Provision of Occupational Vaccines

Revision Date: October 27, 2017

Alberta Health supplies, at no charge, most vaccines recommended for occupational health reasons. Immunization should be provided by the occupational health services of the local employer, if possible, and where a centralized record-keeping system is in place. Employees, who have occupational health services, should not receive vaccine administered though the public health program.

Provincially funded vaccine is not provided to federal employees since they fall under federal jurisdiction. This includes employees of Health Canada, Federal Corrections, Department of National Defense, RCMP and Canada Post. Parks Canada has an arm’s length relationship with Health Canada and their employees are not eligible for provincially funded vaccines. Therefore, rabies vaccine for pre-exposure purposes and hepatitis B vaccine required for occupational reasons are not provided to Parks Canada or their employees free of charge. Parks Canada employees, who are residents of Alberta and wish to receive influenza vaccine and/or tetanus /diphtheria vaccine, may go to a public health center to be immunized by appointment.

Alberta Health Services (AHS) is responsible for distributing and monitoring the usage of provincially funded vaccines supplied for occupational health purposes. AHS also has the responsibility to promote the use of recommended vaccines as outlined in the Alberta Immunization Policy but is not mandated to administer this vaccine.

AHS may wish to provide a comprehensive occupational health service to various employers. If so, the recovery of the cost of providing the service must be directed to the employer, not the employee. The following policies apply when AHS provides, upon request of an employer, an occupational immunization program:

- There must be no direct cost to the employee receiving the provincially funded vaccines provided by Alberta Health.
- AHS may recover the costs of administering the vaccine from the employer, but not from the individual receiving the vaccine.

Physicians and pharmacists who participate in the administration of provincially funded vaccines should not charge an administration fee to individuals receiving the vaccine. Physicians may be reimbursed through the Alberta Health Care Insurance Plan for the injection of provincially funded vaccines administered in their offices. Pharmacists may also seek compensation for administration of provincially funded vaccines through Alberta Blue Cross.

Post-secondary Education Institutions

Institutions are encouraged to protect their students against tetanus, diphtheria, pertussis, measles, rubella, mumps, influenza and varicella. Hepatitis B immunization is also recommended for students enrolled in health care related programs leading to field placement/employment in high-risk occupations. Other vaccines (polio, meningococcal, typhoid and hepatitis A) may be considered for some very specific high-risk occupations as defined in Biological Products – Indications and Scheduling for the each of the specific vaccines. Individuals who have been accepted into post-secondary health care related programs are eligible for provincially funded vaccines according to the criteria described in the Alberta Immunization Policy. Students in programs related to animal health, equine science and wildlife officers may be eligible for rabies vaccine.

To ensure all health care students are fully immunized before leaving post-secondary institutions, AHS/FNIHB will work with institutions to encourage a student health program that includes the provision of appropriate occupational vaccines. Ideally, immunization should be reviewed and completed during the training of HCWs.

It is not the responsibility of AHS/FNIHB to provide this service however, in some places, AHS/FNIHB may wish to provide this service on a cost recovery basis whereby the institution is charged for the service provided.

Note: On entry into a post-secondary health care faculty, health care students who have not received a dose of dTap in adulthood should receive a one-time dose to dTap. The dTap dose may be given regardless of the interval from the last dose of Td vaccine.
Health Care and Laboratory Workers

HCWs, including all hospital employees, other staff who work or study in hospitals (e.g., students in health care disciplines, volunteers and contract workers) and other health care personnel (e.g., those working in clinical laboratories, nursing homes, home care agencies and community settings), who are at risk of exposure to communicable diseases because of their contact with individuals or material from individuals with infections both diagnosed and undiagnosed.4

➢ **Tetanus and Diphtheria Toxoids (Td) and Diphtheria, Tetanus and Acellular Pertussis Combined Vaccine (dTap)**

- Primary immunization for tetanus and diphtheria is indicated for HCWs who have not had a primary series of tetanus-diphtheria-containing vaccines. A dose of an acellular pertussis-containing vaccine is also recommended; therefore, dTap should replace the first dose of Td in the primary series.
- As a high priority group, HCWs that provide care to children younger than 12 months of age and have not received a dose of an acellular pertussis-containing vaccine previously should receive a one-time dose of dTap. This dose should be administered as soon as feasible, regardless of the interval from the last dose of Td vaccine.5
- All other HCWs, who have not received a dose of an acellular pertussis-containing vaccine, should receive a one-time dose of dTap when presenting for a reinforcing dose of Td vaccine.
- Tetanus-prone wounds require special assessment. See [Tetanus Post-exposure Prophylaxis in Injury/Wound Management](#).

