

# NON-ACADEMIC ADMISSION REQUIREMENTS

2020 - 2021



Rady Faculty of  
Health Sciences



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This document is intended for applicants to the College of Nursing's programs at the University of Manitoba. It provides details and steps for you to follow to meet the non-academic admission requirements. Each of these is essential for you to complete the admission process for the College of Nursing.

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## The Non-Academic Admission Requirements

This document contains information about the College of Nursing's non-academic requirements: immunizations, Criminal Records Search Certificate (including vulnerable sector search), Child Abuse Registry check, Adult Abuse Registry check and cardiopulmonary resuscitation (CPR) certification.

The non-academic admission requirements are as important as the academic requirements because your offer of admission to the College is provisional until you have submitted the non-academic admission requirements. Submit all documentation after you have received your Offer of Admission and well before the July 15 deadline (Fall intake) or the November 15 deadline (Winter intake) so that there is time to resolve any requirement issues. Failure to comply with the deadlines associated with each requirement will result in your offer of admission being revoked.

This booklet provides you with all of the information that you will need to ensure that you are able to meet the deadlines for these admission requirements.

### Admission intake

The College of Nursing will have two intakes for the Bachelor of Nursing Program (four year): one for Fall (September), and one for Winter (January)\*. The due dates and deadlines for each intake are clearly set out in the following pages.

### When are my Non-Academic Admission Requirements due?

Fall intake Winter intake

July 15 November 15

### When should I start applying and gathering my Non-Academic Admission Requirements?

REQUIREMENT	FALL INTAKE	WINTER INTAKE
Criminal Record Check	April 2020	April 2020
Child Abuse Registry Check**	April 2020	April 2020
Adult Abuse Registry Check**	April 2020	April 2020
CPR Certification*	April 2020	April 2020

\* Note that some CPR cards state they are valid for 2-3 years, however the College of Nursing requires you to be certified no earlier than April 1 of the current academic year. Therefore, if your card is from 2019 or older, you will be required to re-certify for the 2020-2021 academic year.

\*\* Adult and Child Abuse Registry Checks take approximately 4-6 weeks to obtain. Therefore you should apply for these well in advance of the deadline and before receiving your official acceptance offer from the Undergraduate Admissions Office

This document contains information about the College of Nursing's non-academic requirements: cardiopulmonary resuscitation (CPR) certification, Criminal Records Search Certificate (including Vulnerable Sector Search), Child Abuse Registry check, Adult Abuse Registry check, mask fit testing and immunizations. **It is crucial for all prospective students to read the entire document thoroughly.**

Failure to comply with the deadlines associated with each requirement will result in your Offer of Admission being revoked. This booklet provides you with all of the information that you will need to ensure that you are able to meet these requirements.

Submit all documentation **after** you have received your Offer of Admission and **well before the July 15 deadline** (Fall intake) or the **November 15 deadline** (Winter intake) so that there is time to resolve any requirement issues.

## **Cost of the Non-Academic Requirements**

Students are responsible for the costs associated with compliance with the non-academic admission requirements. In 2018 and 2019 changes were introduced to requirements and deadlines for mask fit testing, immunizations, and tuberculin skin tests. Students are also responsible for confirming that all documents have been received by the Student Services staff and that all admission requirements have been met.

If you have any questions about the non-academic admission requirements, please contact the Student Services Assistant at the address below.

## **Submission of Documents**

All documentation must be submitted to:  
Student Services Assistant  
Room 262  
Helen Glass Centre for Nursing  
Tel: 204-474-6655  
Fax: 204-474-7523  
Email: [nursing@umanitoba.ca](mailto:nursing@umanitoba.ca)

Documents can be submitted at the reception desk drop box, to any Nursing student advisor, or the College of Nursing Registrar when the Student Services assistant is unavailable. If you are submitting your documents by mail, it is recommended that you send them by registered mail or courier so that documents can be tracked. Always keep a copy for yourself of any document you submit.

All documents become the property of the College of Nursing unless you provide one **self-addressed, stamped envelope** for the return of your criminal record search certificate, Child Abuse Registry check and Adult Abuse Registry check. **If you do not provide a self-addressed, stamped envelope, your documents will be confidentially destroyed.** You will be provided a copy of your immunization and testing records at graduation, and a copy will be kept at the College of Nursing for a minimum of ten years after you graduate.

Please note that if you are applying for the Fall intake and your application is unsuccessful, you may use the same documents for a Winter admission, should your Winter application be successful.

## CPR Certification Requirement

- **Documentation can in the form of a copy of the card, an electronic print out of the certification or any documentation that indicates your name, the date certified, and the level of certification.**
- CPR Health Care Provider (HCP) or Basic Life Support (BLS) level.
- Must be certified in Canada.
- Certify April 1 or later for both the Fall and Winter intakes as it must be valid for the entire academic year.
- Your full name and date of certification must be on the card.
- DO NOT submit your original card.
- **You may choose to certify anywhere in Canada as long as it is at the HCP or BLS level.**

Some of the more common facilities are:

HEART & STROKE  
FOUNDATION OF CANADA  
Locations vary  
Toll Free: 1-877-473-0333  
Web: <https://resuscitation.heartandstroke.ca>  
Cost: Price varies

WINNIPEG FIRST AID  
222 Osborne Street in Unit 20,  
Winnipeg Manitoba, R3L1Z3  
Tel: 204-272-8720  
WhatsApp: 1-888-870-7002  
Email: [info@firstaidwinnipeg.ca](mailto:info@firstaidwinnipeg.ca)  
Web: <https://firstaidwinnipeg.ca>  
Cost: \$53.99

ST. JOHN AMBULANCE  
1 St. John Ambulance Way  
Winnipeg, MB R3G 3H5  
Tel: 204-784-7000 or toll free:  
1-800-471-7771  
Web: <http://www.sja.ca/English/Pages/default.aspx>  
Cost: \$135

### PLEASE NOTE:

*You must be a resident of Winnipeg to apply for the Vulnerable Sector Search check. If you are not a resident of Winnipeg and require the Vulnerable Sector, you must attend your local police agency to have the search completed. Proof of your current address is required.*

*To have your original documents returned to you, please enclose with your documents **ONE** self-addressed, stamped envelope:*

*To avoid unnecessary delays or surcharges, follow these addressing guidelines (visual examples follow):*

#### **Correct address formats for self-addressed envelope:**

- Write STREET ADDRESS in uppercase letters.
- Write POSTAL CODES in uppercase letters and separate the first 3 characters from the last 3 characters with 1 space. (No hyphens please. These can cause delays)
- Place the municipality, province or territory and postal code on the same line.
- Separate the municipality from the province (or territory) with 1 space; separate the province (or territory) from the postal code with 2 spaces.
- Don't use punctuation unless it is part of a proper name, e.g., ST. JOHN'S.

View link here on visual examples:

[https://www.canadapost.ca/web/en/kb/details.page?article=addressing\\_mail\\_accu&catttype=kb&cat=addressing&subcat=accuracy](https://www.canadapost.ca/web/en/kb/details.page?article=addressing_mail_accu&catttype=kb&cat=addressing&subcat=accuracy)

## Criminal Record Search

Requirement:

- Apply for the Criminal Record Search Certificate after April 1 and **allow 4-8 weeks processing**. Do not apply before April 1 as you will be required to obtain another valid Criminal Record Search.
- Criminal Record Search, including a Vulnerable Sector Search.
- Apply online at: <https://policeinformationcheck.winnipeg.ca>
- Select 'unpaid practicum' for the reason you are applying.
- Select 'College of Nursing' as the agency.
- Be sure to check the box that indicates you are requesting a Vulnerable Sector Search.
- An email granting access to your check will be sent to us once it has been processed. **You do not need to provide any additional copies to our office.**
- You may use the same Criminal Record Search for both Fall and Winter applications.
- If you do not provide us with an envelope, your documents will be confidentially destroyed after 6 months
- International students must submit a Canadian Criminal Record Search Certificate PLUS an equivalent document from their home country.
- International Criminal Records Checks must be notarized and translated to English.
- Students whose country of origin does not provide an equivalent document, must sign an affidavit to that effect.
- The **affidavit** can be obtained from the College of Nursing and must be signed and sealed by a Notary Public. To find a Notary Public, you may consider doing a Google search for one that is convenient for you and contact their office for quotes and appointment availability.

### WHERE TO OBTAIN THE CRIMINAL RECORDS CHECK IN PERSON

Winnipeg Police Service  
245 Smith Street, Winnipeg, Manitoba  
Monday to Friday: 8:00 a.m. to 3:30 p.m.

Other Canadian Applicants:  
Apply through your home jurisdiction  
or through your local RCMP.  
Web: <http://www.rcmp-grc.gc.ca/cr-cj/fing-empr2-eng.htm>

#### WHERE TO OBTAIN THE CERTIFICATE

Apply online at: <http://www.gov.mb.ca/fs/abuseregistries.html>

Apply By Mail: **Download Application and Instructions (PDF)**

Apply in person:

1st floor - 777 Portage Avenue,  
Winnipeg, MB R3G 0N3

Tel: 204-945-6967 | Fax: 204-948-2222

Email: [car@gov.mb.ca](mailto:car@gov.mb.ca)

Cost: \$20

**Note:** Applicants must provide two valid pieces of government-issued identification (ID), one of which must include the applicant's name, date of birth, signature, photo and an expiry date.

## Child Abuse Registry Check

Requirement:

- **Ensure you apply for the check well in advance of receiving your official offer as this registry check take approximately 4-8 weeks to receive.**
- **Must be dated no earlier than April 1 of the current year. Therefore if you are applying for the January admission, registry checks dated from June of the current year are acceptable. Do not apply before April 1 as you will be required to obtain another valid check.**
- **Original** Manitoba Child Abuse Registry Check.  
**Note:** The Vulnerable Sector Search on the Criminal Record Search Certificate is not the same as the Child Abuse Registry Check. This is a separate document.
- This must be completed before the July 15 deadline (Fall intake) or the November 15 deadline (Winter intake).
- Carefully review all instructions to ensure that your application can be processed promptly.
- In jurisdictions where a Child Abuse Registry or equivalent does not exist, consult with the Student Service Office.
- Provide our office with a self-addressed, stamped envelope for the return of your original documents.
- If you do not provide us with an envelope, your documents will be confidentially destroyed after 6 months.
- Any applicant listed on the Child Abuse Registry will be denied admission to the College.

#### WHERE TO OBTAIN THE CERTIFICATE

Apply online at: <http://www.gov.mb.ca/fs/abuseregistries.html>

Apply By Mail: **Download Application and Instructions (PDF)**

Apply in person:

1st floor - 777 Portage Avenue  
Winnipeg, MB R3G 0N3

Tel: 204-945-6967 | Fax: 204-948-2222

Email: [aar@gov.mb.ca](mailto:aar@gov.mb.ca)

Cost: \$20

**Note:** Applicants must provide two valid pieces of government-issued identification (ID), one of which must include the applicant's name, date of birth, signature, photo and an expiry date.

## Adult Abuse Registry Check

Requirement:

- **Ensure you apply for the check well in advance of receiving your official offer as this registry check take approximately 4-8 weeks to receive.**
- **Must be dated no earlier than April 1 of the current year. Therefore if you are applying for the January admission, registry checks dated from June of the current year are acceptable. Do not apply before April 1 as you will be required to obtain another valid Check.**
- **Original** Manitoba Adult Abuse Registry Check.
- Apply for the Adult Abuse Registry Check April 1 or later and allow 4-8 weeks processing. Do not apply before April 1 as you will be required to obtain another valid Check.
- This must be completed before the July 15 deadline (Fall intake) or the November 15 deadline (Winter intake).
- Carefully review all instructions to ensure that your application can be processed promptly.
- In jurisdictions where a Adult Abuse Registry or equivalent does not exist, consult with the Student Services Office.
- Provide our office with a self-addressed, stamped envelope for the return of your original documents.
- If you do not provide us with an envelope, your documents will be confidentially destroyed after 6 months.
- Any applicant on the Adult Abuse Registry will have their Check reviewed by:
  - Undergraduate Programs – a sub-committee of the Advance Standing and Admissions Committee;
  - Graduate Programs – Curriculum, Governance and Quality Assurance Committee.

