

COUNCIL OF
**ONTARIO FACULTIES
OF MEDICINE**

An affiliate of the Council of Ontario Universities

UE: COFM Blood Borne Pathogen Policy

This policy is an evidence-based consensus document developed by an expert working group on behalf of the six Ontario medical schools and faculties. The policy closely complies with current evidence contained within the *SHEA guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus, and/or Human Immunodeficiency Virus*¹. This policy applies to all students attending an Ontario medical school who participate in clinical activities in Ontario.

Applicants will be:

- aware that they will be required to participate in the care of patients with various communicable diseases or infections including hepatitis, HIV and AIDS;
- required to comply with Faculty/Program Hepatitis B immunization and blood borne pathogen policies and requirements;
- ethically responsible, upon acceptance, to inform the Associate/Assistant Dean of UG Medicine if they are positive for a blood borne pathogen. The Associate/Assistant Dean of UG Medicine may consult with the Expert Board/Board of Medical Assessors or other experts as appropriate. Confidentiality concerning the applicant's state of health will be maintained to the greatest extent possible.

The Medical/Health Sciences Faculty will:

- provide education and training to all students in appropriate methods to prevent the transmission of communicable diseases, including blood borne pathogens, that is consistent with *Provincial Infectious Diseases Advisory Committee's Document: Routine Practices and Additional Precautions in All Health Care Settings*;

¹ Henderson, D.K., Dembry, L., Fishman, N., Grady, C., Lundstrom, T., Palmore, T., Sepkowitz, K., & Weber, D. (2010). SHEA guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus, and/or Human Immunodeficiency Virus. *Infection Control and Hospital Epidemiology*. Vol. 31, No. 3, 203 - 232.

- maintain confidentiality to the greatest extent possible regarding information disclosed by students concerning their serological status and disclose relevant information only with the appropriate consent.

Medical Students are:

- ethically obligated to know their serological status with respect to blood borne pathogens;
- expected to be in a state of health such that they may participate in the academic programs, including patient care, without posing a risk to themselves or others (see COFM's Policy on Essential Skills for Medical Students);
- obligated to comply with Faculty/Program Hepatitis B immunization policies and requirements (see COFM's Immunization Policy);
- mandated to comply with the Provincial Communicable Disease Surveillance Protocol, *Blood-Borne Diseases Surveillance Protocol for Ontario Hospitals*, developed under the *Public Hospitals Act, Regulation 965*;
- required to use Routine Practices and Additional Precautions in order to prevent the spread of blood borne pathogens and other infections;
- required to disclose, as per school policy, if they are potentially exposed to a blood borne pathogen in a clinical setting; and provide a blood specimen, if indicated.

Medical Students infected with Blood Borne Pathogens:

- are professionally and ethically obligated, on acceptance, to inform the relevant Associate/Assistant Dean of any blood borne infection;
- may pursue their studies only as long their continued involvement does not pose a health or safety hazard to themselves or others; it is expected that all students can be accommodated as needed with some modification to their program of study to reduce the risks of blood borne pathogen transmission;
- may have their condition reviewed and monitored by an Expert Board at the request of the Associate/Assistant Dean. The review panel may include individuals who have expertise in the infected provider's specialty or subspecialty, Infection Prevention and Control, Infectious Diseases and/or Hepatology with expertise in viral hepatitis and/or HIV infection, Public Health, Bioethics, Occupational Medicine, and/or hospital administration; and, an individual with legal expertise;
- may have clinical duties or clinical exposure modified, limited or abbreviated based on recommendations from an Expert Board regarding the details of the modifications or limitations – particularly as it relates to the performance of exposure prone procedures and the status of the blood borne infection (i.e. viral loads etc);

- required to disclose if they accidentally expose a patient to their blood borne pathogen in a clinical setting;
- must be offered advice and counseling that will assist him/her regarding clinical practice and career choices; and
- have the right to appeal decisions made by the Associate/Assistant Dean or the Expert Board by submitting, in writing or in person, a proposed amendment to the decision and the rationale supporting such an amendment. The student may submit additional documentation from his/her personal physician or other healthcare provider in support of their appeal. In the case where the student's appeal is rejected by the Associate/Assistant Dean and/or Expert Board, the student may engage in the Student Appeal Procedure of the University to submit any additional appeals.