See Biological Products – Diphtheria and Tetanus-containing Vaccines.

**Note:** Since September 2004, dTap has routinely been offered to Grade 9 students. All HCWs who have not received a dose of dTap in adulthood should receive a one-time dose to dTap.4 The dTap dose may be given regardless of the interval from the last dose of Td vaccine.

➢ **MMR Vaccine**

- **Measles:** HCW, regardless of their year of birth, without a documented history of two doses of measles-containing vaccine, history of laboratory-confirmed measles disease or laboratory evidence of measles immunity should have two documented doses of a measles-containing vaccine.4
- **Mumps:** HCW, regardless of their year of birth, without a documented history of two doses of mumps-containing vaccine or history of laboratory-confirmed mumps disease should have two documented doses of mumps-containing vaccine.4,6
- **Rubella:** Individuals (male and female) who do not have documentation of one dose of rubella vaccine or rubella immunity and who may, through face-to-face contact, expose pregnant women to rubella are required under the Communicable Diseases Regulation, Alberta Regulation 238/19857 to have documented immunity to rubella.

See Biological Products – Measles-mumps-rubella Combined Vaccines.

**Note:** Monovalent vaccines for each disease are not available; therefore, individuals requiring only one antigen should receive MMR combined vaccine.

➢ **Meningococcal Vaccine**

- Laboratory workers who routinely manipulate Neisseria meningitidis should be offered meningococcal conjugate (groups A, C, Y and W-135) vaccine. See [Biological Products – Meningococcal Vaccines](#).
- Meningococcal vaccine is not routinely recommended for HCWs. It is recommended that HCWs use barrier precautions to avoid direct contact with respiratory secretions from any patient. HCWs that experience a direct exposure to respiratory secretions of a patient with invasive meningococcal disease such as during intubation, resuscitation or examination of the oropharynx (without a mask) should be offered chemoprophylaxis.4
**Polio Vaccine**

- Primary immunization for polio is indicated for HCWs who have not had a primary series of polio-containing vaccines.
- Primary immunization of laboratory workers handling specimens that may contain polio virus is recommended.
- Primary immunization of HCWs/student HCWs who may be exposed to patients excreting the wild or vaccine strains of polio virus is recommended.
- Reinforcing doses of polio vaccine are generally not required. See Biological Products – [Biological Products - Polio Vaccine](#) for specific indications.

See Biological Products – [Biological Products - Polio Vaccine](#).

**Hepatitis B Vaccine**

**Pre-exposure**

- Provincially funded hepatitis B vaccine will be provided to HCWs, volunteers or students of health-related disciplines who have a reasonable anticipated risk of exposure to blood/bloody body fluids and/or sharps injuries during the course of their work, including:
  - Individuals who puncture or cut another person’s skin in the course of performing their duties. This includes those HCWs who administer injections.
  - Individuals who handle or have contact with dirty sharps or blood/bloody fluids in the course of performing their duties.

Refer to: [Hepatitis Risk Assessment for Paid Workers/Volunteers/Students](#).

**Notes:**

- Pre-immunization serology (including anti-HBs, HBsAg and antiHBc total) is recommended for the following HCWs and students in health care disciplines:
  - Individuals with a high probability of past infection.
  - Spouse or sexual partners and needle sharing partners of a hepatitis B case or chronic carrier.
  - Household contacts of a hepatitis B case or chronic carrier.
  - Individuals who have emigrated from a country where hepatitis B is endemic. See [Hepatitis B Virus Infection – High Endemic Geographic Areas](#).

- Post-immunization serology for anti-HBs should be conducted on all HCWs and students in health care disciplines to establish antibody response and need for re-immunization should the first course of vaccine fail to provide protection. Serology should be done at least one month but not more than six months after the last dose.
  - Serology done one to six months following the primary series of hepatitis B vaccine. If the individual is negative for antibody after the first series, a second hepatitis B vaccine series should be administered, with repeat serology testing one month later.
  - If immunization was completed more than six months previously and post-immunization screening was not done, testing should be done as part of a routine assessment. If the individual is negative the worker/individual should be given 1 booster dose of hepatitis B vaccine followed by serology one month later. If the individual is still negative after the 4th dose, the second series of hepatitis B vaccine should be completed followed by serology 1 month later.

