine safety committee to address any limitations of the current vaccine monitoring and public health response systems.

Vaccine Procurement

The objectives for the vaccine procurement component of the NIS are to ensure the most-effective value for vaccines, the long-term security of supply for vaccines, the quality of supply, and improvements in accountability.

At the time the NIS was established most of the vaccines purchased in Canada were purchased by the individual province or territory from the manufacturer. The remaining vaccines were purchased through the existing F/P/T procurement process, which is coordinated by Public Works and Government Services Canada (PWGSC).

This mix of buying has resulted in differential vaccine prices across Canada. A bulk procurement process has been established which has strengthened the security of vaccine supply, including management of vaccine during times of shortage. Currently, P/Ts are all actively involved in negotiations and are benefiting from multi-year contracts with multiple providers.

Proposed NIS approach: To address limitations in the current system, the NIS proposed:

- Increase the capacity to ensure security of supply (e.g., multi-year contracts).
- Improve the ability to respond to escalating vaccine prices (e.g., proactive planning of longer-term vaccine needs/orders, use of multi-year contracts).
- Develop a mechanism to include value-added products/services as part of the process and to redistribute these funds as part of the NIS.
- Collaborate with vaccine regulator to ensure timely communication on newly developed or released vaccines.
- Improve information-sharing regarding P/T contracts.
- Improve the administrative process, including development and use of the following:
  - Standardized forms and communication tools to streamline process.
  - Standards for specifications concerning vaccine products and delivery processes.
  - Clear contract parameters and bid evaluation criteria before the tendering process.
  - Performance evaluation standards for contracts.
Immunization Registry Network

The NIS called for the development of a national registry to:

- Enhance national surveillance of immunization coverage rates (i.e., percentages of the recommended population who received the vaccine).
- Facilitate the transfer of and access to individual immunization records.
- Measure progress towards national immunization goals and objectives.
- Facilitate linkage of surveillance data of vaccine preventable diseases and vaccine-associated adverse events (or Adverse Events Following Immunization - AEFI).

The current system is designed by each of the different provinces and territories (P/T). Some P/T have developed electronic immunization registries to collect immunization information on their population, where others still rely on a paper-based system. The current system does not provide data on the national coverage rates of immunization and the lack of the information does not allow for an integrated AEFI monitoring system or the transfer of immunization records when a child moves from one district to another.

Proposed NIS approach: The NIS recommended the development of a network of provincial/territorial registries. This network will allow for the:

- Development of a minimum (core) data set to be collected by each province/territory.
- Development of business, technical, and functional standards for use by each province/ territory.
- Development and provision of tools and software to interested jurisdictions by Health Canada, to assist in achieving the technical capacity to establish an electronic registry.
- Establishment of a national profile for immunization registries, in respect of laws regarding confidentiality of and access to data.
- Development of strategies to populate immunization registries, including bar coding immunization agents.

Evaluation of the NIS

An interim evaluation of the NIS, from 2003 to 2007, was conducted in 2007. The purpose of this evaluation was to:

- Measure progress towards achievement of short-term outcomes.
- Identify areas of future improvement.
- Inform future decisions regarding immunization program planning, design and implementation.
- Ensure accountability.
- Provide evidence to support decision making on improvements to the NIS.

This evaluation concluded that the NIS remains relevant at both federal and P/T levels. The main objectives and goals are consistent with both federal and P/T priorities with respect to immunization issues in Canada. There is no identified need at this time to revise or realign the overall goals and objectives of the NIS. They also found the NIS is making progress towards reaching its objectives and achieving an impact on key areas of Canadian immunization programs.

Making some adjustments at this point would be beneficial in terms of keeping the NIS on track to
achieving its objectives in key areas. This evaluation identified some key limitations to the implementation of the NIS. These included:

- Timeliness of CIC decisions.
- Relation between NACI and CIC.
- Interaction between NIS working groups and the reporting relation with CIC.
- Role of non-government organizations (NGOs) on working groups.
- Resources available to working groups.
- Focus on a longer-term vision.

The evaluation team not only identified these limitations but have developed a set of recommendations to ensure that the goals of NIS are met and the limitations are addressed.

**National Advisory Committee on Immunization (NACI)**

A vaccine is approved by the biologics and genetic therapies directorate (BGTD) of Health Canada. BGTD is the Canadian federal authority that regulates biological drugs (products derived from living sources) and radiopharmaceuticals for human use. The BGTD is discussed in more detail in Module 3, but it is responsible for the approval of the vaccine in Canada and their product monograph with suggested number, timing and spacing of doses. The organizations involved in the approval and implementation of a vaccine are depicted in Figure 1 and discussed in detail in Module 3 (Vaccine Development and Evaluation).

