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Immunization Competencies for Health Professionals

Canada 

*To promote and protect the health of Canadians through leadership,
partnership, innovation, and action in public health*

– Public Health Agency of Canada

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Immunization Competencies for Health Professionals

Prepared by the Professional Education Working Group of
the Canadian Immunization Committee

Approved by the Communicable Disease Control Expert Group and the
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As a starting point for *Immunization Competencies for Health Professionals*, the working group used a document prepared by the U.K. Health Protection Agency entitled *Core Curriculum for Immunisation Training* and adapted it to the Canadian context.

The levels of proficiency (aware, knowledgeable, or proficient) used to develop the Immunization Competencies Levelling Tool was adapted from a document prepared by the Northwest Center for Public Health Practice, University of Washington School of Public Health and Community Medicine entitled *Informatics Competencies for Public Health Professionals*.

Preamble

The competencies contained in the handbook *Immunization Competencies for Health Professionals* were developed to support the application of the National Guidelines for Immunization Practices, published in the *Canadian Immunization Guide*. The aim of this handbook is to promote safe and competent practices to achieve higher vaccine coverage rates. This effort will enable and maintain the highest possible degree of community protection against vaccine-preventable diseases.

The competencies range from knowledge of the scientific basis of immunization to essential immunization practices and contextual issues relevant to immunization. Each competency is supported by a learning domain and a number of guiding learning objectives.

This handbook does not dictate how to teach or assess health professionals. Instead, it lays out the essential topics for effective immunization that are universal to a wide range of health professionals. These can be adapted and incorporated into all immunization training or performance evaluations. As such, the immunization competencies provide the framework stakeholders can use to tailor education programs to the needs of health professionals based on their level of experience, practice setting, and degree of involvement with immunization.

The competencies can be used by:

- » Educational institutions and continuing education providers to conduct needs assessments, assess existing curricula, and incorporate the Immunization Competencies in undergraduate and continuing education training;
- » Coordinators and managers of immunization programs to set practice standards and conduct employee performance evaluations;
- » Front-line health professionals to identify their individual learning needs and select learning opportunities that address the Immunization Competencies; and
- » Educators to assess curricula and adapt existing educational resources to support the Immunization Competencies.

Professional education is one of the initiatives undertaken by the Public Health Agency of Canada (PHAC) to support the National Immunization Strategy, launched in 2003. In 2005, PHAC formed the Professional Education Working Group (PEWG) with members representing front-line health professionals, immunization program planners, professional societies, and academics from across Canada. PEWG is a sub-group of the Canadian Immunization Committee, a federal, provincial, and territorial group of public health officials providing leadership, advice, and recommendations to PHAC on implementing the strategy and on issues affecting immunization in Canada.

PEWG is responsible for making recommendations regarding professional development strategies and learning opportunities for health professionals in the field of immunization. The Immunization Competencies were developed in consultation with immunization program planners from federal, provincial, and territorial jurisdictions; expert advisory committees on immunization; health professional educators; licensing bodies and professional societies; health education accreditors; vaccine regulators; and vaccine manufacturers (Appendix A).

As part of its supporting role, PHAC is involved in the development of learning opportunities and resources that can help health professionals achieve and maintain the immunization competencies. PHAC encourages provincial and territorial jurisdictions, educational institutions, health professional organizations, and other stakeholders to use and incorporate the Immunization Competencies into their respective activities. The desired result is an expanded and diverse set of immunization education resources to support a similarly diverse set of health professionals.

Appendix C includes a levelling tool to assist in identifying levels of proficiency based on the specific responsibilities and performance requirements of a given set of health professionals in a given work setting.

The Canadian Context

Vaccine Approval – Health Canada Biologics and Genetic Therapies Directorate

All vaccines authorized for sale in Canada are reviewed and approved by the Biologics and Genetic Therapies Directorate (BGTD) of Health Canada. Like all medicines, vaccines must undergo rigorous review and testing before they are approved for use. Health Canada also supervises all aspects of vaccine production by the manufacturers to ensure safety, sterility, and quality.

Before a new vaccine can be submitted to Health Canada for approval, its manufacturer must collect sufficient scientific evidence from pre-clinical and clinical human trials (typically carried out over several years) that show the vaccine is safe, effective, and of high quality and that it produces the desired immune response. The manufacturer must then include this evidence along with information on how the vaccine was developed and manufactured, as well as how it will be routinely tested, in a New Drug Submission filed with the BGTD.

As part of the process for approving vaccines, members of the BGTD perform on-site inspections and evaluations of the vaccine manufacturer's establishment(s) to assess the quality of the production process and ensure that the necessary quality controls and internationally recognized Good Manufacturing Practices are being used. The manufacturer must also provide at least three sample batches or "lots" of the vaccine to the BGTD for testing in its laboratories. The BGTD approves a vaccine only when its safety, effectiveness, and quality have been thoroughly proved and when the benefits of the vaccine greatly outweigh any risks associated with it. If the above requirements have been satisfied after thorough review of the New Drug Submission, the on-site evaluation(s), and the independent laboratory testing of samples, the vaccine is issued a Drug Identification Number and a Notice of Compliance indicating that it is approved for sale in Canada.

All vaccines sold in Canada undergo ongoing lot release evaluation even after they have been approved. The manufacturer must submit the results of testing for each lot of vaccine to be sold in Canada and lot samples for independent evaluation by the BGTD. In order to sell new lots of the vaccine, manufacturers must ensure that each new lot is the same in its specific characteristics as the ones tested before authorization was given. This method allows experts to reasonably determine that the new lots are as safe and effective as previous ones. If a vaccine lot meets all required specifications, a formal release letter is issued to approve the sale of that lot in Canada.

Optimal Use – The National Advisory Committee on Immunization

The National Advisory Committee on Immunization (NACI) is an independent committee of recognized experts (in the fields of paediatrics, infectious diseases, immunology, medical microbiology, internal medicine, and public health) that provides expert advice on vaccines to PHAC. After Health Canada authorizes a vaccine for sale in Canada, the NACI evaluates all available scientific information about that vaccine and then makes recommendations about its optimal use. For information on the list of immunizing agents and the companies that have received approval to market them in Canada, consult the *Canadian Immunization Guide*.