Medical Students who are potentially exposed to a blood borne pathogen are:

- required to seek medical attention as soon as possible after the event as per faculty and organizational policy (e.g. within 1-2 hours for HIV post exposure prophylaxis);
- required to report and document occurrence as per faculty and organizational policy;
- required to follow post-occurrence testing and treatment.

Definitions:

Blood borne disease: *a disease caused by a microbiologic agent capable of being transmitted via contact with the blood of an infected individual. Most notably, this includes the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV).*

Exposure-prone procedures : *“Invasive procedures where there is the potential for direct contact between the skin (usually a hand finger or thumb) of the physician and sharp instruments, needle tips, or sharp tissues (spicules of bone or teeth) in body cavities, wounds, or in poorly visualized, confined anatomical sites.”²*

Non-exposure prone procedures (NEPP): *“Procedures where the hands and fingers of the physician worker are visible and outside of the body at all times and procedures or internal examinations that do not involve possible injury to the health-care worker's hands by sharp*

² Health Canada. (1998). Proceedings of the Consensus Conference on infected health care workers: risk for transmission of blood-borne pathogens. *Canada Communicable Disease Report*,24S.

*instruments and/or tissues are considered NEPP, provided routine infection prevention and control procedures are adhered to at all times.*³

Examples of such NEPP include:

- the drawing of blood
- setting up and maintaining intravenous lines or central lines provided that there has been no skin tunneling and the procedure is performed in a non-exposure prone manner
- minor suturing on the surface of the body
- the incision of external abscesses or similar lesions
- routine oral, vaginal or rectal examinations

General Recommendations

1. Students should not be prohibited from participating in patient-care activities solely on the basis of their blood borne pathogen infection. (Please see appendix A).
2. Subject to the precautions below the affected student may perform routine physical examinations provided there is no evidence of open or healing wounds, or eczema on the student's hands as per Routine Practices.
3. If the skin of the hands is intact, and there are no wounds or skin lesions, then in examining a body orifice, whether oral, vaginal, or rectal, the student must wear gloves as per Routine Practices.
4. If the skin on the hands is not intact, whether from a healing laceration, or from any skin condition interfering with the normal protection afforded by intact skin, and is to the extent that could not be covered with a simple dressing then the affected student should not provide direct patient contact until they have received effective treatment.
5. A decision as to whether an affected student should continue to perform a procedure which in itself is not exposure prone should take into account the risk of complications arising which might necessitate the performance of an exposure prone procedure.

³ Health Canada. (1998). Proceedings of the Consensus Conference on infected health care workers: risk for transmission of blood-borne pathogens. *Canada Communicable Disease Report*,24S

6. It is recognized that infection control precautions are not perfect. However, based on the nature of NEPPs and the agent specific guidelines outlined in this document, it is expected that the risk of a transmission event occurring is low and if an event were to occur, remedial action can further minimize the risk to the patient.

Appendix A: Summary Recommendations for Managing Healthcare Providers Infected with Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and/or Human Immunodeficiency Virus (HIV) ⁴

Virus, Circulating viral Burden	Categories of Clinical Activities ^a	Recommendations	Testing
HBV			
<10 ⁴ GE/mL	Categories I, II, and III	No restrictions ^b	Twice per year
≥ 10 ⁴ GE/mL	Categories I and II	No restrictions ^b	NA
≥ 10 ⁴ GE/mL	Category III	Restricted ^c	NA
HCV			
<10 ⁴ GE/mL	Categories I, II, and III	No restrictions ^b	Twice per year
≥10 ⁴ GE/mL	Categories I and II	No restrictions ^b	NA
≥10 ⁴ GE/mL	Category III	Restricted ^c	NA
HIV			
<5X10 ² GE/mL	Categories I, II, and III	No restrictions ^b	Twice per year
≥5X10 ² GE/mL	Categories I and II	No restrictions ^b	NA
≥5X10 ² GE/mL	Category III	Restricted ^d	NA

⁴ Henderson, D.K., Dembry, L., Fishman, N., Grady, C., Lundstrom, T., Palmore, T., Sepkowitz, K., & Weber, D. (2010). SHEA guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus, and/or Human Immunodeficiency Virus. *Infection Control and Hospital Epidemiology*. Vol. 31, No. 3, 203 - 232.