**The Canadian Immunization Committee (CIC) and Provincial Bodies**

NACI provides recommendations based on extensive research and literature review. The Canadian Immunization Committee (CIC) is the F/P/T body that provides leadership in immunization by giving advice and recommendations on implementation of a national immunization strategy and issues affecting immunization.

**The Canadian Immunization Guide**

Every four years, NACI’s recommendations on vaccine use are published in the Canadian Immunization Guide. This guide provides clinicians a national reference on the appropriate use of vaccines as well as an extensive amount of information that is required knowledge for every clinician involved in immunizing the Canadian population.

Although the Canadian Immunization Guide is only published every four years, updates are published as needed in the Canada Communicable Disease Report (CCDR).

All professionals who can administer immunizations (physicians, nurses and certified pharmacists) should be very familiar with this guide.
Provincial and Territorial Immunization Schedules and Resources

The Canadian Immunization Guide is available for download at: https://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php#toc

Overview of all publically funded Immunization programs in Canada: https://www.phac-aspc.gc.ca/im/ptimprog-progimpt/table-1-eng.php

Alberta


British Columbia

Manitoba

New Brunswick

Newfoundland and Labrador

Northwest Territories


Nova Scotia
Routine Childhood Immunization Schedule: http://www.gov.ns.ca/hpp/publications/13078_NsChildhoodImmPoster_Dec07_En.pdf

Nunavut
Routine Immunization Schedule 2007: http://www.phac-aspc.gc.ca/im/pdf/nunavut_immun-
Ontario
Publicly funded immunization schedule for Ontario – January 2009:

Prince Edward Island

Quebec
Guide des normes et pratiques de gestion des vaccins à l’intention des vaccinateurs:
http://www.mssss.gouv.qc.ca/sujets/santepub/vaccination/download.php?f=7a2d4cf9e5ef19575bb5937accb0fc67

Protocole d’immunisation du Québec (PIQ):

Saskatchewan

Yukon

Key Learning Points

1. The National immunization Strategy (NIS) was designed to:
   - Improve immunization coverage.
   - Coordinate immunization activities between the provinces.
   - Improve vaccine safety and monitoring.
   - Improve vaccine procurement.
   - Promote the development of a national registry.

2. The National Advisory Committee on Immunization (NACI) makes recommendations on the use of different vaccines by reviewing the burden of the disease, vaccine characteristics and using the Analytic Framework for Immunization Programs in Canada factors.

3. The Canadian Immunization guide is published every four years based on NACI’s recommendations.

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4. The Canadian Immunization Committee (CIC) was developed to provide recommendations from a national level on the inclusion of vaccines into the publicly funded immunization program.

5. Each province and territory has slightly different immunization schedules and they are available for download online.

Discussion Forum:
1. Looking at each of the objectives from the National Immunization Strategy (NIS), which do you feel is the most important and why?
2. The difference in the immunization schedules between the province and territories can cause confusion for both patients and healthcare professionals. What procedures do you follow when a patient has moved to your region from another province or territory?

Quiz:
1. To improve vaccine procurement, which of the following strategies was NOT recommended by the National Immunization Strategy?
   a. Use short-term (1 year) contracts to improve competitiveness amongst manufacturers
   b. Coordinate the buying activities nationally
   c. Collaborate with vaccine regulator to ensure timely communication on newly developed or released vaccines
   d. Develop a mechanism to include value-added products/services as part of the process and to redistribute these funds as part of the NIS

2. Based on the National Immunization strategy which of the following is a benefit of the development of a vaccine registry?
   a. Enhance national surveillance of immunization coverage rates
   b. Facilitate the transfer of and access to individual immunization records
   c. Facilitate linkage of surveillance data of vaccine preventable diseases and vaccine-associated adverse events
   d. All of the above

3. Which of the following activities is a responsibility of the National Advisory Committee on Immunization (NACI)?
   a. Approving the vaccine for use in Canada
   b. Making recommendations on the use of the vaccine
   c. Approving the product monograph of the vaccine
   d. Monitor all the adverse events reported to the Public Health Agency of Canada

4. How often does the NACI publish the Canadian Immunization guide?
   a. Every 6 months
   b. Every year
   c. Every 4 years
   d. Every 10 years

5. Which group approves the coverage of a vaccine in the publicly funded immunization program?
a. The National Immunization Strategy (NIS)
b. Biologics and genetic therapies directorate (BGTD)
c. National Advisory Committee on Immunization (NACI)
d. Canadian Immunization Committee (CIC)
e. Provincial or territorial immunization advisory committees

References