Immunization Programs – The Provinces and Territories

In Canada, provinces and territories are responsible for the development of publicly funded immunization programs, including the purchase of vaccines. Each provincial or territorial ministry of health uses NACI's recommendations to develop its program and schedules for children and adults. While the provinces and territories decide which vaccines to purchase, most of the vaccines used in publicly funded immunization programs in Canada are purchased through a bulk purchasing program coordinated by Public Works and

Government Services Canada. In some cases, provinces may purchase vaccines on their own behalf. All vaccine purchases must follow a process that is open, fair, and transparent and must respect Canada's obligations under applicable national and international trade agreements. The vaccine procurement process is intended to ensure that equal consideration is given to all eligible vaccines that have met the stringent requirements for approval in Canada.

Post-Marketing Surveillance – Public Health Agency of Canada

After any vaccine is approved to be sold in Canada, mandatory and voluntary post-market surveillance and adverse event reporting occur. Vaccine manufacturers are required by law to report serious adverse events following immunization within 15 days of notification of the occurrence. Public health nurses, doctors, and other healthcare workers in Canada also report these events to the Centre for Immunization and Respiratory Infectious Diseases (CIRID) at PHAC. After removal of any identifying personal information, such events reported at the provincial or territorial level are then referred to the Canadian Adverse Events Following Immunization Surveillance System. Selected serious events, particularly those affecting children, are also reported by the Immunization Monitoring Program – Active (IMPACT). IMPACT is administered by the Canadian Paediatric Society with funding from the Immunization and Respiratory Infections Division of the Public Health Agency of Canada.

The goal of this national vaccine safety surveillance is to monitor all vaccines used in Canada and to detect, as quickly as possible, any evidence of concern regarding safety. If unexpected or increased side effects due to vaccines occur, the BGTD and CIRID decide on the best course of action needed to resolve these situations.

Effective, Competent Practice – The National Immunization Strategy

The development of the National Immunization Strategy (NIS) was first endorsed by the federal/provincial/territorial deputy ministers of health in June 1999, under the direction of the Advisory Committee on Population Health. In 2002, the deputy ministers agreed in principle to the concept of a strategy and endorsed the *National Immunization Strategy: Final Report* in June 2003.

The NIS stipulates the need for continued collaboration and partnerships with federal, provincial, and territorial partners and other stakeholders to improve the effectiveness and efficiency of immunization programs in Canada. In addition, a key activity of the NIS is the development of a national professional education component to support the achievements and maintenance of a safe and competent practice to better protect Canadians from vaccine-preventable diseases.

The image features a stylized graphic design. A large blue shape on the left contains the text 'Application of Basic Biomedical Sciences to Immunization'. This shape is connected to a central red horizontal bar. From this bar, two red lines branch out diagonally upwards and downwards. These lines are bordered by blue shapes that also branch out. The entire composition is set against a white background with several thin, parallel lines extending from the central red bar towards the right edge.

**Application of Basic Biomedical
Sciences to Immunization**



1. The Immune System and Vaccines

Competency: Explains how vaccines work using basic knowledge of immune system.

Learning Objectives

The health professional will be able to perform the following:

1. Compare and contrast innate and adaptive immunity.
2. Differentiate between the primary and memory immune response to a vaccine.
3. Differentiate between passive and active immunity.
4. Explain why some vaccines induce a memory response while others do not.
5. Name some host- and vaccine-related factors that affect the immune response to vaccines.
6. Explain how the immunization schedule accommodates factors that affect the immune response to vaccines.
7. Respond to the concern that giving too many vaccines will overload the immune system.
8. Discuss the pros and cons of immunity gained through immunization as opposed to wild-type infection.

Key Terms: Active immunity, antibody, antigen, B-lymphocyte (B-cell), booster, cell-mediated immunity (CMI), herd/community immunity, humoral immunity, memory response, passive immunity, primary immune response, protective level, T-lymphocyte (T-cell).

Suggested Content for Training

- » Antigens and antibodies
- » Cell-mediated and humoral immunity
- » Active and passive immunity
- » Primary and secondary immune responses
- » Conditions that affect immunity and the immune response to vaccines

2. Vaccine-Preventable Diseases

Competency: Demonstrates an understanding of the rationale and benefit of immunization, as relevant to the practice setting.

Learning Objectives

The health professional will be able to perform the following:

1. Describe the key clinical features, including acute and long-term complications, of each vaccine-preventable disease.
2. Describe the key epidemiologic features of each vaccine-preventable disease.
3. Describe the historical impact of immunization on the epidemiology of vaccine-preventable disease.
4. For each of the vaccines administered in the practice setting, formulate a response to the question “Why should I be immunized when vaccine-preventable diseases are so rare in Canada?”
5. Explain why accurate diagnosis of vaccine-preventable diseases is important.

Key Terms: Carriage, clinical features, communicability, complications, contagiousness, endemic, epidemic, epidemiology, incubation period, imported, natural infection, pandemic, reservoir, serotypes, serogroups, transmissibility, vaccine-preventable disease.

Suggested Content for Training

- » Epidemiology, signs and symptoms, and mode of transmission of each disease
- » Potential complications/long-term sequelae of vaccine-preventable diseases; the nature and rates of each
- » Historical impact of immunization programs and the premature withdrawal of these programs, including reduced coverage
- » Concepts of control, elimination, and eradication of vaccine-preventable diseases

3. Vaccine Development and Evaluation

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

Learning Objectives

The health professional will be able to perform the following:

1. Describe, in general terms, the process to obtain marketing approval for vaccines in Canada.
2. Describe 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 each of the following relative to the post-marketing assessment of vaccine safety and effectiveness:
 - Vaccine manufacturers
 - Canadian regulatory authority (Biologics and Genetic Therapies Directorate)
 - Public Health Agency of Canada
 - Provincial/territorial health departments
 - Vaccine providers
 - Healthcare providers who don't administer vaccines
 - Vaccine recipients or their parents/caregivers

Key Terms: Effectiveness, efficacy, immunogenicity, package insert, post-marketing, product monograph, reactogenicity, surveillance.