Note. These recommendations provide a framework within which to consider such cases; however, each such case is sufficiently complex that each should be independently considered in context by the expert review panel.

GE, genome equivalents; NA, not applicable.

^a See Appendix B for the categorization of clinical activities.

^b No restrictions recommended, so long as the infected healthcare provider (1) is not detected as having transmitted infection to patients; (2) obtains advice from an Expert Review Panel about continued practice; (3) undergoes follow-up routinely by a personal physician who has expertise in the management of her or his infection, e.g., Infectious Diseases physician or Hepatologist, and who is allowed by the provider to communicate with the Expert Review Panel about the provider's clinical status, and who tests the provider twice per year to demonstrate the maintenance of a viral burden of less than the recommended threshold ; (4) consults with an expert about optimal infection control procedures (and strictly adheres to the recommended procedures, including the routine use of double-gloving for Category II and Category III procedures and frequent glove changes during procedures, particularly if performing technical tasks known to compromise glove integrity [e.g., placing sternal wires]), and (5) agrees to the information in and signs a contract or letter from the Expert Review Panel that characterizes her or his responsibilities .

^c These procedures permissible only when viral burden is $<10^4$ GE/mL

^d These procedures permissible only when viral burden is $<5 \times 10^2$ GE/mL

Appendix B: Categorization of Healthcare-Associated Procedures According to Level of Risk for Bloodborne Pathogen Transmission⁵

Category I: Procedures with a minimal risk of bloodborne virus transmission:

- Regular history-taking and/or physical or dental examinations, including gloved oral examination with a mirror and/or tongue depressor and/or dental explorer and periodontal probe;
- Routine dental preventive procedures (e.g., application of sealants or topical fluoride or administration of prophylaxis ^a), diagnostic procedures, orthodontic procedures, prosthetic procedures (e.g., denture fabrication), cosmetic procedures (e.g., bleaching) not requiring local anesthesia;
- Routine rectal or vaginal examination;
- Minor surface suturing;
- Elective peripheral phlebotomy ^b ;
- Lower gastrointestinal tract endoscopic examinations and procedures, such as sigmoidoscopy and colonoscopy;
- Hands-off supervision during surgical procedures and computer-aided remote or robotic surgical procedures; and
- Psychiatric evaluations ^c .

Category II: Procedures for which bloodborne virus transmission is theoretically possible but unlikely

- Locally anesthetized ophthalmologic surgery;
- Locally anesthetized operative, prosthetic, and endodontic dental procedures;
- Periodontal scaling and root planning ^d ;
- Minor oral surgical procedures (e.g., simple tooth extraction [i.e., not requiring excess force], soft tissue flap or sectioning, minor soft tissue biopsy, or incision and drainage of an accessible abscess);
- Minor local procedures (e.g., skin excision, abscess drainage, biopsy, and use of laser) under local anesthesia (often under bloodless conditions);
- Percutaneous cardiac procedures (e.g., angiography and catheterization);
- Percutaneous and other minor orthopedic procedures;
- Subcutaneous pacemaker implantation;
- Bronchoscopy;
- Insertion and maintenance of epidural and spinal anesthesia lines;

⁵ Henderson, D.K., Dembry, L., Fishman, N., Grady, C., Lundstrom, T., Palmore, T., Sepkowitz, K., & Weber, D. (2010). SHEA guideline for Management of Healthcare Workers Who Are Infected with Hepatitis B Virus, Hepatitis C Virus, and/or Human Immunodeficiency Virus. *Infection Control and Hospital Epidemiology*. Vol. 31, No. 3, 203 - 232.