## Mask-Fit Testing

Requirement:

Mask-fit testing documentation is **no longer due prior to admission**. Mask fit testing will occur on an as-needed basis only, should the student be placed on a unit or in a setting where an N95 mask is required for patient care, and as determined by the clinical course leader and Director of Clinical Education.

## Immunizations

Requirements:

- Immunizations and tests do not need to be completed prior to the start of classes. If you have started the process, please keep the information you have.
- Complete and submit the **Immune Status Consent Form and Student Information Form**.
- Previous immunization and testing records will be reviewed and students will be informed what additional items, if any, are required.
- Students will be able to choose ONE of the following options:
  - Students can have outstanding immunizations and tests completed through the College of Nursing (free of charge), OR
  - Students can have outstanding immunizations and tests completed through their own healthcare provider (students are responsible for all associated costs).
- Students may decide now on which option they prefer, or alternatively, may wait until the first day of orientation session to decide.
- Regardless of where you decide to have your immunizations and tests conducted, failure to maintain an up-to-date immunization record throughout your schooling may result in your student account placed on hold, and/or removal from clinical placements.
- Immunizations and tests cannot be administered by family members.
- Students are required to obtain the influenza vaccine annually.

## Steps in the process

**Step one:** Complete the **Immune Status Consent Form and Student Information Form**

**Step two:** Collect any immunization and testing records of relevance. You do not need to obtain your Manitoba provincial immunization registry record, this will be done for all students. However the following may not be entered into the provincial immunization registry, and therefore you should obtain:

- Immunization records from another province or country, unless they were already entered into the Manitoba provincial immunization registry (e.g., when you came to Manitoba as a child). If you are not certain let us know on your forms, and we will let you know if the records do not appear in the provincial registry.
- Immunization records documented prior to 1982.
- Travel immunization records (e.g., hepatitis A+B immunizations), unless they were already entered into the Manitoba provincial immunization registry. If you are not certain let us know on your forms, and we will let you know if the records do not appear in the provincial registry.

**Step three:** Submit the Immune Status Consent Form and Student Information Form and any other relevant records mentioned above by July 15 (Fall term) or November 15 (Winter term)

## Frequently Asked Questions

### ***Will I have to pay for my immunizations?***

Many students have expressed concerns about the costs of the vaccines, which has prompted the College of Nursing to attempt to reduce costs and offer additional services to students. If you choose to have services provided through the College of Nursing, the costs of required immunizations and tuberculin skin tests will be free to you. If you have services through our own health-care provider, you may be expected to pay some costs.

### ***When do I begin updating my required immunizations and tests?***

You do not need to complete your required immunizations and tests for the College of Nursing right now. Once you receive an offer of admission, you will be sent an Immune Status Consent Form and Student Information Form for completion. Your documents will then be reviewed by the College of Nursing. Outstanding immunizations and tests can be addressed right away, or else you may decide to wait until the start of classes; most students prefer to wait until the start of classes before completing the immunization and testing process.

## Additional information

The Student Immunization Manual (pages 13 to 43) contains detailed information on immunization and testing requirements.

If you have any additional questions about immunizations please contact:

Student Services Assistant  
Room 262 Helen Glass Centre for Nursing  
89 Curry Place  
Winnipeg, Manitoba R3T 2N2  
Tel: 204-474-6655 | Fax: 204-474-7523  
For immunization questions, email: [Nursing.Immunizations@umanitoba.ca](mailto:Nursing.Immunizations@umanitoba.ca)

# STUDENT IMMUNIZATION MANUAL

#### QUESTIONS:

If you have any questions about the collection of your personal information or personal health information, please contact the Student Services assistant at the College of Nursing (tel. 204-474-6655); students may also wish to contact the Access & Privacy Office (tel. 204-474-9462), 233 Elizabeth Dafoe Library, University of Manitoba, Winnipeg, MB, R3T 2N2.

For more information on PHIA please visit [www.gov.mb.ca/health/phia/index.html](http://www.gov.mb.ca/health/phia/index.html)

For more information on FIPPA please visit [www.gov.mb.ca/chc/fippa/index.html](http://www.gov.mb.ca/chc/fippa/index.html)

## Welcome

### INTRODUCTION

When students enter into a new field of study in health care, it is important for various immunization and screening tests to be reviewed, in keeping with national occupational health recommendations and provincial legislation. Maintaining an up-to-date health record is an important responsibility of being a student, and serves to protect the health of the student, vulnerable patients with whose care the students will be involved, and the broader community. In general, immunizations and health screening tests are voluntary procedures; however, the immunizations and/or testing outlined in these documents are also a condition of enrollment within the College of Nursing. Failure to maintain an up-to-date record may result in the student being barred from clinical activities involving patients, and may mean the student cannot complete the program.

The immunization and testing requirements of the College of Nursing are based for the most part on the **Canadian Immunization Guide** and **Canadian Tuberculosis Standards** (both available online).

Students may have any required immunizations and/or tests arranged by the College of Nursing. This may include one or more of the following:

1. Services offered by physician and nursing staff of the College of Nursing.
2. Services offered through occupational health units of the Winnipeg Regional Health Authority.
3. Clinics scheduled within the school year involving supervised, trained healthcare students assisting with immunizations or testing.

Students who do not want required immunizations and testing arranged by the College of Nursing may choose to have services performed by their own healthcare provider. In the Student Information Form we ask you where you wish to have services provided; students may also wait and decide at the first-year orientation conducted prior to the start of classes (at orientation we will ask you through a written questionnaire where you plan to have your immunization and testing requirements completed).

**Privacy and protection of personal information:** The College of Nursing is committed to maintaining the privacy of students. Only the minimal amount of health information required will be collected, used or disclosed. On occasion records may be obtained from, or shared with, certain individuals or organizations as necessary in order to determine a student's ability to participate in patient-related activities in the student's current program of study. Records are protected by *The Freedom of Information and Protection of Privacy Act (FIPPA)* and *The Personal Health Information Act (PHIA)*.

**Access to records:** Student records are securely stored and are accessible to a very limited number of staff of the College of Nursing, and only for the stated purposes of the program. The immune status record for every student will be kept while the student is enrolled in the College of Nursing, and for a minimum of 10 years after the student's expected date of graduation. Eventually the College of Nursing will destroy all immune status record in a secure and confidential manner, consistent with accepted methods of disposal of health records. Students may request a copy of their record at any time while the program has these records.

**Use and disclosure:** Your personal information and personal health information is being collected under the authority of The University of Manitoba Act. The information you provide will be used by the University for the purpose of determining your ability to participate in patient-related activities during your clinical placements. Your personal information and personal health information may be disclosed to your clinical placement sites to confirm your immunization status. Immunizations provided by the College of Nursing will be entered into the Manitoba Health immunization registry (for those registered with Manitoba Health). Your personal information and personal health information will not be used or disclosed for other purposes, unless permitted by *The Freedom of Information and Protection of Privacy Act (FIPPA)* and *The Personal Health Information Act (PHIA)*.

## **School clinics**

The following sections provide some additional details regarding the school clinics that may involve student immunizers; more information will be provided at the orientation lecture conducted prior to the start of classes.

### **FORMAT OF THE CLINICS**

All students attending school clinics will be provided an individual schedule listing dates and times of clinics; students may need to attend one clinic or multiple clinics. Most school clinics will be scheduled over the noon lunch hour. At each clinic, students will line up and fill out a short questionnaire asking about their current health status. Students will briefly review with a clinician (e.g., nurse or physician) what they are receiving that day; students will then go to one of several stations set up for the required item.

### **STUDENT IMMUNIZERS**

Immunizations will be administered at the school clinics by a physician, nurse, or trained, supervised health-care students. In addition to providing a valuable service to all incoming student clients, the clinics provide an excellent opportunity for student immunizers to learn about vaccinations and tests. Student immunizers will be provided only the minimal amount of information about your health necessary to provide you care (e.g., concerns over allergies or fainting). All student immunizers are covered by The Personal Health Information Act (PHIA), and are not allowed to disclose any of your personal health information. (Note: student immunizers will NOT have access to a student's complete record, health questionnaire, serology [blood antibody] results, or tuberculin skin test results). Student clients who do not wish to obtain services from a student immunizer can access care through their own health-care provider.

### **STUDENTS WHO FEEL UNWELL AT THE SCHOOL CLINICS**

Students are asked to remain at the clinic for 15 minutes after they receive an immunization or skin test. This is in case the student experiences a severe allergic reaction, or in case the student feels unwell or faints. Students who feel unwell should notify immediately the clinician at the clinic, or a student immunizer. Students who feel unwell will be provided juice and will be observed for a period of time. Policies are in place to respond to students who faint, or students who experience a severe allergic reaction (epinephrine/adrenaline is available and can be administered by the clinician if necessary).

### **TIPS ON ATTENDING THE SCHOOL CLINICS:**

- Please try to attend as close to your scheduled time as possible (indicated on your personalized schedule or email invitation), in order to reduce long line-ups. Students who wait a short amount of time are less likely to feel unwell or faint.
- Please wear a suitable shirt that will allow you to expose your entire upper arm (including deltoid/shoulder).
- Students should eat or drink something before the clinic; obtaining a vaccination or skin test on an empty stomach may increase the risk of fainting.
- If you feel there is an error or omission in your vaccination and testing schedule, please try to contact the Student Services assistant to review this in advance of a clinic.
- Remain at the clinic 15 minutes in case of an allergic reaction or fainting episode.

## Costs of Vaccines and Services

The following outlines the costs of vaccines and services, for information. Remember that all required immunizations as well as tuberculin skin tests are provided at no charge for students accessing services through the College of Nursing.

- 1. Publicly funded vaccines:** Some vaccines are publicly funded (paid for by the government) in certain situations. Whether a vaccine is publicly funded may depend on your age, risk factors, and whether you have provincial health insurance with Manitoba. A list of publicly funded vaccines is found at <http://www.gov.mb.ca/health/publichealth/cdc/vaccineeligibility.html>. For example:
  - Routine tetanus, diphtheria, pertussis, polio, measles, mumps and rubella vaccines are free to Manitoba residents in most situations
  - Hepatitis B vaccine is free to Manitoba resident born in or after 1989, and also to individuals with risk factors such as multiple sexual partners
  - Hepatitis A vaccine is free to Manitoba residents who identify as men who have sex with men (MSM), and those with certain liver diseases
- 2. Vaccines that are not publicly funded:** If a vaccine is not publicly funded, it must be purchased from a pharmacy or clinic. You may receive a discount if your drug plan pays for some or all of the vaccine; retain your official receipts and submit them for reimbursement. However, if your program of study requires a vaccine that normally costs money, you will not be charged for it if you receive it through the school program (see #3 below).
- 3. Required vaccines:** Any required vaccine you need to receive as part of your program of study is provided free of charge, for those accessing care through the school clinics. For example, if you need hepatitis B vaccine but did not receive it yet, we will provide it to you for free, regardless of whether or not you would have qualified for publicly funded hepatitis B vaccine. (If you are accessing care from your own provider, you may need to pay for a vaccine if it is not otherwise publicly funded)
- 4. Serology:** Some serology (blood antibody) tests are provided free of charge, and some may not be. For example, if you require serology for hepatitis B and varicella (chickenpox) antibodies, the laboratory may charge you a flat rate of about \$55 for all tests. However, if you request testing for HIV and/or hepatitis C, there is no charge for the bloodwork, even if it includes tests that would normally cost you.
- 5. Tuberculin skin tests:** All tuberculin skin tests (TSTs or Mantoux tests) are provided free of charge for those accessing care through the school clinics. If you receive this on your own, you may be charged \$50 or more for each test (most students require two of these tests). If you obtain a TST through the service arranged by the College of Nursing but miss a reading without notifying the College of Nursing in advance, you will be charged \$20 for the test.
- 6. Fees charged by primary care providers:** Students who choose to access services through their own health-care provider may be charged fees for having forms completed, or for obtaining vaccinations or tuberculin skin tests.