Suggested Content for Training

- » Stages of vaccine trials before and after licensure
- » Steps in the process of obtaining approval of vaccines for sale in Canada
- » Post-marketing surveillance and immunization safety
- » The role of surveillance in designing and monitoring immunization programs

4. The Types of Immunizing Agents and Their Composition

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

Learning Objectives

The health professional will be able to perform the following:

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

Key Terms: Active immunizing agent, additive, adjuvant, allergens, combination vaccine, inactivated vaccine, live attenuated vaccine, passive immunizing agent, polysaccharide, preservative, protein conjugate, purified protein, subunit vaccine, toxoid.

Suggested Content for Training

- » Immunoglobulins, live and inactivated vaccines, polysaccharide and conjugate vaccines and combination vaccines
- » Composition of a vaccine, use of adjuvants and other additives
- » Efficacy, reactogenicity, compatibility

5. Population Health

Competency: Applies relevant principles of population health for improving immunization coverage rates.

Learning Objectives

The health professional will be able to perform the following:

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 rates decrease.
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 workforce.
6. Use health promotion planning model to identify barriers (economic, educational, system-based, and social factors) to immunization uptake.
7. Use health promotion strategies to improve immunization coverage rates.

Key Terms: Community immunity, coverage rate, determinants of health, effectiveness, efficacy, endemic, epidemic, epidemiological triangle, herd immunity, incidence, mode of transmission, morbidity, mortality, pandemic, population health prevalence, prevention and health promotion, primary prevention, recall, reminder, sporadic.

Suggested Content for Training

- » Concept of herd immunity and the effect of vaccination on the community as a whole
- » How herd immunity protects individuals
- » Identification of barriers and obstacles that may prevent uptake of vaccination
- » Development of strategies to overcome barriers and improve immunization services
- » Consideration of environmental factors such as the clinic environment, appointment timings, and length and attitudes of staff to immunization





Essential Immunization Practices



6. Communication

Competency: Communicates effectively about immunization, as relevant to the practice setting(s).

Learning Objectives

The health professional will be able to perform the following:

1. List the components of the evidence-based decision-making process.
2. Explain the importance of risk perception for immunization decision making.
3. Respond appropriately following an assessment of client knowledge, attitudes, and beliefs regarding immunization.
4. Deliver clear, concise messages about the risks of vaccine-preventable diseases and the benefits and risks of vaccines.
5. Provide appropriate evidence-based information and resources to clients regarding immunization and vaccines.
6. Provide guidance to clients so they can correctly identify credible sources of information on immunization and vaccines.
7. Apply, as appropriate to the practice setting, mass media strategies for public communication.

Key Terms: Credible sources, evidence-based decision making, informed decision making, risk communication, risk perception.

Suggested Content for Training

- » Issues that affect and influence parents/caregivers in their vaccination decision making
- » Responding to commonly asked questions and misconceptions
- » Local and national sources of further information and advice for parents
- » Importance of risk perception for immunization decision making
- » Basic principles of risk communication
- » The effect of media reporting on parental views and acceptance of vaccination

7. Storage and Handling of Immunization Agents

Competency: Implements Canadian guidelines when storing, handling, or transporting vaccines.

Learning Objectives

The health professional will be able to perform the following:

1. State where to access the most recent national guidelines dealing with vaccine storage, handling, and transportation.
2. Describe the national guideline requirements for vaccine storage, handling, and transportation and their importance in maximizing the potency and efficacy of each vaccine.
3. Outline the key steps for maintaining the cold chain in the practice setting.
4. Explain actions taken to report and manage breaks in the cold chain or other insults that compromise vaccine integrity.

Key Terms: Min-Max thermometers, *National Vaccine Storage and Handling Guidelines for Immunization Providers*, potency, efficacy, cold chain, stock rotation.

Suggested Content for Training

- » Effects of temperature on potency, efficacy, and adverse events of vaccines
- » Daily monitoring and written temperature records
- » Correct use of designated purpose-built vaccine fridge
- » Importance of regular checks for expired vaccine
- » Ordering appropriate vaccine stock
- » Management of breakdowns in the cold chain
- » Disposal of heat- or cold-damaged vaccine
- » Monitoring and maintaining the cold chain during vaccine transportation
- » Maintenance of the cold chain during a clinic session
- » Taking responsibility for ensuring that all vaccines administered have been stored correctly
- » Importance of protocols/standard operating procedures in each practice setting
- » Fulfillment of *National Vaccine Storage and Handling Guidelines for Immunization Providers*

8. Administration of Immunizing Agents

Competency: Prepares and administers immunization agents correctly.

Learning Objectives

The health professional will be able to perform the following:

1. Prepare a checklist for pre-immunization patient assessment, including precautions, contraindications, and indications for rescheduling.
2. Ensure the seven “Rights” of immunization: right drug, right client, right dose, right time, right route, right reason, and right documentation.
3. Demonstrate the steps involved in vaccine preparation, including reconstitution, if appropriate, administration, and disposal.
4. Name the resources that are used to guide the immunization administration process and decision making.
5. Develop a table listing the vaccine, age, dose, route, site, contraindications/precautions, and side effects for each vaccine used in the practice setting.
6. Demonstrate the age-appropriate injection sites and proper client positioning used for immunization.
7. Choose the correct needle length and gauge for the age and size of the client.
8. Describe actions taken to increase safety in immunization clinics related to the provider, the recipient, and the environment.
9. Demonstrate the appropriate technique for immunization.
10. Describe techniques to reduce the pain associated with immunization.