- Minor gynecological procedures (e.g., dilatation and curettage, suction abortion, colposcopy, insertion and removal of contraceptive devices and implants, and collection of ova);
- Male urological procedures (excluding transabdominal intrapelvic procedures);
- Upper gastrointestinal tract endoscopic procedures;
- Minor vascular procedures (e.g., embolectomy and vein stripping);
- Amputations, including major limbs (e.g., hemipelvectomy and amputation of legs or arms) and minor amputations (e.g., amputations of fingers, toes, hands, or feet);
- Breast augmentation or reduction;
- Minimum-exposure plastic surgical procedures (e.g., liposuction, minor skin resection for reshaping, face lift, brow lift, blepharoplasty, and otoplasty);
- Total and subtotal thyroidectomy and/or biopsy;
- Endoscopic ear, nose, and throat surgery and simple ear and nasal procedures (e.g., stapedectomy or stapedotomy, and insertion of tympanostomy tubes);
- Ophthalmic surgery;
- Assistance with an uncomplicated vaginal delivery ^e;
- Laparoscopic procedures;
- Thoracoscopic procedures ^f;
- Nasal endoscopic procedures ^g;
- Routine arthroscopic procedures ^h;
- Plastic surgery ⁱ;
- Insertion of, maintenance of, and drug administration into arterial and central venous lines; and
- Endotracheal intubation and use of laryngeal mask;
- Obtainment and use of venous and arterial access devices that occur under complete antiseptic technique, using universal precautions, “no-sharp” technique, and newly gloved hands.

Category III: Procedures for which there is definite risk of bloodborne virus transmission or that have been classified previously as “exposure-prone”:

- General surgery, including nephrectomy, small bowel resection, cholecystectomy, subtotal thyroidectomy other elective open abdominal surgery;
- General oral surgery, including surgical extractions, ^j hard and soft tissue biopsy (if more extensive and/or having difficult access for suturing), apicoectomy, root amputation, gingivectomy, periodontal curettage, mucogingival and osseous surgery, alveoplasty or alveoectomy, and endosseous implant surgery
- Cardiothoracic surgery, including valve replacement, coronary artery bypass grafting, other bypass surgery, heart transplantation, repair of congenital heart defects, thymectomy, and open-lung biopsy;
- Open extensive head and neck surgery involving bones, including oncological procedures;
- Neurosurgery, including craniotomy, other intracranial procedures, and open-spine surgery;

- Non-elective procedures performed in the emergency department, including open resuscitation efforts, deep suturing to arrest hemorrhage, and internal cardiac massage;
- Obstetrical/gynecological surgery, including cesarean delivery, hysterectomy, forceps delivery, episiotomy, cone biopsy, and ovarian cyst removal, and other transvaginal obstetrical and gynecological procedures involving hand-guided sharps;
- Orthopedic procedures, including total knee arthroplasty, total hip arthroplasty, major joint replacement surgery, open spine surgery, and open pelvic surgery;
- Extensive plastic surgery, including extensive cosmetic procedures (e.g., abdominoplasty and thoracoplasty);
- Transplantation surgery (except skin and corneal transplantation);
- Trauma surgery, including open head injuries, facial and jaw fracture reductions, extensive soft-tissue trauma, and ophthalmic trauma;
- Interactions with patients in situations during which the risk of the patient biting the physician is significant; for example, interactions with violent patients or patients experiencing an epileptic seizure; and
- Any open surgical procedure with a duration of more than 3 hours, probably necessitating glove change.

Note

^a Does not include subgingival scaling with hand instrumentation.

^b If done emergently (e.g., during acute trauma or resuscitation efforts), peripheral phlebotomy is classified as Category III.

^c If there is no risk present of biting or of otherwise violent patients.

^d Use of an ultrasonic device for scaling and root planing would greatly reduce or eliminate the risk for percutaneous injury to the provider. If significant physical force with hand instrumentation is anticipated to be necessary, scaling and root planing and other Class II procedures could be reasonably classified as Category III.

^e Making and suturing an episiotomy is classified as Category III.

^f If unexpected circumstances require moving to an open procedure (e.g., laparotomy or thoracotomy), some of these procedures will be classified as Category III.

^g If moving to an open procedure is required, these procedures will be classified as Category III.

^h If opening a joint is indicated and/or use of power instruments (e.g., drills) is necessary, this procedure is classified as Category III.

ⁱ A procedure involving bones, major vasculature, and/or deep body cavities will be classified as Category III.

^j Removal of an erupted or non-erupted tooth requiring elevation of a mucoperiosteal flap, removal of bone, or sectioning of tooth and suturing if needed.