**DRUG COVERAGE:** Students have an option of staying with the University of Manitoba *UMSU Health and Dental Plan* ([www.umsu.ca](http://www.umsu.ca)), or opting-out of this plan and instead obtaining coverage through third-party pharmaceutical coverage. If the College of Nursing obtains any vaccinations for a student, the student's third-party drug coverage may be used at the pharmacy in order to reduce the costs of purchasing these vaccinations.

### **ADDITIONAL TIPS ON OBTAINING RECORDS**

A “trustee” means a health professional, health-care facility, public body, or health services agency that collects or maintains personal health information. Please note the following:

- You can request records from any trustee that still has the records, including a clinic, public health unit, pharmacy, etc.
- If records still exist a trustee is legally obligated to share these with a client within 30 days of a request (this is the law in Manitoba; it may be similar in other jurisdictions). The client’s right to obtain records generally still exists even if a trustee has retired or died.
- Records should include your name, the date of the service, the item in question, and the name and designation of the clinician. Records created by students or their family members generally are not accepted.
- A trustee cannot insist a client attend in person to obtain records.
- Trustees are allowed to charge a modest fee for records, which must take into account a client’s ability to pay.

### **Obtaining Old Records**

It is very important that a student’s previous immunization and testing records be reviewed by the College of Nursing in order to determine a student’s outstanding immunization and testing requirements. In general proper records (signed and dated by a health-care provider) are required for proof of immunizations or tests; verbal histories of these are not acceptable. For example, an immunization record should state the following:

- The name of the immunization provided
- The date it was provided (including day, month, and year)
- The name, designation, and signature of the clinician completing the record
- The date the record was completed

**Relevant records:** Only certain records are relevant to the program, including:

- Bacille Calmette-Guérin immunization (BCG) vaccination
- Hepatitis A and B immunizations
- Measles, mumps, rubella immunizations
- Pertussis immunization (adult)
- Polio immunizations
- Tetanus and diphtheria immunizations
- Varicella (chickenpox) immunizations
- Serology reports for testing any of the above
- Any previous tuberculin skin tests (TSTs or Mantoux)
- Chest x-ray reports obtained after a positive TST
- A previous diagnosis of, or therapy for, latent tuberculosis infection (LTBI) or active tuberculosis disease

Some records are not relevant to the program and do NOT need to be submitted; this includes: immunization records for cholera, human papillomavirus (HPV), previous influenza, meningococcal, pneumococcus, rabies, typhoid, or yellow fever; nor do students need to provide records for any screening tests that were conducted, such as syphilis, hepatitis C, or human immunodeficiency virus (HIV).

**Locating records:** Records may exist in various locations, including at the office of a student’s former pediatrician or family physician, or a local public health unit. Students may also have immunization papers or pocket cards in their own possession. If immunizations were given but the records are not available, the student should contact the Associate Dean, Undergraduate Programs or designate about this.

**The provincial immunization registry:** Manitoba’s provincial immunization registry (previously known as the “Manitoba Immunization Monitoring System” or MIMS; it is now called Panorama”) is an electronic provincial immunization database kept by Manitoba Health; it began as a pilot for some regions in Manitoba in 1981, and was rolled out for all regions in 1984 (some back-entry of old records may also have occurred). All immunizations that are billed by physicians or offered by Public Health Nurses in schools or clinics, and any other records that are sent to public health by health-care providers, are entered into the provincial immunization registry; all immunizations given by the College of Nursing to students who have a Manitoba Health card will also be sent for entry into the registry. The registry is not 100% complete, as not all health-care providers will send vaccination records for entry into it. You can have any properly documented immunization records (e.g., out-of-province records) entered into the registry by bringing these to your local public health office; be sure to bring your Manitoba Health card as well. Students or those providing care to students can request a copy of the immunization registry record by contacting the local public health unit; for a list of public health offices please refer to: <http://www.gov.mb.ca/health/publichealth/offices.html>.

**The College of Nursing will obtain an immunization record for every student from the provincial immunization registry, and students do NOT need to do this.** However, vaccination records may exist that are not listed on the provincial immunization registry; this includes: records that are from out-of-province; recent travel immunizations that may not have been entered into the registry; or older records (i.e., before the early 1980s). In addition, students may also have records in their possession that are relevant (e.g., immunization pocket cards).

## Exceptions and Contraindications to Immunization and Testing Requirements

Students may be granted an exemption from a specific immunization requirement for a medical or health condition. If you feel you have an exemption please notify the College of Nursing of this; adequate documentation is required for an exemption to be considered. An exemption will fall under one of the following categories:

1. **Allergy:** A student may have a suspected immunoglobulin E (IgE) mediated or other serious allergy to a specific vaccine, vaccine component, or tuberculin, making that item contraindicated for the student; adequate documentation from a physician is required.
2. **Compromised immune system:** A student may have a compromised immune system due to the use of immunosuppressing medications, certain infections (e.g., HIV infection), or genetic disorders. In such situations a specific vaccine may be contraindicated, or a vaccine or test may require special timing relative to medical therapy. Adequate documentation from a physician is required. Special immunization or serological testing requirements that are different from those listed in this document may be recommended for these students. Consultation with an infectious diseases expert is recommended in such situations.
3. **Pregnancy:** Live vaccines are contraindicated in pregnancy. Some vaccines are known to be safe during pregnancy, while other vaccines may require a balancing of the benefits versus risks; depending on the risk assessment, a vaccine may be deferred until the student is no longer pregnant. Documenting a self-reported history of pregnancy is considered adequate. For more information on immunization in pregnancy and breastfeeding please refer to the **Canadian Immunization Guide section on Immunization in Pregnancy and Breastfeeding**.
4. **Other:** Some vaccines may not be appropriate for an individual due to a specific medical condition or concern; such situations should be addressed on an individual basis.

## Family Members Providing Services

Some students have parents or other immediate family members who are trained as nurses or physicians. Students should be aware that in most situations parents or other close family members should not provide a student health services such as immunizations or blood tests, or complete forms for a student.

The College of Registered Nurses of Manitoba indicates in the document Professional Boundaries for Therapeutic Relationships that in general nurses should not provide care to family members.

[https://www.crnmb.ca/uploads/document/document\\_file\\_99.pdf?t=1438267436](https://www.crnmb.ca/uploads/document/document_file_99.pdf?t=1438267436)

The College of Physicians and Surgeons of Manitoba advises its members in its Code of Ethics: "Limit treatment of yourself or members of your immediate family to minor or emergency services and only when another physician is not readily available; there should be no fee for such treatment."

<http://cpsm.mb.ca/cjj39alckF30a/wpcontent/uploads/CODE-OF-ETHICS-Schedule%20G.pdf>

Other health professions have similar guidelines for their members.

Family members should not complete any medical forms for the student. However, if the student has received any services (e.g., immunizations) from family members in the past relevant to what is now being requested, the College of Nursing may still accept these records.

## **Vaccine Basics**

### **WHAT ARE VACCINES?**

Vaccines are also called immunizations, needles or baby shots. Vaccines allow the immune system to learn how to recognize and fight bacteria and viruses that cause diseases. Vaccines not only protect the people who are immunized, but may also protect those who cannot be immunized for medical reasons: It is more difficult to maintain a chain of person-to-person infection when large numbers of a population are immune (this is also called “herd-immunity”). Most vaccines are given in childhood, although some vaccines are given at other points in one’s life. For some vaccines, booster (extra) needles are needed to maintain protection against certain diseases, since the protection given by the original immunizations begins to drop with time.

Before vaccines were available, little could be done to prevent serious diseases such as diphtheria, pertussis (whooping cough), tetanus (lockjaw), measles and polio, to name a few. Now, very few Canadians get sick or die from these diseases because people are protected by immunization. However, in some countries where immunization rates have dropped to low levels, rates of disease can quickly rise. Diseases that are rare in Canada have the potential to once again cause significant suffering and death if we do not continue to immunize individuals against them.

Some vaccines are live, containing living but weakened versions of the organisms they are being used to protect against; examples of this include MMR (measles, mumps, rubella) and varicella (chickenpox). Other vaccinations do not contain living organisms; these include diphtheria, hepatitis A and B, influenza, polio, pertussis, and tetanus.

### **WHAT ARE ANTIBODIES?**

Once an individual is exposed to viruses or bacteria, his or her immune system will attempt to create small proteins in the bloodstream called antibodies, in order to fight the infection. If the immune system is successful in creating antibodies, the next time an individual is exposed to the same virus or bacteria, he or she will be more successful in fighting off an infection, as there are now antibodies readily available. This is the basic concept behind vaccinations: an individual’s immune system is exposed to small particles in the vaccine that mimic the appearance of viruses or bacteria; this trains the immune system to recognize and fight future infections.

For some diseases, antibody levels in the bloodstream can be measured through a simple blood test. This can be used to determine if the individual is likely protected against a disease, if an exposure were to occur in the future. A common example of this is the antibody level that is checked for hepatitis B after vaccination in all students in healthcare disciplines (see pages 26 to 27). However, in most situations it is not necessary or recommended to test antibodies after an immunization series is given.

### **ARE VACCINES NECESSARY?**

One of the greatest achievements by public health systems throughout the world is the reduction of infectious diseases resulting from the use of vaccines. Routine immunization has eradicated smallpox from the globe and led to the near elimination of wild poliovirus. The diseases that vaccines prevent are at an all-time low in developed countries, and now few people experience the devastating effects of measles, polio, tetanus, pertussis and other illnesses. Newer vaccines are being created to further reduce the toll that infectious agents take on human health.

### **ARE VACCINES SAFE?**

Prior to approval by Health Canada, vaccines are tested extensively to ensure they are effective and safe. Vaccines are the best defence we have against certain infectious diseases; however, no vaccine is 100% safe or effective. Differences in the way individual immune systems react to a vaccine account for rare occasions when people are not protected following immunization or when they experience side effects. Unfortunately, as the incidence of infectious diseases continues to decline, some people have become less interested in the consequences of preventable illnesses. Instead, they have become increasingly concerned about the risks associated with vaccines. Since vaccination is such a common and memorable event, any illness following immunization may be attributed to the vaccine. While some of these reactions may be caused by the vaccine, many of them are unrelated events that occur after vaccination by coincidence.

## Multiple injections

### ***Is it safe to receive more than one vaccine at the same time? Are there more side effects?***

One of the most important principles of vaccination administration is that vaccines can almost always be given at the same time. Doing so will not increase the rate of side effects than when each individual vaccine is given alone. In fact, there are increasingly more vaccine manufacturers that are supplying combination vaccines where one needle contains up to five or six vaccines. The body's immune system is exposed to thousands of antigens (foreign substances such as bacteria and viruses) every day; giving more than one vaccine at one clinic visit is a very small fraction of the total number daily antigens the body encounters. (NOTE: If two live vaccines or a live vaccine and a tuberculin skin test are not given at the same visit, a short period of time must elapse after a live vaccination before any other live vaccines or tuberculin skin tests can be given.)

## Gaps in vaccine schedules

### ***If it has been a long time since I started a particular vaccination series but did not finish, does the series need to be started over?***

Many vaccinations require multiple doses given over a period of weeks or months, following a set schedule (e.g., hepatitis B; measles/mumps/rubella). If a lengthy period of time has elapsed since starting the series, the series does not need to be restarted, even if it has been years since the previous dose was given. There are minimum time intervals between vaccinations that need to be respected, but there are no maximum time intervals. (NOTE: The only exception to this rule is some situations where oral typhoid vaccination is given.)

## What are the side effects of vaccinations?

**Common side effects (all vaccinations):** With any vaccination that is administered, local reactions are common and normal, and may include soreness and redness at the injection site for up to two days. Other reactions can include fever, headache or myalgia (tenderness or pain in the muscles). A few individuals will faint during or after an immunization, or when they are having blood drawn, which is one reason individuals should remain at the clinic 15 minutes after being immunized.