Key Terms: Aseptic technique, *Canadian Immunization Guide* (CIG), contraindications, expired stock, expiry date, immunization schedules (delayed, interrupted, etc.), injection error, injection site, medication error, minimum vaccine intervals, needle length and gauge, needle stick injury, precautions, reconstitution, rotation of stock, route of administration (intramuscular, subcutaneous, intradermal, intranasal, oral), routine practices, safety-engineered injection devices.

Suggested Content for Training

- » Assessment of fitness for vaccination and identification of true contraindications to vaccination
- » Route, needle size, and injection site for administration of vaccine based on research, current recommendations, and effects on efficacy and local reactions
- » Dosage and reconstitution of each vaccine
- » Preparation and disposal of vaccination equipment

9. Adverse Events Following Immunization

Competency: Anticipates, identifies, and manages adverse events following immunization, as appropriate to the practice setting.

Learning Objectives

The health professional will be able to perform the following:

1. Use reliable, evidence-based resources to list the frequencies of the common, uncommon, and rare adverse events associated with vaccines.
2. Inform recipients and/or their caregivers on what to expect and what to do regarding adverse events that could follow immunizations.
3. Draft in detail an effective step-by-step response to anaphylaxis.
4. Document all adverse events following immunization on the appropriate form and submit it to the appropriate agencies.
5. Distinguish between reporting an adverse event following immunization and proving that immunization caused an adverse event.

Key Terms: Abscess, active surveillance, adverse event following immunization, adverse vaccine reaction, anaphylaxis, anxiety attack, causality, cellulitis, encephalitis, encephalopathy, Guillain-Barré syndrome, hypotonic hyporesponsive episode, induration, injection site reaction, local reaction, nodule at injection site, oculorespiratory syndrome, passive surveillance, serious adverse events, syndromic surveillance.

Suggested Content for Training

- » Physiology of anaphylaxis and allergic reactions
- » Potential causes of anaphylaxis and ways of decreasing the risks
- » Signs and symptoms of and differences between anaphylaxis and fainting
- » Treatment of anaphylaxis, equipment required, adrenaline dosages, and sites for its administration
- » Definition and types of adverse events
- » Where and how to report adverse events to vaccines – Canadian Adverse Events Following Immunization Surveillance System
- » Recording of adverse events to vaccinations – Use of the *Adverse Event Following Immunization Reporting Form*

10. Documentation

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

Learning Objectives

The health professional will be able to perform the following:

1. Describe the role and importance of immunization records.
2. Identify the information to be documented on an immunization record.
3. Record an immunization encounter on the appropriate documentation instruments accurately and completely.
4. Facilitate the transfer of information in the vaccination record to other providers and to appropriate agencies in accordance with requirements.
5. Record the reason and planned follow-up action when a scheduled immunization is not given.

Key Terms: Bar coding, immunization coverage, immunization record professional chart, immunization record take-home, immunization registry, lot number.

Suggested Content for Training

- » Requirements and importance of accurate documentation
- » Where and why vaccinations should be recorded and reported
- » Policy for reporting and recording vaccine errors
- » Importance of and reasons for recording batch numbers

11. Populations Requiring Special Considerations

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

Learning Objectives

The health professional will be able to perform the following:

1. Describe the unique immunization needs of certain populations, as relevant to the practice setting, including
 - individuals who are off course of a recommended immunization schedule;
 - individuals who have had a serious adverse event following a prior immunization;
 - individuals with certain medical conditions, including transplant recipients;
 - pregnant women;
 - women who are breastfeeding;
 - occupational risk groups;
 - travellers;
 - new Canadians;
 - international students;
 - individuals with behaviours that put them at risk for vaccine-preventable diseases;
 - “hard-to-reach” individuals; and
 - outbreak populations.
2. Appropriately refer to expert professionals/resources when required to address the immunization needs of certain populations.

Key Terms: International students, medical conditions and pregnancy, new Canadians, occupational risk groups, risk behaviours, special populations, “hard-to-reach” individuals/populations/groups, travellers.

Suggested Content for Training

- » Designing schedules for people with uncertain or incomplete vaccination status with the minimum number of visits
- » National and provincial guidelines that guide travel immunization
- » Expert advice available to consult regarding travel immunization and recommendations
- » Citizenship and Immigration Canada’s policy – distinguish when newcomers are immunized before arrival and when they are not



**Contextual Issues Relevant to
Immunization**

12. The Canadian Immunization System

Competency: Demonstrates 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 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.

Key Terms: *Canadian Immunization Guide (CIG)*, immunization schedule.

Suggested Content for Training

- » Goals of the NIS
- » How the number, timing, and spacing of doses is decided upon
- » The role of the National Advisory Committee on Immunization and how vaccine recommendation is decided upon
- » Current published recommendations in the CIG
- » The role and responsibilities of the federal, provincial, and territorial governments in publicly funded immunization programs and vaccine purchase
- » Provincial and territorial resources available to consult about immunization issues

13. Immunization Issues

Competency: Addresses immunization issues using an evidence-based approach.

Learning Objectives

The health professional will be able to perform the following:

1. Describe factors which lead to scepticism regarding immunization for both health professionals and the general public.
2. Describe the impact that misperceptions regarding immunizing agents have on immunization programs and on the population.
3. Address misperceptions regarding immunizing agents using an evidence-based approach.
4. Locate evidence-based sources of information on current issues relating to immunization.
5. Use evidence-based scientific knowledge to develop clear, concise key messages regarding true immunization benefits and risks.

Suggested Content for Training

- » Importance of keeping up to date
- » Anti-immunization messages on social media
- » Multiple injections
- » Thimerosal
- » How and where to find information (local and national sources of advice) and assessing the reliability of sources
- » Media portrayal of vaccine news stories
- » The critical importance of professional confidence in immunization

14. Legal and Ethical Aspects of Immunization

Competency: Acts in accordance with legal and high ethical standards in all aspects of immunization practice.

