

Yukon Immunization Competencies Competency Framework

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Preamble

The Yukon Immunization Competencies originate from core competencies developed by the Public Health Agency of Canada: [Immunization Competencies for Health Professionals](#), and align with the BC Centre for Disease Control (BCCDC) Immunization Competencies. The competencies and learning objectives within this document mirror those of BCCDC and were adapted to Yukon context.

The competencies range from knowledge of the scientific basis of immunization to essential immunization practices in context. Each competency is supported by a number of guiding learning objectives and key terms. The Yukon Immunization Manual outlines all information required to meet these competencies. Therefore, the Yukon Immunization Manual is deemed the sole reference guide for immunization practice in Yukon.

This document does not dictate how to teach or assess health professionals. Instead, it lays out the essential topics for safe and effective immunization that are universal to a wide range of health professionals. These are adapted and incorporated into immunization certification that is relative to the various immunizing facilities in Yukon. As such, the Yukon Immunization Competencies provides the necessary framework that can be used to assess the needs of health professionals based on their level of experience, practice setting, and degree of involvement with immunization.

Vaccine Preventable Diseases

Competency

Demonstrates an understanding of the rationale and benefit of immunization.

Learning Objective

The health professional will be able to:

1. Describe the historical impact of immunization on the epidemiology of vaccine- preventable disease.
2. Respond to the question “Why should I be immunized when vaccine preventable diseases are so rare in Canada?”
3. Describe the key clinical features, including acute and long term complications, of each vaccine-preventable disease.
4. Describe the key epidemiologic features of each vaccine-preventable disease.

Key Terms:

Communicability, incubation period, transmissibility, vaccine-preventable diseases.

The Immune System

Competency

Demonstrates a general understanding of the immune system.

Learning Objective

The health professional will be able to:

1. Compare and contrast innate and adaptive immunity.
2. Differentiate between passive and active immunity.
3. Describe the lymphatic system.
4. Describe the development of the fetal and infant immune system.

Key Terms:

Active immunity, antibody, antigen, B-lymphocyte (B-cell), cell-mediated immunity (CMI), humoral immunity, passive immunity, T-lymphocyte (T-cell).

Vaccine Development and Evaluation

Competency

Integrates into practice knowledge about the main steps in vaccine development and evaluation.

Learning Objective

The health professional will be able to:

1. Describe, in general terms, the process to obtain marketing approval for vaccines in Canada.
2. Describe, in general terms, what can be learned about vaccines after they are approved for marketing, via surveillance activities and more formal post marketing studies.
3. Characterize, in broad terms, the key roles and responsibilities for various stakeholders in post-marketing assessment of vaccine safety and effectiveness.

Key Terms:

Active surveillance, Adverse Event Following Immunization, Canadian Adverse Event Following Immunization Surveillance System (CAEFISS), passive surveillance, vaccine safety

Immunizing Agents

Competency

Applies the knowledge of the components and properties of immunizing agents as needed for safe and effective practice.

Learning Objective

The health professional will be able to:

1. Classify each immunizing agent used in practice as live attenuated or inactivated/subunit, and compare the major advantages and disadvantages of live versus inactivated /subunit vaccines.
2. Identify key differences in the immune response to purified polysaccharide versus polysaccharide protein conjugate vaccines.
3. Describe live attenuated, inactivated and subunit immunizing agents to an audience with minimal or no science knowledge.
4. Describe, in general terms, the purpose, action and potential concerns of each of the following components that may be present in a given immunizing agent: adjuvant, preservative, additives.
5. Locate and utilize current information resources on the types and content of immunizing agents used in practice.
6. Locate and utilize current information resources on addressing public concerns regarding immunizing agent components.

Key Terms:

Passive immunizing agent, active immunizing agent, additive, adjuvant, combination vaccine, inactivated vaccine, live attenuated vaccine, polysaccharide, preservative, protein conjugate, purified protein, subunit vaccine, toxoid.

Vaccine Immune Response

Competency

Explains how vaccines work using basic knowledge of the immune system.

Learning Objective

The health professional will be able to:

1. Differentiate between the primary and memory immune response to a vaccine.
2. Explain why some vaccines induce a memory response while others do not.
3. Name some host and vaccine-related factors that affect the immune response to vaccines.
4. Respond to the concern that giving too many vaccines will overload the immune system.
5. Discuss the pros and cons of immunity gained through immunization as opposed to wild type infection.
6. Identify the key differences in the immune response to purified polysaccharide versus polysaccharide protein conjugate vaccines.
7. Describe new vaccine technologies, such as mRNA or recombinant vaccines, to an audience with minimal or no science knowledge.

Key Terms:

Active immunity, antibody, antigen, B-lymphocyte (B-cell), booster, cell-mediated immunity (CMI), humoral immunity, memory response, passive immunity, primary immune response, protective levels, T-lymphocyte (T-cell), mRNA

Immunization Schedules

Competency

Demonstrate an understanding of immunization schedules.

Learning Objective

The health professional will be able to:

1. Describe the guidelines for immunization schedules.
2. Locate the current Yukon immunization schedules.
3. Explain how the guidelines for immunization schedules accommodates factors that affect the immune response to vaccines.
4. Describe for each vaccine: age indications, dose, route, site, contraindication, precaution, side effects.
5. Provide an appropriate schedule for clients based on age, and high risk conditions.
6. Provide an appropriate schedule for clients who are not considered up to date as per the Yukon Immunization Program schedules.

Key Terms:

Off-schedule, Yukon Immunization Schedule, routine children's schedule

Populations Requiring Special Considerations

Competency

Recognizes and responds to the unique immunization needs of certain population groups.