**Rare side effects:** About one in five hundred thousand vaccinations are associated with a severe allergic reaction (anaphylaxis), manifest by painless swelling about the face and mouth, an itchy rash (90% of cases), and respiratory symptoms, such as coughing, wheezing, and laboured breathing. Individuals should always mention any known allergies to their healthcare provider prior to receiving any vaccination. Some vaccinations (e.g., influenza) have been associated with Guillain-Barré syndrome, which is a form of paralysis that is usually temporary (occurs once in every one million vaccinations; this also occurs in individuals who have not been vaccinated).

**Tetanus/diphtheria/pertussis vaccines:** These have been noted to cause more local reactions than other vaccines, such as redness, pain and swelling around the area the vaccine is given; these reactions are not serious, and concern over such side effects should not lead to a delay in receiving this immunization (see pages 18 to 20).

## Live viral vaccinations

**MMR:** Within three weeks after immunization a red rash occurs in less than five per cent of people receiving live MMR vaccine who are not immune to measles or rubella; sometimes the rash can cover the whole body. The rash disappears by itself and is NOT passed on to other people. Temporary swelling of lymph glands, especially those of the head and neck, occurs in about five to 15 per cent of people who are not immune to rubella. Temporary joint pain or swelling lasting one to three weeks may occur after receiving rubella vaccine; this is most common in post-pubertal females. There is no evidence this leads to chronic arthritic or neurologic conditions.

**Varicella (chickenpox) vaccine:** Some people will get a rash that looks like chickenpox one to four weeks after getting the chickenpox vaccine, usually with fewer than 50 spots or blisters. The fluid in the blisters MAY be contagious, although transmission of the disease from a vaccine rash is rare. The rash should be covered if possible, and contact with people who have not had chickenpox or those with weakened immune systems should be minimized.

## **Pregnancy**

Some vaccines (e.g., influenza) are approved for use in pregnancy, while others are not; this is due to the (largely theoretical) risk some vaccinations may pose to pregnant women. Females should always advise their health-care provider if they are pregnant before receiving a vaccination.

**Women should not receive a live vaccine (e.g., MMR; varicella) if they are pregnant, and women should avoid pregnancy for one month after receiving these vaccines.**

## **Donating blood after receiving an immunization**

Many students wish to help others through blood donation, and students who qualify as eligible blood donors are strongly encouraged to do this. Canadian Blood Services (CBS) is located at 777 William Avenue, across the street from the University of Manitoba Bannatyne campus; both scheduled and walk-in appointments are available. Students should be aware that a recent immunization might result in a temporary deferral period introduced, when an individual will not be able to donate blood. The deferral period ranges from a few days to several weeks, depending on the type of immunization given. Students should always mention recent immunization they have received when donating blood (this is asked on the screening form potential donors complete during their appointment). For complete donor eligibility criteria or to speak to a trained Canadian Blood Services health professional, please call 1-888-2- DONATE (1-888-236-6283) or go to [www.bloodservices.ca](http://www.bloodservices.ca).

### ***Tetanus and Diphtheria Immunization Requirement:***

All students are required to have documented a complete primary series of tetanus/diphtheria immunizations. This requires a minimum of three doses, with ideally a minimum of two months (absolute minimum one month) between the first two doses, and a minimum of six months between the last two doses. In addition, the last tetanus/diphtheria containing immunization must have been received within the past ten years. Serology is not accepted as proof of tetanus and diphtheria immunity. Students who do not have a primary series documented must complete a primary adult immunization series. Records indicating that a childhood series was received without providing dates are insufficient.

### ***Booster dose:***

A booster dose of tetanus/diphtheria (Td) containing vaccine is required every 10 years, with one of these doses being given in adulthood as the combined tetanus/diphtheria/acellular pertussis (Tdap) vaccine (see **page 20** for more information on the pertussis immunization requirements).

## **Tetanus**

### ***What is tetanus?***

Tetanus is a rapid and often fatal disease caused by an extremely potent neurotoxin (nerve toxin) produced by the bacterium *Clostridium tetani*. The organism is found in soil, the intestines of animals and humans, and also the dust inside buildings. Wounds that are contaminated with soil or feces (stool) and that are associated with deep tissue injury are most frequently associated with tetanus; cases have also been reported related to injection drug use, animal bites/lacerations, burns or surgery. Once inside the body, the tetanus bacteria produce a neurotoxin that causes prolonged, painful contraction of muscles; usually starting in the jaw ("lockjaw", causing difficulty with opening the mouth or swallowing), and then progressing to other areas of the body. Death occurs in over 10% of cases.

### ***How can tetanus be spread?***

Exposure occurs when tetanus bacteria from the environment gain entry into the body, usually through an open wound; about a third of cases occur without a known injury. Tetanus is not spread person-to-person.

### ***Canada***

Prior to vaccination, there were about 40 to 50 deaths from tetanus each year in Canada. From 2005 to 2011 there were between 0 and 6 cases of tetanus in Canada each year; cases occur almost exclusively among individuals who are under-immunized or with uncertain immunization histories

### ***How can tetanus be prevented?***

Most cases of tetanus can be prevented through immunization. All individuals should receive a primary (childhood) series of vaccinations with tetanus vaccine. Adults with an unclear or absent history of vaccination should also be given a primary series. A booster dose of tetanus vaccine should then be given every ten years (in Canada tetanus vaccine comes combined with diphtheria vaccine). Sometimes special wound treatment may be required after an injury, depending on the level of contamination of the wound and the immunization status of the individual. Precautions should always be exercised when individuals handle soil or animal feces (e.g., gloves should always be worn while gardening). All injuries to skin should be thoroughly cleaned.

### ***After a tetanus/diphtheria immunization is given, when is the next dose of tetanus/diphtheria due?***

After a tetanus/diphtheria (Td) or tetanus/diphtheria/acellular pertussis (Tdap) immunization is given in adulthood (and assuming the primary series is complete) one would need another routine Td immunization in 10 years. However, if a fully immunized adult sustains a wound that is serious and/or dirty, and it has been more than five years since the last dose of a tetanus-containing vaccine was given, then another dose of Td should be given. A dose of Tdap is also recommended with every pregnancy.

### ***Why is this disease important to a health-care worker?***

Although there is no risk of spread of tetanus person-to-person, health-care workers should know the risk of tetanus for themselves and their clients, and take the appropriate control measures for all wound management.

***Tetanus and Diphtheria Immunization Requirement:***

All students are required to have documented a complete primary series of tetanus/diphtheria immunizations. This requires a minimum of three doses, with ideally a minimum of two months (absolute minimum one month) between the first two doses, and a minimum of six months between the last two doses. In addition, the last tetanus/diphtheria containing immunization must have been received within the past ten years. Serology is not accepted as proof of tetanus and diphtheria immunity. Students who do not have a primary series documented must complete a primary adult immunization series. Records indicating that a childhood series was received without providing dates are insufficient.

***Booster dose:***

A booster dose of tetanus/diphtheria (Td) containing vaccine is required every 10 years, with one of these doses being given in adulthood as the combined tetanus/diphtheria/acellular pertussis (Tdap) vaccine (see **page 20** for more information on the pertussis immunization requirements).

## **Diphtheria**

***What is diphtheria?***

Diphtheria is a communicable disease caused by certain toxin-producing strains of the bacterium *Corynebacterium diphtheriae*. Infection can occur in the respiratory tract (lungs and connecting airways) and/or skin. One characteristic sign of diphtheria is an adherent, grey membrane that forms over the mucous membrane of the tonsils or throat; attempts to remove the membrane can cause bleeding. Large membranes may cause life-threatening airway obstruction. The diphtheria organisms can produce a toxin, which damages the heart and central nervous system. About 5% to 10% of those with diphtheria of the respiratory system will die; most at risk are the very young and the elderly. About 3% to 5% of healthy persons with no symptoms may have diphtheria bacteria living on the skin or in the nose and throat.

***How can diphtheria be spread?***

Diphtheria is spread by person-to-person transmission through respiratory secretions, and physical contact with skin lesions infected with diphtheria bacteria.

***Canada***

Prior to universal diphtheria vaccination there were thousands of cases of diphtheria in Canada each year, now there are 0 - 5 positive diphtheria cultures reported annually. Occasionally imported cases of diphtheria are reported.

***How can diphtheria be prevented?***

Diphtheria can usually be prevented through vaccination. All individuals should receive a primary (childhood) series of vaccination with diphtheria vaccine. Adults with an unclear or absent history of vaccination should also be given a primary series. A booster dose of diphtheria vaccine should then be given every ten years (in Canada diphtheria vaccine comes combined with tetanus vaccine). Studies of healthy adult populations in Canada indicate that approximately 20% of adults (higher in some age groups) do not have protective levels of antibody to diphtheria. Infection can occur in immunized persons, however, disease is most common and most severe in those not immunized, or just partially immunized. Taking precautions to minimize contact with respiratory secretions or skin lesions is also important in limiting the spread of diphtheria, and many other infections.

***Why is this disease important to a health-care worker?***

If diphtheria protection is not maintained through immunization and infection control precautions, there is a potential for disease reemergence. Health-care workers are in a unique position to be infected by diphtheria themselves, and to spread the disease to vulnerable patients.

***Pertussis Immunization Requirement:***

All students are required to have single adult dose of tetanus/diphtheria/acellular pertussis (Tdap) vaccine on or **after 18 years of age**. This is regardless of: when the last dose of tetanus/diphtheria was given; when the next dose of tetanus/diphtheria is due; whether or not a dose of Tdap was already given in adolescence.

**Pertussis (Whooping Cough)*****What is pertussis?***

Pertussis (or whooping cough) is an infectious disease caused by the bacterium *Bordetella pertussis*. The disease can affect individuals of any age; however, severity is greatest among young infants. Symptoms include fever, vomiting and severe coughing spasms, which may or may not be associated with the classic “whoop” made when breathing in (hence the popular name “whooping cough”). The cough gets progressively worse, to the point where some individuals will have difficulty breathing and become exhausted. Rare complications of pertussis include pneumonia, seizures, brain damage and death. Death is estimated to occur in 1 in 200 cases in children less than one year of age.

***How can pertussis be spread?***

The virus is transmitted person-to-person, through direct contact with or inhalation of the secretions from an infected person’s nose or mouth.

***Canada and Manitoba***

There are 1,000 to 3,000 cases of pertussis every year in Canada, with one to three deaths annually. Those most affected are infants too young to have begun their immunization and in partially immunized infants (e.g., those who have received only one or two doses). From 2002 to 2012, Manitoba averaged 37 cases a year, with one death occurring in 2012; there were likely many other cases that went unrecognized and unreported. In 2015 Manitoba experienced a large outbreak of pertussis; this contributed to a total for the year of 57 laboratory confirmed cases (and likely many more undiagnosed cases).

***How can pertussis be prevented?***

The majority of pertussis cases can be prevented through vaccination. Since the introduction of the pertussis vaccine in 1943, rates of pertussis have decreased over 90% in Canada, although outbreaks continue to occur. Hand washing, covering one’s cough, and other routine infection control practices are important strategies to prevent the transmission of many infections, including pertussis.

***Why is this disease important to a health-care worker?***

Healthcare workers are capable of acquiring pertussis infection, and of spreading the disease to vulnerable patients, particularly vulnerable babies who are at greatest risk of complications or death after the disease. Vaccination should also be considered for individuals who may be raising young children at home, now or in the future. Receiving adult pertussis vaccine might prevent a health-care worker from transmitting pertussis to younger, more vulnerable individuals (e.g., babies), some of whom are too young to be properly immunized; and it may also save the healthcare worker from getting a chronic cough (caused by pertussis) lasting several weeks at some point in their lives.

***Didn’t I already get vaccinated against pertussis in childhood?***

Pertussis vaccination is part of the routine childhood series of vaccinations, but after childhood individuals did not traditionally receive any further doses. When it was recognized that adults could be afflicted by pertussis (pertussis is the cause of about 20% of “post-viral” chronic coughs that last several weeks in adults), an adult booster of pertussis vaccine was made available.