Learning Objectives

The health professional will be able to perform the following:

1. Discuss the implications of basic ethical principles, including individual's right, confidentiality, privacy, informed consent, and informed refusal.
2. Describe the legal requirements relevant to immunization administration, documentation, recording, and reporting.
3. Describe the legal requirements in the province/territory of immunization practice that relate to immunization status and exclusion from daycare, school, workplace, or other settings.
4. Identify his/her own professional scope of practice as it relates to immunization (jurisdiction, organization, practice setting – institutions, etc.).
5. Discuss the ethical issues arising from:
 - mandatory versus voluntary immunization; and
 - targeted versus universal immunization.
6. Discuss the responsibility of health professionals to inform patients regarding the availability of all recommended vaccines regardless of whether they are publicly funded.
7. Describe the ethical implications when a provider's beliefs conflict with evidence-based recommendations for immunization.

Key Terms: Assent, benefit, conflict of interest (real and perceived), disclosure, harm, informed consent for immunization, informed consent for registry, mandatory immunization, risks, medicolegal, targeted immunization, universal immunization, voluntary immunization.

Suggested Content for Training

- » Current legal requirements for informed consent
- » Data protection
- » Documentation
- » Professional accountability

List of Acronyms

AFMC	Association of Faculties of Medicine of Canada
AFPC	Association of Faculties of Pharmacy of Canada
BGTD	Biologics and Genetic Therapies Directorate
CAEFISS	Canadian Adverse Events Following Immunization Surveillance System
CAIRE	Canadian Association for Immunization Research and Evaluation
CASN	Canadian Association of Schools of Nursing
CIC	Canadian Immunization Committee
CIG	Canadian Immunization Guide
CMA	Canadian Medical Association
CNA	Canadian Nurses Association
CNCI	Canadian Nursing Coalition for Immunization
CPS	Canadian Paediatric Society
CPhA	Canadian Pharmacists Association
CPHA	Canadian Public Health Association
CIRID	Centre for Immunization and Respiratory Infectious Diseases
CFPC	College of Family Physicians of Canada
CIQ	Comité sur l'immunisation du Québec
CHNA	Community Health Nurses of Alberta
DIN	Drug Identification Number
FNSSC	Federation of National Specialty Societies of Canada
FNIHB	First Nations and Inuit Health Branch
IMPACT	Immunization Monitoring Program – Active
MPhA	Manitoba Pharmaceutical Association
NACI	National Advisory Committee on Immunization
NIS	National Immunization Strategy
OPA	Ontario Pharmacists' Association
PEWG	Professional Education Working Group
PHAC	Public Health Agency of Canada
VIC	Vaccine Industry Committee
VON	Victorian Order of Nurses
VPD	Vaccine-Preventable Diseases

Resources

Canadian Online Resources

Canadian Adverse Events Following Immunization Surveillance System
www.phac-aspc.gc.ca/im/vs-sv/caefiss-eng.php

Canadian Immunization Guide
www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php

Canadian Paediatric Society – Your Child’s Best Shot: A Parents Guide to Vaccination
www.cps.ca/english/publications/bookstore/yourchildsbestshot.htm

National Immunization Strategy: Final Report 2003
www.phac-aspc.gc.ca/publicat/nis-sni-03/index-eng.php

National Vaccine Storage and Handling Guidelines for Immunization Providers
www.phac-aspc.gc.ca/publicat/2007/nvshglp-ldemv/index-eng.php

Canadian Organizations

Biologics and Genetics Therapies Directorate – Drugs and Health Products
www.hc-sc.gc.ca/dhp-mps/brgtherap/index-eng.php

Canadian Immunization Committee – (not available on line)

Centre for Immunization and Respiratory Infectious Disease
www.phac-aspc.gc.ca/irid-diir/index-eng.php

National Advisory Committee on Immunization
www.phac-aspc.gc.ca/naci-ccni/index-eng.php

Public Health Agency of Canada
www.phac-aspc.gc.ca/index-eng.php

Provincial and Territorial Immunization Manuals and Guidelines

Alberta

Alberta Immunization Strategy 2007–2017
www.health.alberta.ca/resources/publications/ImmStrat07.pdf

Routine Immunization Schedule
www.health.alberta.ca/public/imm_routine-schedule.html

British Columbia

Immunization Manual
www.bccdc.org/content.php?item=193

Manitoba

Manitoba Immunization Schedule
www.gov.mb.ca/health/publichealth/cdc/protocol/mims.pdf

New Brunswick

Immunization Brochure
www.gnb.ca/0053/disprev/pdf/3680e.pdf

Newfoundland and Labrador

Immunization Manual
www.health.gov.nl.ca/health/publications/immunization/pdf/immunization_manual.pdf

Northwest Territories

NWT Immunization Schedule
www.hlthss.gov.nt.ca/english/services/communicable_disease_control_program/pdf/immunization/nwt_immunization_schedule.pdf

NWT Certification of Immunization Competence Self-Directed, Web-Based Learning Module
www.hlthss.gov.nt.ca/sites/immunization%5Fquiz/

Nova Scotia

Immunization Protects Children (Immunization Schedule)
www.gov.ns.ca/hpp/publichealth/content/pubs/13002_ImmunizationProtectsBrochure_Jun08_En.pdf

Nunavut

Routine Immunization Schedule
www.phac-aspc.gc.ca/im/pdf/nunavut_immun-sched07.pdf

Ontario

Immunization: Your Best Protection
www.health.gov.on.ca/english/public/pub/immun/immunization.html

Prince Edward Island

Immunization Schedule

www.gov.pe.ca/health/index.php3?number=1021131&lang=E

Québec

Guide des normes et pratiques de gestion des vaccins à l'intention des vaccinateurs

www.msss.gouv.qc.ca/sujets/santepub/vaccination/download.php?f=7a2d4cf9e5ef19575bb5937accb0fc67

Protocole d'immunisation du Québec

<http://206.167.52.1/fr/document/publication.nsf/4b1768b3f849519c852568fd0061480d/a61341010d1b912885256e82006cc1bc?OpenDocument>