**Post-exposure**

- Provincially funded hepatitis B vaccine is provided for post-exposure management in workplace settings.
- Occupational exposures to potentially infectious material should be managed according to the occupational health and safety guidelines of the workplace where the incident occurred or the worker’s personal physician.

See: [Biological Products - Hepatitis B Vaccine](#).
Hepatitis A Vaccine

- Generally, HCWs are not eligible for pre- or post-exposure hepatitis A vaccine.

See: Biological Products - Hepatitis A Vaccine.

Influenza Vaccine

- Annual influenza immunization is recommended for HCWs and other staff working with people who have contact with individuals at high risk for influenza. HCWs and their employers have a duty to actively promote, implement, and comply with influenza immunization recommendations in order to decrease the risk of infection and complications in the vulnerable populations for which they care.

See Biological Products – Influenza Vaccines.

- Alberta’s Influenza Immunization Program has been a universal program since September 2009. Individuals six months of age and older who live, work or go to school in Alberta are eligible to receive provincially funded influenza vaccine.

Refer to: Alberta’s Influenza Immunization Program Policy.

Varicella Vaccine

- HCWs should be screened for immunity to varicella and offered a vaccine if susceptible. Immunity to varicella is defined as a reliable clinical history of chickenpox (after 12 months of age), positive varicella serology or documentation of age-appropriate varicella immunization.

See: Biological Products – Varicella Vaccine.

Typhoid Vaccine

- Laboratory workers who regularly manipulate Salmonella typhi should be offered a typhoid vaccine.

See Biological Products – Typhoid Vaccines: Biological Products – Typhoid Vaccine.

Volunteers Working in Health Care Settings

- Volunteers working in health care settings with face-to-face patient contact should be assessed as HCWs for the following antigens: tetanus/diphtheria toxoids, acellular pertussis, measles, mumps, rubella, varicella and influenza. Some volunteers may also be at risk for hepatitis B through their volunteer work and so should be assessed for this vaccine.

Animal Care and Control Workers

Rabies Vaccine

Pre-exposure

- Workers caring for animals; including veterinarians, veterinary health technicians, veterinary assistants, and SPCA workers.
- Animal research workers; including rabies laboratory workers and workers in other laboratories working with rabies-prone species.
- Animal control workers; including bylaw officers, dog pound workers, zoo workers and workers in animal shelters.
- Wildlife workers; including fish and wildlife workers and foresters.
- Spelunkers; those planning to spelunk in Alberta.

See Biological Products – Rabies Vaccines.

Note: Employees under federal jurisdiction including Canadian Food and Inspection Agency (CFIA) and Parks Canada are not eligible to receive provincially funded rabies vaccine. These employees have occupational services provided by their employer.
Post-exposure
See Biological Products: Rabies Immune Globulin, Rabies Vaccine and Authorizing and Obtaining Rabies Post-exposure Biologicals.

Refer to: Public health Notifiable Disease Management Guidelines-Rabies.¹⁰

- **Hepatitis A Vaccine**
  - Hepatitis A vaccine is provided for specific occupational groups (e.g., zoo-keepers, researchers who handle non-human primates or are involved in hepatitis A virus research).

  See: Biological Products – Hepatitis A Vaccine.

Child Care Workers
- Child care workers are at risk of exposure to communicable diseases from the contact they have with children. All staff of daycare facilities should ensure that they are immunized against rubella.⁷
  - In addition, child care workers should be encouraged to receive all routinely recommended vaccines for adults. Influenza vaccine is strongly recommended for everyone in Alberta especially for those who care for children 59 months⁹ of age and younger.

Other Occupational Groups at Risk
- **Hepatitis B Vaccine**
  - Individuals who puncture or cut another person’s skin, in the course of performing their duties, should receive hepatitis B vaccine.
  - Individuals who handle or have contact with dirty sharps in the course of performing their duties should receive hepatitis B vaccine.
  - Staff of institutions or group homes for the developmentally challenged qualifies for provincially funded hepatitis B vaccine if there is a known hepatitis B chronic carrier living in the long-term care institution or group home.

  See Biological Products – Hepatitis Vaccines.

  Refer to: Hepatitis Risk Assessment for Paid Workers/Volunteers/Students.

- **Hepatitis A Vaccine**
  - Staff of institutions for the developmentally challenged should be offered hepatitis A vaccine when there is evidence of sustained hepatitis A transmission.

References