***How soon after a tetanus/diphtheria immunization can a dose of pertussis vaccine be given?***

The Tdap immunization can be administered regardless of the interval since the last dose of tetanus and diphtheria toxoid-containing vaccine.

***After a Tdap immunization when is the next dose of tetanus/diphtheria due?***

A Tdap booster given now would count as the regular tetanus/diphtheria (Td) booster that is due every ten years. After a Tdap vaccination is given in adulthood, one would need another routine Td immunization in 10 years. However, if a fully immunized adult sustains a wound that is serious and/or dirty, and it has been more than five years since the last dose of a tetanus-containing vaccine was given, then another dose of Td should be given. A dose of Tdap is also recommended with every pregnancy.

**Polio Immunization Requirement:**

All students are required to have documented a complete primary series of polio immunizations. This requires a minimum of three doses, with a minimum of one month between the first two doses, and a minimum of six months between the last two doses. Serology is not accepted as proof of polio immunity. Students who do not have a primary series documented must complete a primary adult immunization series. Records indicating that a childhood series was received without providing dates are insufficient.

**Booster dose:**

Booster doses of polio vaccine are generally not required for healthcare workers who have received a complete primary series, unless they are traveling to high-risk areas of the world (e.g., work or vacation in a polio-endemic country).

## Polio

**What is poliomyelitis (polio)?**

Polio is a very contagious infection caused by the poliovirus. Over 90% of polio infections produce no symptoms or mild symptoms. Some individuals however will experience a severe infection with lasting complications. Symptoms of polio infection begin with minor fever, headache, and vomiting. The virus can attack the cells surrounding nerve cells in the spinal column or the brain stem, causing damage to these nerves and associated muscles. Individuals so affected may experience a major illness with severe muscle pain and stiffness of the neck and back. In less than 1% of infections paralysis of muscles at one or more parts of the body may occur; the paralysis is usually asymmetric (e.g., one arm affected more than the other, or one leg affected more than the other). Paralysis of the muscles of the lungs or the throat can be life threatening.

**How can polio be spread?**

Polio is spread person-to-person through the “fecal-oral route” or through the “oral-oral route”; infection can occur when secretions from an infected person’s mouth or the person’s feces are passed into another person’s body through the mouth. The virus is extremely stable and can remain viable in the environment for long periods of time.

**Canada**

There have been no wild cases (i.e., local spread of natural disease) of polio in Canada since 1977. Cases of poliomyelitis occurring in Canada and the United States are attributable to importation by tourists and immigrants, and to vaccine-associated strains (see OPV and IPV discussed below). Polio has almost been eradicated in most parts of the world, but it continues to be a serious threat in certain countries, particularly parts of Africa.

**How can polio be prevented?**

Polio can be prevented through vaccination. It is important for all children to receive a primary immunization series against poliovirus. Immunization with polio vaccine is also recommended for previously unimmunized adults; this is particularly important for adults who may be exposed to wild polioviruses. These include: travelers to countries where these viruses are circulating; residents of communities in which a visitor or new refugee/immigrant may be excreting the viruses; health-care workers (see below); laboratory workers.

**What is the difference between OPV and IPV?**

In the past oral poliovirus vaccine (OPV), a live vaccine, was used for polio immunization. While this was a highly efficient and effective vaccination, it caused paralytic polio disease in about one in every two million vaccine recipients. Canada has since switched to the exclusive use of inactivated poliovirus vaccine (IPV), which is not a live vaccine and which cannot cause polio disease. (Note: Both OPV and IPV can be counted as valid when previous polio records are reviewed).

**Why is this disease important to a health-care worker?**

Health-care workers may be at higher risk of being infected by polio because they are more likely to be in close contact with individuals who may be excreting poliovirus.

**Measles Requirement:**

One of the following criteria is required for evidence of measles immunity:

- a. Documented evidence of immunization with TWO doses of measles-containing vaccine, given at least a month apart, starting on or after the first birthday; OR
- b. Serology showing antibodies to measles; date of test and IgG serology (blood antibody) results required; OR
- c. Laboratory documentation of measles infection (e.g., virus culture); laboratory report required.

**In most situations immunization to measles is preferred over serological testing**, but either is acceptable. Serology is not required if measles immunization requirements have been met. If two doses of measles vaccine have been documented, negative serology can be ignored.

## Measles

**What is measles?**

Measles (also called rubeola or red measles) is a highly contagious disease caused by the measles virus. Infection occurs when someone comes into contact with droplets or air contaminated with the virus. Symptoms of measles include fever, cough, runny nose, conjunctivitis (red eyes) and a characteristic red blotchy rash; these symptoms usually last one to two weeks. Complications can include diarrhea, ear infection, pneumonia, encephalitis (inflammation of the brain), seizures, coma, and death. Measles is the leading cause of vaccine-preventable deaths in children worldwide; in 2013 there were 145 700 measles deaths globally.

**How is measles spread?**

Measles virus is transmitted person-to-person by direct contact with an individual's infectious nose and throat droplets; less commonly, measles can be spread by the airborne route, i.e., carried short distances when an individual coughs or sneezes.

**Canada and Manitoba**

Despite a dramatic drop in the number of cases of measles reported after the widespread use of measles vaccine, Canada continues to see sporadic activity. The majority of cases are the result of international travelers arriving in Canada with measles, or as a result of limited spread following imported cases. Between 2005 and 2011 the number of measles cases in Canada ranged from 6 to 750 cases each year. In 2014 there was significant measles activity reported in several Canadian provinces, including Manitoba.

**How can measles be prevented?**

The best way of preventing the spread of measles in the world is through an effective vaccination program. In Canada, children now routinely get two doses of the vaccine MMR (measles, mumps, rubella) to prevent infection (the two-dose vaccine schedule was introduced around 1996-97). As measles outbreaks were so common in the past, the majority of individuals born prior to 1970 are considered immune to measles. Adults in 1970 or later should ensure that they have received at least one dose of measles vaccine. Some high-risk adults (e.g., healthcare workers; military recruits; university students and those traveling to measles-endemic areas of the world born in or after 1970) require two doses of measles vaccine for immunity.

**Why is this disease important to a health-care worker?**

Susceptible health-care workers are capable of developing measles infection from patients afflicted by the infection; workers are also at higher risk of spreading the disease to vulnerable patients. Young health-care workers such as students are at particular risk because many were born on or after 1970 and are therefore too young to have any degree of immunity from natural measles infection.

**Mumps Requirement:**

One of the following criteria is required for evidence of mumps immunity:

- a. Documented evidence of immunization with TWO doses of mumps-containing vaccine, given at least a month apart, starting on or after the first birthday; OR
- b. Serology showing antibodies to mumps; date of test and IgG serology (blood antibody) results required; OR
- c. Laboratory documentation of mumps infection (e.g., virus culture); laboratory report required.

**In most situations immunization to mumps is preferred over serological testing**, but either is acceptable. Serology is not required if mumps immunization requirements have been met. If two doses of mumps vaccine have been documented, negative serology can be ignored.

## Mumps

**What is mumps?**

Mumps is an infectious disease caused by the mumps virus. Symptoms include fever, headache, muscle ache and swelling and tenderness of the parotid glands at the angle of the jaw (parotitis). Half of infections present with mild symptoms, or no symptoms at all. Less commonly, mumps infection can lead to inflammation of the testicles (orchitis; 25% of cases in adolescents or adults) or ovaries (oophoritis; 5% of cases), inflammation of the pancreas, inflammation of the meninges surrounding the brain and spinal cord (meningitis), and temporary or permanent hearing loss. Although extremely rare, if meningitis is severe mumps can prove fatal.

**How is mumps spread?**

Infection with the mumps virus occurs through direct contact with respiratory droplets from the nose or throat, coughing, sneezing, sharing drinks, kissing or from contact with surfaces that have been contaminated with the mumps virus.

**Canada**

Prior to routine vaccination in 1969 there were about 34,000 cases of mumps in Canada each year; after universal mumps vaccinations was introduced numbers dropped more than 99%. From September 2016 up to January 9, 2018 there have been 1,500 confirmed cases of mumps reported in Manitoba as part of a large provincewide outbreak of the disease.

**How can mumps be prevented?**

The most effective way of preventing mumps infection is through immunization. Originally a single dose of mumps vaccine was recommended for all children as part of their routine immunization schedule; children began to receive two doses of mumps when a second dose of MMR (measles, mumps, rubella) vaccine was introduced in 1996 (the second dose was intended for enhanced measles protection). Due to large mumps outbreaks across Canada, recommendations around mumps vaccination for health-care workers have changed (listed below).

**Why is this disease important to a health-care worker?**

Susceptible health-care workers are capable of developing mumps infection from patients afflicted by the infection; workers are also at higher risk of spreading the disease to vulnerable patients. Young health-care workers such as students are at particular risk because (1) many were born in or after 1970 and are therefore too young to have any degree of immunity from natural mumps infection; (2) healthcare students will spend a great deal of time around vulnerable patients; and (3) young university students are known to be at particularly high risk for mumps (this is the group that was most affected by a large 2007 mumps outbreak).

**Rubella Requirement:**

One of the following criteria is required for evidence of rubella immunity:

- a. Documented evidence of immunization with TWO doses of rubella-containing vaccine, given at least a month apart, starting on or after the first birthday; OR
- b. Serology showing antibodies to rubella; date of test and IgG serology (blood antibody) results required; OR
- c. Laboratory documentation of rubella infection (e.g., virus culture); laboratory report required.

**In most situations immunization to rubella is preferred over serological testing**, but either is acceptable. Serology is not required if rubella immunization requirements have been met. If two doses of rubella vaccine have been documented, negative serology can be ignored.

## Rubella

**What is rubella?**

Rubella is an infection caused by the rubella virus, which is usually a mild illness that can occur in adults and children. It presents with a rash that starts out with red spots on the face, which spread downwards to cover the entire body. Other symptoms include fever, sore throat, eye irritation, painful joints and tender swelling of the lymph nodes located behind the ear and at the back of the head. Children usually have few or no symptoms, but adults may have a more severe illness; 70% of adolescent and adult females with rubella develop pain and swelling of large joints. About 20% to 50% of those who acquire rubella infection have no symptoms, and yet can still transmit the infection to others. Although rubella is generally a mild illness, if contracted in the early months of pregnancy it is associated with a high rate of fetal loss or a constellation of birth defects known as **congenital rubella syndrome (CRS)**. The most common features of CRS are deafness, blindness, and heart and brain defects. Symptoms of CRS may be obvious at birth or develop later in life. Diabetes mellitus is a recognized late complication of CRS. Between 1986 and 1995, thirty cases of CRS were reported in Canada.

**How is rubella spread?**

Rubella is acquired by direct contact with the secretions from the nose or mouth of an infected person. It can also be acquired by directly inhaling droplets discharged from infected people when they cough or sneeze. In CRS, the virus is transmitted from an infected mother across the placenta to her baby during pregnancy.

**Canada and Manitoba**

After universal rubella vaccination was introduced in Canada in 1983, the average number of rubella cases reported decreased from approximately 5,300 (1971-1982) to fewer than 30 cases per year (1998-2004). Outbreaks of rubella used to occur fairly frequently, including one in Manitoba in 1997 (3,900 cases, mainly among males who were not immunized prior to 1983). In Manitoba there was one case of rubella in 2007 and two cases in 2009.

**How can rubella be prevented?**

The most effective way of preventing mumps infection is through immunization. In Canada, routine infant immunization programs have resulted in sustained high rates of rubella immunity in the general population.

**Why is this disease important to a health-care worker?**

Susceptible health-care workers are capable of acquiring rubella infection from patients afflicted by the infection; workers are also at higher risk of spreading the disease to vulnerable patients, particularly pregnant women.

**Varicella Requirement:**

One of the following criteria is required for evidence of varicella immunity:

- a. Documented evidence of immunization with TWO doses of varicella-containing vaccine, given at least a month apart (ideally six or more weeks), starting on or after the first birthday; OR
- b. Serology showing antibodies to varicella; date of test and IgG serology (blood antibody) results required; OR
- c. Laboratory documentation of varicella infection (e.g., virus culture); laboratory report required.