Saskatchewan

Immunization Manual

www.health.gov.sk.ca/immunization-manual

Yukon

Routine Immunization Schedule for Infants and Children

www.hss.gov.yk.ca/downloads/imm_sched.pdf

International Online Resources

American Academy of Paediatrics – The Red Book
<http://aapredbook.aappublications.org>

The Children’s Hospital of Philadelphia – Vaccination Education Center
www.chop.edu/consumer/jsp/division/generic.jsp?id=75697

U.K. Department of Health – Immunisation Against Infectious Disease: The Green Book
www.dh.gov.uk/en/Publichealth/Healthprotection/Immunisation/Greenbook/index.htm

U.K. National Health Service – Immunisation Information
www.immunisation.nhs.uk

U.S. Advisory Committee on Immunization Practices – Recommendations and Guidelines
www.cdc.gov/vaccines/recs/acip

U.S. Centers for Disease Control and Prevention
www.cdc.gov

World Health Organization – Information on Immunization and Vaccines
www.who.int/topics/immunization/en
www.who.int/topics/vaccines/en

World Health Organization – WHO Vaccine Preventable Diseases Monitoring System (Country Profiles)
www.who.int/vaccines/globalsummary/Immunization/CountryProfileSelect.cfm

Articles and Books

Humiston S, Good C. 2000. *Vaccinating your child: Questions and answers for the concerned parent*. 2nd ed. Atlanta (GA): Peachtree Publishers Ltd. Available from: www.peachtree-online.com.

Marshall G (Ed.). 2003. *The vaccine handbook: A practical guide for clinicians*. Philadelphia (PA): Lippincott Williams & Wilkins.

Myers MG, Pineda D. 2008. *Do vaccines cause that?! A guide for evaluating vaccine safety concerns*. Gavelston (TX): Immunizations for Public Health. Available from: www.dovaccinescausetthat.com

Offit PA. 2007. *Vaccinated: One man's quest to defeat the world's deadliest diseases*. New York (NY): Smithsonian Books.

Offit PA, Bell L. 2003. *Vaccines: What you should know*. 3rd ed. Hoboken (NJ): John Wiley & Sons, Inc.

Offit PA, Hackett CJ. 2003. Addressing parents' concerns: Do vaccines cause allergic or autoimmune diseases? *Pediatrics*. Mar;111(3):653–659. Available from: <http://pediatrics.aappublications.org/content/vol111/issue3/index.shtml>

Offit PA, Jew RK. 2003. Addressing parents' concerns: Do vaccines contain harmful preservatives, adjuvants, additives, or residuals? *Pediatrics*. Dec;112(6):1394–1397. Available from: <http://pediatrics.aappublications.org/content/vol112/issue6/index.shtml>

Offit PA, Quarles J, Gerber MA, Hackett CJ, Marcuse EK, Kollman TR, Gellin BG, Landry S. 2002. Addressing parents' concerns: Do multiple vaccines overwhelm or weaken the infant's immune system? *Pediatrics*. Jan;109(1):124–129. Available from: <http://pediatrics.aappublications.org/content/vol109/issue1/index.shtml>

Appendix A: Organizations Consulted

Special thanks to the following organizations for providing feedback and comments during the consultation process that supported the development of *Immunization Competencies for Health Professionals*.

Round 1 Consultation

- » Biologics and Genetic Therapies Directorate (BGTD)
- » Canadian Immunization Committee (CIC)
- » Canadian Nursing Coalition for Immunization (CNCI)
- » Canadian Paediatric Society (CPS) – Infectious Disease and Immunization Committee
- » Comité sur l’immunisation du Québec (CIQ)
- » First Nations and Inuit Health Branch (FNIHB), Health Canada
- » National Advisory Committee on Immunization (NACI)
- » P/T immunization programs

Round 2 Consultation

- » Association of Faculties of Medicine of Canada (AFMC)
- » Association of Faculties of Pharmacy of Canada (AFPC)
- » BIOTECanada Vaccine Industry Committee (VIC)
- » Canadian Association for Immunization Research and Evaluation (CAIRE)
- » Canadian Association of Schools of Nursing (CASN)
- » Canadian Medical Association (CMA)
- » Canadian Nurses Association (CNA)
- » Canadian Paediatric Society (CPS)
- » Canadian Pharmacists Association (CPhA)
- » Canadian Public Health Association (CPHA)
- » College of Family Physicians of Canada (CFPC)
- » College of Nursing, University of Saskatchewan
- » College of Registered Nurses of Nova Scotia
- » Community Health Nurses of Alberta (CHNA)
- » Dalhousie University
- » Faculty of Pharmaceutical Sciences, University of British Columbia
- » Faculty of Pharmacy, University of Manitoba
- » Federation of National Specialty Societies of Canada (FNSSC)
- » Manitoba Pharmaceutical Association (MPhA)
- » Ontario Pharmacists’ Association (OPA)
- » Victorian Order of Nurses (VON)

Appendix B: Table of Vaccine-Preventable Diseases

	Microbial Agent	Disease	
		Medical term	Common Usage
Bacteria	<i>Bordetella pertussis</i>	pertussis	whooping cough
	<i>Corynebacterium diphtheriae</i>	diphtheria	
	<i>Clostridium tetani</i>	tetanus	lockjaw
	<i>Streptococcus pneumoniae</i> (multiple capsular serotypes)	invasive pneumococcal disease pneumococcal meningitis	pneumonia meningitis
	<i>Neisseria meningitidis</i> serotypes A, B, C, Y, W-135	invasive meningococcal disease, meningococcal meningitis, meningococemia	sepsis blood poisoning epiglottitis
	<i>Haemophilus influenzae</i> serotype b	hemophilus meningitis	
	<i>Mycobacterium tuberculosis</i> (disease agent) Bacillus calmette Guerin (vaccine agent)	tuberculosis	TB
	<i>Salmonella typhi-murium</i>	typhoid fever	
	<i>Vibrio cholerae</i>	cholera	
	Viruses	poliovirus (types 1,2,3)	poliomyelitis
Measles virus		measles	red measles
Mumps virus		mumps	
Rubella virus		rubella, congenital rubella syndrome	German measles
Influenza virus (groups A, B)		influenza	flu, grippe,
Rotavirus		gastroenteritis	
Human papillomavirus		cancer (cervical, vaginal or vulval), genital warts, condyloma, recurrent respiratory papillomatosis	
Hepatitis A virus		hepatitis A	infectious hepatitis
Hepatitis B virus		hepatitis B	serum hepatitis
Varicella Zoster Virus		varicella	chickenpox
		herpes zoster	shingles, postherpetic neuralgia
Rabies virus		rabies	
Yellowfever virus		yellow fever	
Japanese encephalitis virus		encephalitis	
Variola virus (disease agent) Vaccinia virus (vaccine agent)		smallpox	