Learning Objective

The health professional will be able to:

1. Describe the unique immunization needs of certain Special Populations as outlined in the Yukon Immunization Manual
2. Appropriately refer to expert professional resources, e.g. Yukon Immunization Program, specialist, when required to address the immunization needs of certain populations.

Key Terms:

Special populations, auto immune conditions, RSV program, immunocompromised, pregnancy.

Storage and Handling of Immunizing Agents

Competency

Implements territorial guidelines when storing, handling or transporting immunizing agents.

Learning Objectives:

The health professional will be able to:

1. State where to access the most recent territorial guidelines dealing with immunizing agent storage, handling and transportation.
2. Describe the territorial guideline requirements for immunizing agent storage, handling and transportation.
3. Explain the importance of maintaining the cold chain.
4. Outline the key steps for maintaining the cold chain in the practice setting.
5. Explain actions taken to report and manage cold chain incidents that compromise immunizing agent integrity.

Key Terms:

Min-max thermometers, stock rotation, cold chain management.

Administration of Immunizing Agents

Competency

Prepares and administers immunizing agents correctly.

Learning Objectives:

The health professional will be able to:

1. Recognize that the Yukon Immunization Manual guidelines take precedent when determining immunization administration and decision making processes in Yukon.
2. Describe actions taken to increase safety in immunization clinics related to the provider, the recipient and the environment.
3. Ensure the 7 “Rights” of immunization: right drug, right client, right dose, right time, right route, right reason and right documentation.
4. Describe the steps involved in immunizing agent preparation, including reconstitution if appropriate, administration and disposal.
5. Choose the correct needle length and gauge for the age and size of the client.
6. Describe the age appropriate injection sites and proper client positioning used for immunization.
7. Describe techniques to reduce the pain associated with immunization.
8. Demonstrate the appropriate technique for immunization.
9. Provide appropriate and adequate patient teaching before, during, and after immunization administration.

Key Terms:

Contraindications, expiry date, injection error, injection site, needle length and gauge, needle stick injury, precautions, reconstitution, route of administration.

Adverse Events Following Immunization

Competency

Anticipates, identifies and manages reactions following immunization.

Learning Objectives:

The health professional will be able to:

1. Use reliable evidence-based resources to list the frequencies of the common, uncommon and rare adverse events associated with immunizing agents.
2. Inform recipients and/or their caregivers on what to expect and what to do regarding adverse events that could follow immunizations.
3. Describe the step-by-step response to anaphylaxis as appropriate to the immunization setting.
4. Locate appropriate forms and understand the process for submitting a report on an adverse event following immunization
5. Distinguish between reporting an adverse event following immunization and proving that immunization caused an adverse event.

Key Terms:

Adverse Event Following Immunization, anaphylaxis, causality, local reaction, passive surveillance, active surveillance

Documentation

Competency

Documents information relevant to each immunization encounter in accordance with provincial guidelines for immunization practices and jurisdictional health information processes.

Learning Objectives:

The health professional will be able to:

1. Describe the role and importance of best practices in documenting immunizations including timely data entry.
2. Identify the information to be documented on an immunization record in Panorama.
3. Record the reason for and planned follow-up action when a scheduled immunization is not given.
4. Describe the difference in documentation requirements for an AEFI vs. expected immunization reactions.
5. Understand how data from Panorama are used to guide the immunization program.

Key Terms:

Immunization Record, Panorama

Legal and Ethical Aspects of Immunization

Competency

Acts in accordance with legal and high ethical standards.

Learning Objectives:

The health professional will be able to:

1. Discuss the implications of the individual's right, confidentiality, privacy, informed consent and informed refusal.
2. Describe the legislations that impact immunization practice in Yukon.
3. Identify their professional scope of practice as it relates to immunizing Yukon.
4. Discuss the issues arising from mandatory versus voluntary immunization.

Key Terms:

Informed consent, legislation, mandatory immunization, voluntary immunization, scope of practice, HIPMA, minor consent

Population Health

Competency

Applies relevant principles of population health for improving immunization rates.

Learning Objectives:

The health professional will be able to:

1. Use specific examples to show how immunization is a population-based health strategy.
2. Explain the concept of herd immunity (also called community immunity) in non scientific terms.
3. Explain, using examples, why vaccine-preventable diseases return when immunization coverage decreases.
4. Explain how immunization registries can benefit not only individuals but also populations.
5. Present the case for the importance of having a highly immunized healthcare work force.
6. Identify barriers (economic, educational and social factors) to immunization uptake.

Key Terms:

Community immunity, herd immunity, coverage, endemic, epidemic, epidemiology, incidence, pandemic.

Communication: Principles & Immunization Issues

Competency

Communicates effectively about immunizations through an evidence-based approach.

Learning Objectives:

The health professional will be able to:

1. Explain the importance of risk perception for immunization decision making.
2. Respond appropriately following an assessment of client knowledge, attitudes, and beliefs regarding immunization.
3. Deliver clear, concise messages about the risks of vaccine-preventable diseases and the benefits/risks of vaccines.
4. Provide guidance to clients so they can correctly identify credible sources of information on immunization and vaccines.
5. Address misperceptions regarding immunizing agents using evidence based approach.

Key Terms:

Credible sources, informed decision making, risk communication, risk perception, vaccine hesitancy

The Canadian Immunization System

Competency

Demonstrate an understanding of the immunization system in Canada and its impact on his/her own practice.

Learning Objectives:

The health professional will be able to:

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. Explain the reasons for the variable immunization schedules among the provinces and territories.
4. List who can administer immunizations in Yukon.

Key Terms:

National Immunization Strategy