A history of varicella infection is not acceptable proof of immunity. Students without documented varicella immunizations should have a varicella serology blood test performed before receiving chickenpox vaccine; most of these students will already be immune, making immunization unnecessary. Serology is not required if varicella immunization requirements have been met. If two doses of varicella vaccine have been documented, negative serology can be ignored.

**Varicella (Chickenpox)****What is chickenpox?**

Chickenpox (also known as varicella) is an infection caused by a virus. The virus causes an itchy rash that turns into small, fluid-filled blisters. Sometimes a person may also have a fever and headache before or during the rash. Some people have only a few blisters; others can have many blisters over their entire body. While most people recover from chickenpox without lasting effects, some children and adults will suffer severe complications. These complications include: infection of the skin or organs; pneumonia; bleeding problems; inflammation of the liver, kidney, lining around the spinal cord (meningitis) or the brain (encephalitis). Prior to universal vaccination about 90% of all children acquired chickenpox before they reach 12 years of age. Most individuals will only get chickenpox once.

**How is chickenpox spread?**

Chickenpox is one of the most contagious infections; the virus spreads easily through coughing, sneezing and contact with infected saliva or blister fluid.

**How is shingles, or zoster?**

After a person gets chickenpox, the virus stays in the body in an inactive form. It can become active again later causing shingles (zoster), a rash appearing on usually one isolated area of the body that can cause severe pain, sometimes lasting as long as six months. The rash is even more serious if it occurs on the face or near the eyes. In persons with weakened immune systems, shingles can sometimes spread throughout the entire body. Up to 30% of individuals who have been infected with chickenpox will get shingles. Shingles tends to occur in older individuals and those with a weakened immune system.

**Canada and Manitoba**

In the pre-vaccine era, it is estimated that in Canada there were approximately 350,000 varicella cases and 1,500 to 2,000 varicella-related hospitalizations each year. Since the introduction of varicella immunization as part of the childhood immunization series these numbers have dropped substantially. Since 2004, the annual average number of varicella hospitalizations at Immunization Monitoring Program ACTive (IMPACT) centers has dropped from 300 (2000 to 2004) to 114 (2005 to 2009). Between 2000 and 2009, a total of 10 pediatric deaths due to varicella were reported by the (IMPACT) system, with a range of 0-3 deaths per year.

**How can chickenpox be prevented?**

Chickenpox vaccine decreases the chance of getting chickenpox by between 70 and 90%, and substantially decreases the likelihood of severe illness. In Canada, all children are being offered chickenpox vaccine on or after the first birthday, with a booster dose at age five to six years. Older children and adults who have already had chickenpox infection do not need to get vaccinated.

**Why is this disease important to a health-care worker?**

Students who are not immune to chickenpox may get infected, and then transmit the virus to others in health-care settings who are also not immune. This may include pediatric patients, and patients with weakened immune systems, who may suffer severe complications from infection. If a non-immune pregnant woman gets chickenpox, her baby may be born with birth defects. These include eye problems, scarring, or shortening of the arms and legs. If the mother has chickenpox around the time the baby is born, the newborn can suffer severe infection.

## Hepatitis B Requirement:

### Assessment for hepatitis B infection:

Hepatitis B surface antigen (**HBsAg**) is a test for current hepatitis B infection. This test is required for **all students**, including those who are believed to be already immune to hepatitis B. The test must be conducted on or after the time of the assessment for hepatitis B immunity. The test should be conducted 28 or more days after a hepatitis B immunization to avoid the possibility of a false-positive HBsAg result (vaccine can produce a false-positive HBsAg result for several weeks).

### Assessment for hepatitis B immunity:

Students will fall into one of the following three categories:

#### 1. Immune to hepatitis B (most students are in this category):

Documentation of a complete hepatitis B immunization series is required (see definition of a complete series below). A test for immunity, hepatitis B surface antibody (anti-HBs) should be performed one or more months (ideally 1-2 months) after the last dose of the series. If the postimmunization anti-HBs is positive ( $\geq 10$  mIU/mL), no further hepatitis B immunizations or anti-HBs tests are required. If anti-HBs is negative, additional 30 doses of vaccine and antibody tests are required (see algorithm on **page 27**).

**2. Vaccine non-responders:** This means a student has received two complete, documented hepatitis B immunization series, and post-immunization serology 1-6 months after the final dose has not demonstrated immunity. In this situation generally no further hepatitis B immunizations or serological testing are required. In the event of a possible exposure to hepatitis B (e.g., a needlestick injury, human bite, mucosal splash) the student may need passive immunization with hepatitis B immune globulin (a human blood product) as soon as possible, and then again one month later.

#### 3. Immune due to natural infection:

Students with positive anti-HBs AND positive anti-HBc (hepatitis B core antibody), are considered immune due to presumed natural infection and do not require documented hepatitis B immunizations. Testing for natural immunity is not necessary for most students, but can be considered if a student comes from a background with a high likelihood of previous hepatitis B infection (e.g., countries with high rates of endemic hepatitis B infection).

**4. (4) Hepatitis B infection:** Students with hepatitis B infection (positive HBsAg) do not require any additional hepatitis B immunizations. Such student must consult with the Associate Dean or designate regarding their status.

## Hepatitis B

### What is hepatitis B?

Hepatitis B is a serious infection of the liver caused by the hepatitis B virus (HBV). The virus is spread by direct exposure to the blood or body fluids of those infected with HBV. Symptoms appear usually about three months after infection occurs, and include loss of appetite, nausea and vomiting, stomach pain, fatigue, and a yellowing of the skin and eyes (jaundice). About 30% of infected adults will have few or no symptoms. It is possible after infection to completely clear the virus, and develop life-long immunity. However some people infected with HBV, especially infants and children, never completely recover and carry the virus in their blood for the rest of their lives; people who permanently carry the virus remain infectious to others. In some of these people there will be persistent inflammation of the liver and possibly cirrhosis (scarring and hardening) of the liver, liver failure and liver cancer. HBV causes 80% of all primary liver cancers worldwide.

### How is hepatitis B spread?

HBV is spread through exposure to the blood or body fluids of those infected with the virus. This includes: sexual contact with an infected person; sharing of drug injection equipment; transmission from an infected mother to her infant at the time of birth; or exposure to blood in the workplace. Almost one-third of infections have no identified risk factors.

### Canada and Manitoba

Canada has low rates of hepatitis B infection; almost 5% of the population shows serological (blood) evidence of previous infection, and less than 1% are chronic HBV carriers. About 10% of those immigrating to Canada are HBV chronic carriers. In Manitoba there is marked variation from year to year in new cases; this number will likely drop due to universal immunization.

### Can hepatitis B be prevented?

Hepatitis B infection is preventable through immunization. Universal immunization to hepatitis B is offered in all provinces and territories (in Manitoba, this started for grade 4 students in 1998). Hepatitis B vaccine is also recommended for certain groups at higher risk of infection with hepatitis B. Other steps that can be taken to reduce the risk of infection with HBV include: universal precautions for healthcare workers when handling specimens potentially contaminated with HBV (e.g., needles); safer sexual practices (e.g., reducing the number of sex partners, using latex condoms); not sharing household articles that may be contaminated with blood (e.g., toothbrushes, razors); for those who use injection drugs, not sharing injection equipment; screening all pregnant women for infection, and providing prophylaxis to newborns at birth.

### Why is this disease important to a health-care worker?

Handling potentially infected blood and body fluids or contaminated sharp equipment is a risk of health care. Occupational transmission of hepatitis B used to happen more frequently, but has become significantly less common since the advent of hepatitis B immunization and infection control precautions. Health-care workers are capable of both acquiring HBV through their work, and of passing on HBV to patients.

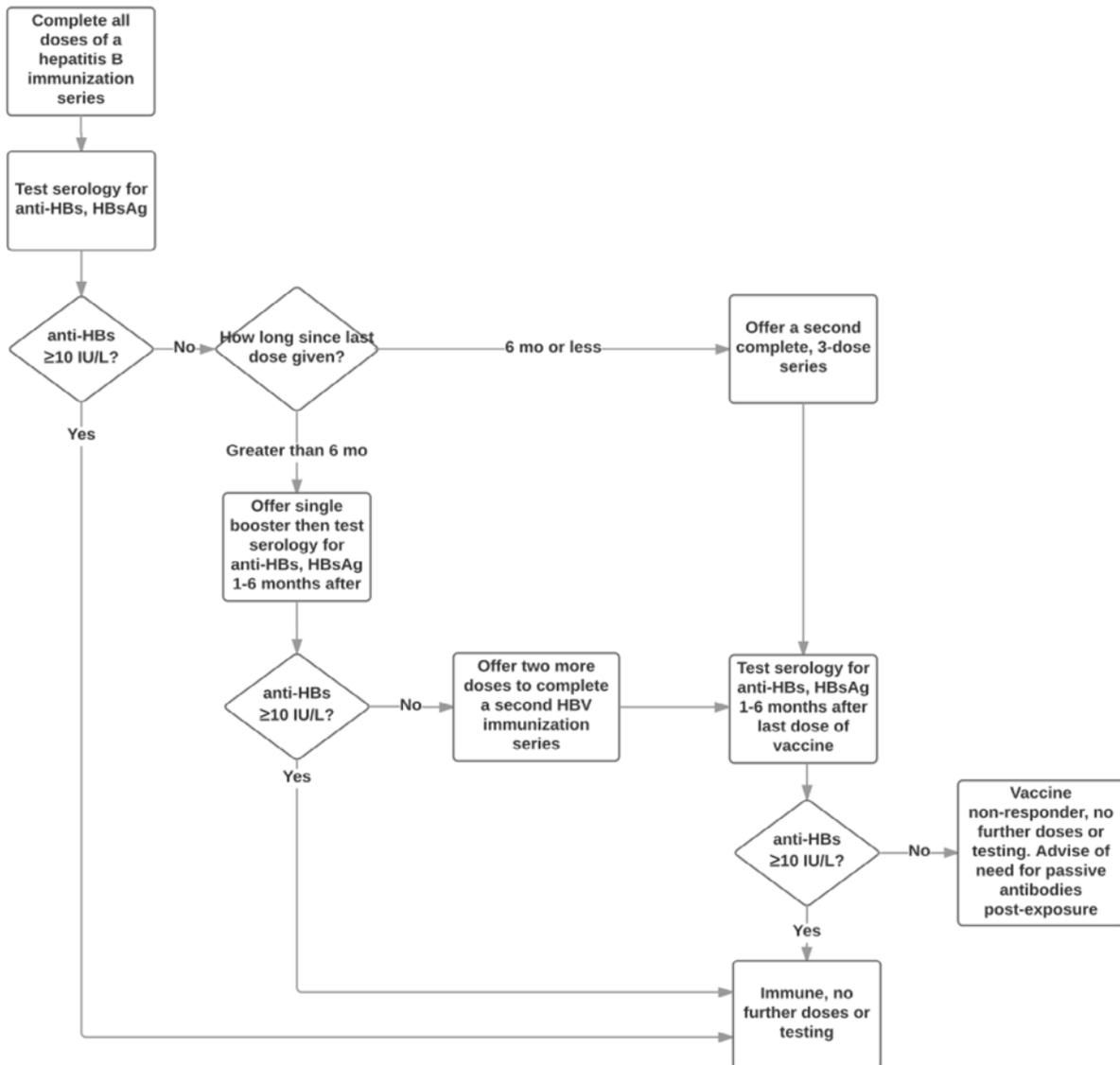
### Please note the following:

**Complete hepatitis B series:** there are multiple different hepatitis B series available, including 2-dose, 3-dose, and 4-dose series. Whether a series is complete depends on the type of vaccine used, the age of the recipient, the number of doses used and the spacing between doses. For a complete list please see table 3 in the Hepatitis B section of the Canadian Immunization Guide. For adults starting a series, a three-dose series should be selected, with doses given at time 0, 1, and 6 months.