Appendix C: Immunization Competencies Levelling Tool

The Immunization Competencies Levelling Tool is intended to help assess various segments of the public health workforce in order to tailor training programs, practice standards, or performance assessment.

Because of the complexity of the health workforce and the settings in which immunization is provided, levels of proficiency should be adapted as appropriate to the specific performance requirements of a given set of professionals in a given work setting.

How to Use the Levelling Tool

Identify and define the specific segment of health professionals you will be assessing, and use the following scale to identify the level of proficiency for each learning objective:

- » **Aware** indicates a basic level of mastery of the competency, in which individuals are able to identify the concept or skill but have a relatively limited ability to perform the skill.
- » **Knowledgeable** indicates an intermediate level of mastery of the competency, in which individuals are able to apply and describe the skill.
- » **Proficient** indicates an advanced level of mastery of the competency, in which individuals are able to synthesize, critique, or teach the skill.

1. The Immune System and Vaccines

Competency: Explains how vaccines work using basic knowledge of immune system.	Targeted Health Professional:
1. Compare and contrast innate and adaptive immunity.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Differentiate between the primary and memory immune response to a vaccine.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Differentiate between passive and active immunity.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Explain why some vaccines induce a memory response while others do not.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Name some host- and vaccine-related factors that affect the immune response to vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Explain how the immunization schedule accommodates factors that affect the immune response to vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
7. Respond to the concern that giving too many vaccines will overload the immune system.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
8. Discuss the pros and cons of immunity gained through immunization as opposed to the wild-type infection.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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2. Vaccine-Preventable Diseases

Competency: Demonstrates an understanding of the rationale and benefit of immunization, as relevant to the practice setting.	Targeted Health Professional:
1. Describe the key clinical features, including acute and long-term complications, of each vaccine-preventable disease.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Describe the key epidemiologic features of each vaccine-preventable disease.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Describe the historical impact of immunization on the epidemiology of vaccine-preventable disease.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. For each of the vaccines administered in the practice setting, formulate a response to the question “Why should I be immunized when vaccine-preventable diseases are so rare in Canada?”	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Explain why accurate diagnosis of vaccine-preventable diseases is important.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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3. Vaccine Development and Evaluation

Competency: Integrates into practice knowledge about the main steps in vaccine development and evaluation.	Targeted Health Professional:
1. Describe, in general terms, the process to obtain marketing approval for vaccines in Canada.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Describe what can be learned about vaccines after they are approved for marketing, via surveillance activities and more formal post-marketing studies.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Characterize, in broad terms, the key roles and responsibilities for each of the following relative to the post- marketing assessment of vaccine safety and effectiveness: <ul style="list-style-type: none"> – Vaccine manufacturers – Canadian regulatory authority (Biologics and Genetic Therapies Directorate) – Public Health Agency of Canada – Provincial/territorial health departments – Vaccine providers – Healthcare providers who don't administer vaccines – Vaccine recipients or their parents/caregivers 	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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4. The Types of Immunizing Agents and Their Composition

Competency: Applies the knowledge of the components and properties of immunizing agents as needed for safe and effective practice.	Targeted Health Professional:
1. Classify each immunizing agent used in practice as live attenuated, inactivated, or subunit.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Demonstrate the ability to describe live attenuated, inactivated, and subunit immunizing agents to an audience with minimal or no science knowledge.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Compare the major advantages and disadvantages of live attenuated versus inactivated/subunit immunizing agents.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Identify key differences in the immune response to purified polysaccharide versus polysaccharide protein conjugate vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Describe, in general terms, the purpose, action, and potential concerns of each of the following components that may be present in a given vaccine product: adjuvant, preservative, additives, glass vial, stopper, and pre-filled syringe.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Locate and utilize current information resources on the types and content of immunizing agents used in practice.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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5. Population Health

Competency: Applies relevant principles of population health for improving immunization coverage rates.	Targeted Health Professional:
1. Use specific examples to show how immunization is a population-based health strategy.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Explain the concept of herd immunity (also called community immunity) in non-scientific terms.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Explain, using examples, why vaccine-preventable diseases return when immunization coverage rates decrease.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Explain how immunization registries can benefit not only individuals but also populations.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Present the case for the importance of having a highly immunized healthcare workforce.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Use health promotion planning model to identify barriers (economic, educational, system-based, and social factors) to immunization uptake.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
7. Use health promotion strategies to improve immunization coverage rates.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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6. Communication

Competency: Communicates effectively about immunization as relevant to the practice setting(s).	Targeted Health Professional:
1. List the components of the evidence-based decision-making process.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Explain the importance of risk perception for immunization decision making.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Respond appropriately following an assessment of client knowledge, attitudes, and beliefs regarding immunization.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Deliver clear, concise messages about the risks of vaccine-preventable diseases and the benefits and risks of vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Provide appropriate evidence-based information and resources to clients regarding immunization and vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Provide guidance to clients so they can correctly identify credible sources of information on immunization and vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
7. Apply, as appropriate to the practice setting, mass media strategies for public communication.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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7. Storage and Handling of Immunization Agents