**Previous doses:** Any previous documented doses of hepatitis B vaccine count towards the total number of doses in the series; the vaccination series does not need to be re-started. The final dose(s) of the series should be completed, regardless of how long ago the initial dose(s) were given, as long as the minimal intervals between doses are respected. Vaccines produced by different manufacturers can be used interchangeably, provided that the age-appropriate dosages are used.

**Positive serology without documented immunizations:** Positive serology (anti-HBs  $\geq 10$  mIU/mL) will not be accepted if there is an incomplete or absent record of immunization. This is because positive serology proves long-term immunity only in those with a complete, documented hepatitis B immunization series. An exception to this: students immune due to presumed natural immunity, i.e., positive anti-HBs AND positive anti-HBc (hepatitis B core antibody), are considered immune and do not require documented hepatitis B immunizations.

### HEPATITIS B IMMUNIZATION AND TESTING ALGORITHM



## **Hepatitis A**

**Hepatitis A vaccination is neither required nor recommended for the majority of health-care workers practicing within Canada.** However, if an individual desired protection against hepatitis A for other reasons, a hepatitis A immunization series can be completed.

### ***What is hepatitis A?***

Hepatitis A is an infection of the liver caused by the hepatitis A virus. Symptoms of hepatitis A infection include fever, loss of appetite, nausea, fatigue, stomach pain, dark urine and a yellowing of the skin and eyes (jaundice). While the vast majority of people with hepatitis A infection recover from their symptoms in 4 to 6 weeks, some experience illness that requires months of recovery; the annual hospitalization rate for those over 40 years of age was 30%, and up to 1.8% of adults aged >50 years will die. Unlike Hepatitis B and C, HAV infection is always temporary, and none of those infected will permanently carry the virus.

### ***How is hepatitis A spread?***

Hepatitis A is spread person-to-person through the “fecal-oral route”; infection usually occurs when something is put in the mouth that has been contaminated with feces (stool) containing the virus; this may include food or water. The hepatitis A virus is very stable, and can live outside the human body for days or even weeks and still be capable of causing infection.

### ***Canada***

The number of cases of HA reported annually in Canada has varied from 2,978 (1991) to 246 (2012). Given the under-diagnosis and under-reporting of hepatitis A and the occurrence of subclinical infections, the actual number of cases is estimated to be several times higher than reported. Many cases are associated with a return from foreign travel, particularly in individuals who never received hepatitis A vaccine.

### ***Can hepatitis A be prevented?***

HAV is preventable through immunization with hepatitis A vaccine; which is at least 90% to 97% effective in preventing clinical hepatitis A illness. The most common series involves two doses of hepatitis A vaccine spaced six or more months apart. Another option is to receive hepatitis A vaccination at the same time as the hepatitis B immunization series; a combined hepatitis A and B vaccine, “Twinrix”, is available in Canada, and is usually administered using a 3-dose series. Hepatitis A vaccine can be obtained through a student’s primary care provider, travel health clinic, and many pharmacies. For men who have sex with men, those with chronic liver disease, and those with certain other high-risk groups, vaccine is available at no cost to the client.

### ***Why is this disease important to a health-care worker?***

Most health-care workers practicing in Canada do not need to get vaccinated to protect themselves or the patients whom they serve. However, there are some remote northern communities where hepatitis A is more common, and vaccination could be considered for those working in these communities. Vaccination should be considered for those providing healthcare in foreign countries where hepatitis A is endemic; anyone who is traveling to a foreign country for other business or pleasure should also consider getting immunized against hepatitis A.

## **Tuberculosis (TB)**

### ***What is the difference between tuberculosis infection and tuberculosis disease?***

**Latent tuberculosis infection (LTBI)** occurs when an individual has been infected with tuberculosis bacteria and now has latent (sleeping) bacteria inside the lungs. The individual has no symptoms because of this infection, and cannot transmit the bacteria to others; in this situation a chest x-ray is usually normal. The only way to test for LTBI is to administer a tuberculin skin test, or to use a new blood test called an interferon gamma release assay (IGRA).

About 10% of individuals with LTBI will progress to **active tuberculosis (TB) disease**. This occurs when the TB organisms begin to multiply, and break through the body's immune system defenses. Individuals with tuberculosis disease usually have symptoms of TB, such as: cough lasting more than three weeks, fever, weight loss, night sweats, fatigue, and sometimes a cough that has blood in it. These individuals are usually infectious to other people through coughing or sneezing, until they receive appropriate treatment.

### ***What is the tuberculin skin test?***

The tuberculin skin test (TST or Mantoux test) is a test used to determine whether a person is infected with *Mycobacterium tuberculosis*, the bacteria that caused tuberculosis disease. The TST is a good test for tuberculosis infection, but it is not a good test for tuberculosis disease.

### ***How is the TST administered?***

The TST is performed by injecting 0.1 ml of tuberculin purified protein derivative (PPD) into the inner surface of the forearm, just under the skin. When the test is done properly, the injection should produce a pale elevation of the skin (a wheal) 6 to 10 mm in diameter. A trained healthcare worker familiar with TST technique, interpretation, and indications for testing must perform the test. Tuberculin does not contain any living organisms.

### ***How is the TST read?***

The skin test must be read between 48 and 72 hours after administration. A patient who does not return for the reading within 72 hours will need to have a repeat test performed. The reaction should be measured in millimeters of induration (a hardened area of swelling); the diameter of the indurated area should be measured across the forearm (perpendicular to the long axis of the forearm). The reader should NOT measure erythema (redness).

### ***How are TST reactions interpreted?***

When interpreting the TST result, the healthcare provider must consider three important factors:

1. The size of the skin reaction, measured in millimeters of induration;
2. Possible causes of false-negative and false-positive reactions; and
3. The individual's risk of development of active tuberculosis if truly infected.

For most healthcare workers, a TST reaction of 10 mm or greater is considered positive; however, there are special situations where a TST less than 10 mm might also be considered positive (see the Canadian Tuberculosis Standards online for more information on test interpretation).

### ***What are false-positive reactions?***

Some persons may react to the TST even though they are not infected with *M. tuberculosis*. Possible causes of falsepositive reactions include: infection with specific bacteria found in the environment that are similar but not identical to tuberculosis bacteria; previous Bacille Calmette-Guérin (BCG) vaccination; incorrect method of TST administration; or incorrect interpretation of the reaction.

### ***What are false-negative reactions?***

Some persons may not react to the TST even though they are infected with *M. tuberculosis*. Possible causes of falsenegative reactions include: a weakness in the immune system's ability to react to foreign substances; very recent tuberculosis infection (i.e., infection that occurred within the past eight weeks may not yet be detectable); tuberculosis infection that occurred many years ago; very young age (less than six months old); recent live-virus vaccination (e.g., measles, mumps, rubella vaccine; possibly chickenpox and yellow fever vaccines); some viral illnesses (e.g., measles and chickenpox); overwhelming tuberculosis disease (this is one reason why a TST is not a good test for active tuberculosis disease); incorrect method of TST administration;

### **TST Requirement**

**TB History:** In the Student Information Form (to be completed by those offered admission) students will need to answer if they have a previous positive TB history (e.g., previous positive TST). Students with a positive TB history will need to supply a chest X-ray report ordered on or after the date of the positive TB history.

### **Testing for latent tuberculosis**

**infection:** All students without contraindications must have a two-step TST documented; students must also have a recent TST performed within six months of the start of the program. Most students will therefore require a two-step TST at this time, but students who have already had a two-step TST documented previously will only require a one-step (single) TST at this time. Students found to have a positive TST will require a chest x-ray, and will need to complete a TB symptom questionnaire.

### **Is the TST safe?**

Almost everyone can safely receive a TST; this includes infants and children, pregnant women, those with HIV infection, and those who have received a BCG (TB) vaccine in the past.

### **Who should not have a TST?**

Individuals who should not receive a TST include: persons who have had a severe reaction to a previous TST (e.g., severe skin damage, blistering, or a severe allergic reaction that interferes with breathing); those with a *documented* previously positive TST; those with documentation of treatment for active TB disease or latent tuberculosis infection.

### **What are the side effects of a TST?**

The TST is very well tolerated, and serious reactions are extremely rare. As with any injection through the skin, there is a small risk of infection or bleeding at the injection site, or fainting after the injection. Some individuals will notice some redness, swelling, or tenderness at the injection site. Rarely, blistering of the skin may occur. There is a very small risk (approximately one in one million) of a severe allergic reaction called anaphylaxis, manifested by an itchy body rash, swelling of the mouth and throat, and difficulty breathing. Any serious reactions should be reported to the individual's health-care provider.

### **What should be done to the area where the TST was administered?**

The area of the TST should be left alone, and should not be bandaged, scratched, or have any lotions or compresses applied to it before it is read.

### **How often can TSTs be repeated?**

In general, there is no risk associated with repeated tuberculin skin tests, as long as previous tests were tolerated. If a person does not return within 48 to 72 hours for a tuberculin skin test reading, a second test can be placed as soon as possible.

### **Can TSTs be given to persons receiving vaccinations?**

A TST can be given at the same time as most vaccinations. However, vaccination with live viruses may interfere with TST reactions. The TST should either be given on the *same day* as vaccination with a live virus vaccine, or *four weeks after* the administration of the live virus vaccine. Live virus vaccinations include measles, mumps, rubella (MMR), varicella (chickenpox), and yellow fever vaccines; live virus vaccinations do NOT include hepatitis A or B, tetanus/diphtheria, polio, pertussis, or injectable influenza vaccines.

### **What is a two-step TST?**

In some persons who are infected with *M. tuberculosis*, the ability to react to a TST may drop over time. When the very first TST is administered years after tuberculosis infection occurred, these persons might have a falsenegative reaction. However, this TST may stimulate the immune system, causing a positive (boosted) reaction to future tests. Giving a second TST after an initial negative TST reaction is called two-step testing. The second test is usually performed 7-28 days after the first (up to one year later).

### **When is a two-step TST indicated?**

Two-step testing is useful for the initial skin testing of adults who may be tested again in the future, such as health care workers. This two-step approach can reduce the likelihood that a boosted reaction to a subsequent TST will be misinterpreted as a recent infection. A two-step usually only needs to be done ONCE; future TSTs can be single, one-step TSTs.

### **What if I have a significant or positive TST?**

If you have a positive TST, this may mean that you were infected with TB bacteria at some point in your life. Your healthcare provider will provide you with additional information, and advice on what you need to do. **A chest x-ray will be required to look for evidence of previous TB infection or disease, as well as a TB symptom questionnaire.** The student may then choose to be referred to a specialized clinical site for additional information on tuberculosis, and for consideration of LTBI therapy (referral is optional for students).

### **Why is tuberculosis important to a health-care worker?**

If a health-care worker has latent (sleeping) tuberculosis infection, he or she may one day go on to develop active (infectious) tuberculosis disease. It is possible that a healthcare worker may then infect others with the tuberculosis bacteria, including vulnerable clients in healthcare settings. It is also important to document a worker's baseline TST status, in case testing needs to be performed after a future exposure to TB disease.

## **BCG (Bacille Calmette-Guérin)**

### ***What is BCG?***

BCG (Bacille Calmette-Guérin) is a live vaccine that was developed in the 1920s. It helps protect babies and young children against the most severe forms of TB disease. BCG is one of the most commonly used vaccines in the world, and is frequently used in other countries where TB infection and TB disease are more common. It is rarely used in Canada today.

### ***How do I know if I had a BCG vaccine?***

Student can check their immunization records or check with their parents or former guardians to see if they have ever had a BCG vaccine. Most new health-care students today have never had a BCG vaccine, but some may have. In Manitoba, BCG vaccine was discontinued in the 1970s for health-care workers, but it is still given to infants living in most TB-endemic Aboriginal communities in Manitoba. Most people who have had a BCG have a characteristic scar at the site at which it was administered (e.g., upper arm or shoulder). However, not everyone who had a BCG vaccination will have a scar.

### ***Why is BCG not used routinely in Canada?***

Since TB disease rates have dropped in most communities, the risk of infants and young children being exposed to TB is very small (the exception to this is infants who live in Indigenous communities with high rates of TB). Also, there can be serious side effects from the BCG vaccine, particularly in individuals who have problems with their immune system. Finally, BCG may make the tuberculin skin test more difficult to interpret, limiting the usefulness of this test (see below).

### ***Does a history of BCG vaccination mean that the tuberculin skin test will be positive?***

People vaccinated with BCG may have a positive reaction to a tuberculin skin test (TST or Mantoux). This reaction may be due to the BCG vaccine or to a real TB infection (BCG likely does not prevent TB infection; it is intended only to prevent the development of severe TB disease in those already infected with the TB bacteria). BCG given in the first year of life will almost never cause a positive TST 10 or more years later; those who were vaccinated after the age of 6 years, or adults who had many BCG vaccinations are much more likely to have a positive TB skin test because of BCG. Since the reaction from BCG fades over time, adults who were vaccinated with BCG very early in life should consider a positive skin test as indicative of true TB infection. Health-care workers with a history of BCG vaccination should still have a TST performed.

### ***How can I tell if my positive TST was caused by my previous BCG vaccination?***

Interferon gamma release assays (IGRAs) are new blood tests that can test for latent tuberculosis infection. The two IGRA tests approved for use in Canada are QuantiFERON TB Gold and T-SPOT.TB. Unlike the TST, IGRA tests are not influenced by a past history of Bacille Calmette-Guérin (BCG) vaccination. An individual who has a positive TST and who had a previous BCG vaccination may opt to have an IGRA test performed as an aid in confirming whether the individual likely has latent tuberculosis infection. Additional information on IGRA testing is available on request.administration;

### ***Influenza immunization requirement***

All students are required to submit documentation of an annual influenza vaccination by November 18. For healthcare workers the quadrivalent, injectable influenza vaccine is preferred. Students who do not submit to the College of Nursing documentation of the influenza vaccination by November 18 will have their student account placed on hold and may be deregistered from winter term clinical practice courses.

## **Influenza**

### ***What is influenza?***

Influenza (also called “the flu”) is a common respiratory viral illness spread person-to-person. In Canada, influenza season usually runs from November to May, and sometimes later. Symptoms may include fever, headache, cough, muscle aches, runny nose, sore throat and exhaustion. Symptoms can be similar to other viral illnesses such as a cold; however, the symptoms are usually more serious than a cold, and onset of influenza is usually more sudden than other respiratory pathogens. Most individuals will recover from the illness after 7 to 10 days, but sometimes this takes longer for high-risk individuals. Some people may carry and spread the influenza virus but have no symptoms. Some individuals, particularly babies, the elderly, and those with immune system problems are particularly vulnerable to the complications of influenza, including pneumonia and meningitis.

### ***How can influenza be spread?***

Influenza virus is spread when a person who has influenza coughs, sneezes, or speaks, and sends influenza virus into the air, allowing others to inhale the virus. Influenza viruses may also be spread when a person touches respiratory droplets on another person or an object and then touches his or her own mouth or nose before washing his or her hands.

### ***Canada and Manitoba***

Influenza and related pneumonia is ranked among the top 10 leading causes of death in Canada. Although the overall number and severity of influenza infections can vary from year to year, it is estimated that an average of 12,200 hospitalizations and approximately 3,500 deaths attributable to influenza occur annually. The incidence of influenza is often underreported since the illness may be confused with other viral illnesses, and many people with influenza-like illness (ILI) do not seek medical care or have viral diagnostic testing done.

### ***Can influenza be prevented?***

In addition to existing concerns over seasonal influenza, there is always concern over an impending worldwide influenza pandemic; an influenza pandemic was declared by the World Health Organization in 2009. An influenza pandemic occurs when a new influenza virus for which people have little or no immunity emerges and spreads rapidly throughout the world. The rate of infection and fatality rate may be greater than what is seen with the seasonal influenza that occurs now, particularly if an effective vaccine is not available. While it is difficult to predict when influenza pandemics will occur or their severity, governments, public health officials, and businesses should prepare for the worst (additional information on Canadian Pandemic Influenza Preparedness is available online).

### ***Why is this disease important to a health-care worker?***

Health-care providers are in a unique position to both acquire influenza infection in the workplace, and to transmit infection to patients, many of whom are extremely vulnerable. As it is possible to transmit influenza prior to the onset of symptoms, providers may not even know that they are infectious to others.

## Influenza Vaccine Myths

### ***Myth #1: Influenza is not a serious illness.***

**FACT:** Each year in Canada, thousands of people die from influenza, or from complications of influenza like pneumonia. Deaths occur mainly among infants, the elderly, and those with immune system problems.

### ***Myth #2: If you do not have a high-risk medical condition you do not need to be vaccinated.***

**FACT:** Any person who wants to protect his or her health can consider influenza vaccination. **Health-care workers who have contact with high-risk individuals have a professional responsibility to do what they can to protect these individuals from the spread of diseases such as influenza.**

### ***Myth #3: If you never get influenza you do not need to be immunized.***

**FACT:** If you have never had influenza this does not mean that you will not get it in the future. As well, no one is completely immune from influenza viruses, even if a person has already had the disease; most people can get sick with influenza several times over the course of their lifetimes, since the virus changes from year to year.

### ***Myth #4: The influenza vaccine can give you influenza.***

**FACT:** The influenza vaccine **cannot** give you influenza. The injectable influenza vaccine contains non-living influenza virus particles that cannot multiply or cause infection. The intranasal influenza vaccine contains weakened living organisms that cannot cause influenza disease in an immune competent host.

### ***Myth #5: The influenza vaccine causes severe reactions or side effects.***

**FACT:** Influenza vaccine is very safe. Most people experience no symptoms after their influenza immunization other than some redness or soreness for one or two days at the area where the needle was given; this rarely interferes with normal activities. Healthy adults receiving influenza vaccine show no increase in the frequency of fever or other systemic symptoms compared with those receiving placebo.

### ***Myth #6: Getting an influenza immunization every year may weaken your immune system.***

**FACT:** The vaccine strengthens your body's immune system, by preparing and boosting it to help you fight the influenza virus if you contract it. People who get the influenza immunization each year are better protected against influenza than those who do not get vaccinated.

### ***Myth #7: You should not get the influenza immunization if you have a number of different allergies.***

**FACT:** Most allergies are not a reason for refusing an influenza immunization. Individuals who have had a previous allergic reaction to the influenza vaccine, or any of its components, including eggs, should talk to their doctor first before getting an influenza immunization.

### ***Myth #8: Vaccination is not necessary since there are better ways of preventing the spread of influenza, such as frequent hand-washing, covering your mouth when coughing, or staying home when you are sick.***

**FACT:** These are all very important ways to prevent the spread of infections such as influenza, but they do not mean that influenza vaccination is not necessary. Despite our best efforts, influenza may still spread throughout the community. As well, individuals who develop influenza may be infectious to others prior to the onset of symptoms, limiting the benefit of staying home when ill.

### ***Myth #9: The influenza vaccine protects against the viruses or bacteria that cause colds or stomach illnesses***

**FACT:** The influenza virus is very different and more severe than the common cold, or gastrointestinal illnesses ("stomach flu"). Influenza vaccine does not protect against the viruses or bacteria that cause colds, or gastrointestinal illnesses; the vaccine only helps the body build immunity to the viruses that cause influenza.

### ***Myth #10: Someone you know got the influenza vaccine and still got the flu, so this proves the vaccine doesn't work.***

**FACT:** At any given time there are many different types of viruses being spread that can cause symptoms like influenza, but are not actually the influenza virus. The influenza vaccine contains three or four types of influenza viruses that are likely to cause influenza in the coming winter months. These are the only viruses the vaccine will protect against. Because these strains may change each year, a person needs to get the influenza immunization each year to be protected against new strains. When the strains in the vaccine are well-matched to the strains of influenza virus in the community, the influenza immunization prevents influenza in eight of ten vaccinated persons. In elderly people and people who have certain chronic health conditions, the vaccine may not work as well to prevent infection, but it will still decrease symptoms and the risk of serious health concerns (e.g., hospitalization and death).

### ***Myth #11: If you are pregnant or breastfeeding you should not have an influenza immunization.***

**FACT:** An influenza vaccine is safe during pregnancy. In fact, national Canadian guidelines recommend that all pregnant women receive a non-live influenza vaccination to protect themselves. Babies less than six months of age, especially newborns, are at high risk from the complications of influenza, but cannot be vaccinated because their immune response to influenza vaccine is not strong enough. Vaccinating their close contacts, including their mothers, can help to protect them and reduce their risk of becoming infected.

## Travel health services

### ***When would I need to go to a travel health clinic?***

Many students will at some point travel to a foreign country, either as part of their formal education, for work, or for a vacation. It is important for students planning international journeys to access high quality travel health advice, to ensure a positive travel experience. A travel health clinic can both help travellers stay healthy while traveling, and also provide assistance if a traveller experiences illness after arriving back in Canada.

### ***What does a travel health clinic offer?***

A travel health clinic can review with a traveller many traveling basics, such as:

**Education:** Advice ranging from problem areas/conflict zones, safety issues, food and water precautions, how to manage diarrhea, mosquito and insect precautions, altitude information, protection against sexually transmitted infections (STIs), etc.

**Immunizations:** Recommended vaccinations depend on the area of the world to which the traveller is embarking, and may include updates to any routine vaccinations (e.g., measles, mumps, rubella, tetanus, diphtheria, polio, pertussis, influenza) and travel specific vaccinations such as hepatitis A, hepatitis B, rabies, typhoid, meningococcal meningitis, Japanese encephalitis and yellow fever immunizations. Some vaccinations are required in order to legally enter certain countries. Proper documentation of vaccinations is also sometimes required for travel to some areas.

**Prophylaxis:** Travel to some areas of the world requires a traveller take medications to avoid becoming ill with disease. An example of this is malaria “prophylaxis” (treatment used to prevent infection): if at risk, the traveller will begin to take antimalarial prescription medication before leaving, and then while away and for a certain amount of time upon leaving a malaria risk area, to avoid acquiring this disease from mosquitoes.

**Supplies:** A travel health clinic can also help a traveller organize, or provide information on what should be included in a First Aid travel pack; travellers can purchase items for their kit. A travel health clinic can also sell supplies such as insecticide-treated mosquito bed nets, insect repellent, water purification kits, sunscreen or sunblock lotions, a personal supply of syringes and needles (in the event of requiring medical procedures while abroad and where there is a lack of a reliable supply in a foreign hospital), and many other essential items.

**Students can also attend a travel health clinic to have school requirements reviewed (charges will apply).**

### ***Do travel health services cost anything?***

As the majority of travel health services are not publicly insured services, clients will be charged for services, immunizations and supplies. However, this should be seen as essential “travel insurance” to make a trip as safe and enjoyable as possible. Travellers will often spend many thousands of dollars on airline and accommodation fees, and yet hesitate to spend a couple hundred dollars to make sure they are in good health during the trip. (NOTE: Manitoba Health covers post travel clinic visits, for travellers experiencing travel-related illness on return)

### ***WHERE should I go for travel health advice?***

There are several travel health clinics in Manitoba (a list of Manitoba travel health clinics is listed at: <http://www.wrha.mb.ca/community/travel/index.php>). **Travellers who do not wish to go to a travel health clinic should, at a minimum, visit their own physicians or healthcare provider**, who can review current travel health resources, or contact the Manitoba travel health network for advice. However, the more exotic the trip, the more travellers are encouraged to make use of a high-quality, certified travel health clinic.

### ***WHEN should I go for travel health advice?***

It is best to make an appointment **at least 6-8 weeks prior** to your departure; this is particularly important when a traveller is being offered vaccinations, as some require several weeks to build the traveller’s immunity. However, even if a traveller is scheduled to depart in a few days, an appointment with a travel health clinic will still prove beneficial.

### ***Why is this especially important for health-care workers?***

In addition to their desire to protect themselves and their families, travellers should recognize a duty to protect other Canadians by reducing opportunities to import diseases. This is particularly true of travellers who are health-care workers who serve vulnerable patients.