Competency: Implements Canadian guidelines when storing, handling, or transporting vaccines.	Targeted Health Professional:
1. State where to access the most recent national guidelines dealing with vaccine storage, handling, and transportation.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Describe the national guideline requirements for vaccine storage, handling, and transportation and their importance in maximizing the potency and efficacy of each vaccine.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Outline the key steps for maintaining the cold chain in the practice setting.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Explain actions taken to report and manage breaks in the cold chain or other insults that compromise vaccine integrity.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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8. Administration of Immunizing Agents

Competency: Prepares and administers immunization agents correctly.	Targeted Health Professional:
1. Prepare a checklist for pre-immunization patient assessment, including precautions, contraindications, and indications for rescheduling.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Ensure the seven “Rights” of immunization: right drug, right client, right dose, right time, right route, right reason, and right documentation.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Demonstrate the steps involved in vaccine preparation, including reconstitution, if appropriate, administration, and disposal.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Name the resources that are used to guide the immunization administration process and decision making.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Develop a table listing the vaccine, age, dose, route, site, contraindications/precautions, and side effects for each vaccine used in the practice setting.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Demonstrate the age-appropriate injection sites and proper client positioning used for immunization.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
7. Choose the correct needle length and gauge for the age and size of the client.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
8. Describe actions taken to increase safety in immunization clinics related to the provider, the recipient, and the environment.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
9. Demonstrate the appropriate technique for immunization.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
10. Describe techniques to reduce the pain associated with immunization.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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9. Adverse Events Following Immunization

Competency: Anticipates, identifies, and manages adverse events following immunization.	Targeted Health Professional:
1. Use reliable, evidence-based resources to list the frequencies of the common, uncommon, and rare adverse events associated with vaccines.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Inform recipients and/or their caregivers on what to expect and what to do regarding adverse events that could follow immunizations.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Draft in detail an effective step-by-step response to anaphylaxis.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Document all adverse events following immunization on the appropriate form and submit it to the appropriate agencies.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Distinguish between reporting an adverse event following immunization and proving that immunization caused an adverse event.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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10. Documentation

Competency: Documents information relevant to each immunization encounter in accordance with national guidelines for immunization practices and jurisdictional health information processes.	Targeted Health Professional:
1. Describe the role and importance of immunization records.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Identify the information to be documented on an immunization record.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Record an immunization encounter on the appropriate documentation instruments accurately and completely.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Facilitate the transfer of information in the vaccination record to other providers and to appropriate agencies in accordance with requirements.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Record the reason and planned follow-up action when a scheduled immunization is not given.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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11. Populations Requiring Special Considerations

Competency: Recognizes and responds to the unique immunization needs of certain population groups.	Targeted Health Professional:
1. Describe the unique immunization needs of certain populations, as relevant to the practice setting, including <ul style="list-style-type: none"> – individuals who are off course of a recommended immunization schedule; – individuals who have had a serious adverse event following a prior immunization; – individuals with certain medical conditions, including transplant recipients; – pregnant women; – women who are breastfeeding; – occupational risk groups; – travellers; – new Canadians; – international students; – individuals with behaviours that put them at risk for vaccine-preventable infections; – “hard-to-reach” individuals; and – outbreak populations. 	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Appropriately refer to expert professionals/resources when required to address the immunization needs of certain populations.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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12. The Canadian Immunization System

Competency:	Targeted Health Professional:
Demonstrates an understanding of the immunization system in Canada and its impact on his/her own practice.	
1. Describe how the National Immunization Strategy is relevant to practice.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Distinguish between federal and provincial/territorial responsibilities as related to immunization programs in Canada.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. List who can administer immunizations in Canada.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Describe the current status of immunization registries in the province or territory where practice is based.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Describe the process required to introduce a new publicly funded vaccine in a province or territory.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Explain the reasons for the variable immunization schedules among the provinces and territories.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
7. Locate the current immunization schedule for the province or territory of practice.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
8. Identify laws and regulations that may affect immunization delivery programs in provinces and territories.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

Aware = Basic level of mastery of the competency, in which individuals are able to identify the concept or skill but have a limited ability to perform the skill.

Knowledgeable = Intermediate level of mastery of the competency, in which individuals are able to apply and describe the skill.

Proficient = Advanced level of mastery of the competency, in which individuals are able to synthesize, critique, or teach the skill.

13. Immunization Issues

Competency: Addresses immunization issues using an evidence-based approach.	Targeted Health Professional:
1. Describe factors which lead to scepticism regarding immunization for both healthcare providers and the general public.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Describe the impact that misperceptions regarding immunizing agents have on immunization programs and on the population.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Address misperceptions regarding immunizing agents using an evidence-based approach.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Locate evidence-based sources of information on current issues relating to immunization.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Use evidence-based scientific knowledge to develop clear, concise key messages regarding true immunization benefits and risks.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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14. Legal and Ethical Aspects of Immunization

Competency: Acts in accordance with legal and high ethical standards in all aspects of immunization practice.	Targeted Health Professional:
1. Discuss the implications of basic ethical principles, including individual's right, confidentiality, privacy, informed consent, and informed refusal.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
2. Describe the legal requirements relevant to immunization administration, documentation, recording, and reporting.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
3. Describe the legal requirements in the province/territory of immunization practice that relate to immunization status and exclusion from daycare, school, workplace, or other settings.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
4. Identify his/her own professional scope of practice as it relates to immunization (jurisdiction, organization, practice setting – institutions, etc.).	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
5. Discuss the ethical issues arising from: <ul style="list-style-type: none"> – mandatory versus voluntary immunization; and – targeted versus universal immunization. 	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
6. Discuss the responsibility of health professionals to inform patients regarding the availability of all recommended vaccines regardless of whether they are publicly funded.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient
7. Describe the ethical implications when a provider's beliefs conflict with evidence-based recommendations for immunization.	<input type="checkbox"/> Aware <input type="checkbox"/> Knowledgeable <input type="checkbox"/> Proficient

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Appendix D: Glossary

A glossary of immunization terms is available in the online version of this document at:
www.publichealth.gc.ca/immunizationcompetencies