



The College of Physicians and Surgeons of British Columbia

RESOURCE MANUAL

Blood Borne Communicable Diseases in Physicians

For many years, and especially since the discovery of acquired immunodeficiency syndrome, physicians and the public have been aware of and concerned about the risk of transmission of blood borne pathogens. All physicians have an ethical responsibility to be aware of their serological status with respect to blood borne communicable diseases, especially if they are engaging in exposure prone procedures. With present and continued advances in medical science, Hepatitis B and Hepatitis C, which are the most prevalent of the blood borne infections, may be treated such that the disease course may be modified or the disease potentially cured.

The College is very aware of the issues confronting physicians infected with a blood borne pathogen and of the importance of confidentiality and the physician's right to privacy. However these issues must be considered in the context of the College's mandate to protect the public from unnecessary medical risk.

Since the early 1990s, the Expert Panel on Blood Borne Communicable Disease has offered advice and guidance to physicians, medical students, residents, or fellows infected with a blood borne pathogen ("affected physicians"). In September 2004, the College Council resolved to establish a standing committee of the College, which will more fully and formally address this difficult and important issue. The Blood Borne Communicable Disease Committee's objective is to assist affected physicians to practise safely in the public's interest. The Committee members include a hepatologist, an internist/microbiologist, an infectious disease specialist, and may be supplemented by a physician representative from the office of the Provincial Medical Officer of Health.

The Committee establishes general guidelines, advises and makes recommendations to physicians for the purpose of managing and preventing risk of transmission of blood borne communicable disease to patients.

For the purpose of advising an affected physician, the Committee will review information pertinent to that physician, including current health status, serology, and the nature of the affected physician's specific medical practice. Subsequent to its review, the Committee will formulate and advise the affected physician of specific guidelines relevant to his/her practice and, as required, of any restrictions on practice that should be implemented to prevent or minimize the potential of transmission to patients. Where necessary, the Committee may also recommend alterations to or restrictions on the focus or scope of an affected physician's practice, including restrictions on exposure prone procedures. It may also advise the affected physician and his/her treating physician on how the affected physician's health, as it relates to practice, may be managed so as to prevent or minimize risk of transmission to patients. An affected physician may request a personal interview with the Committee to review or contest any of its recommendations.

The following represents the *Guidelines of the Blood Borne Communicable Disease Committee* for affected physicians and their attending:

Guidelines of the Blood Borne Communicable Disease Committee

I. DEFINITIONS

- a) “exposure prone procedures” (EPP) are those where there is a risk that injury to the physician may result in the exposure of the patient’s open tissues to the blood of the physician (bleedback). These include procedures where the physician’s gloved hand may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient’s open body cavity, wound, or confined anatomical space where the hands or finger tips may not be completely visible at all times.
- b) “non-exposure prone procedures” (NEPP): Procedures where the hands and fingertips of the physician are visible and outside the patients body at all times, and internal examinations or procedures that do not involve possible injury to the physician’s gloved hands from sharp instruments and/or tissues, are **considered to be non-exposure prone** provided routine infection control procedures are adhered to at all times.
- c) “an affected physician” is one who has contracted a blood borne communicable disease and whose clinical status is such that inadvertent or accidental exposure to the physician’s blood would lead to a risk of transmission of the BBCD to the patient.

II. GENERAL RECOMMENDATIONS

1. Subject to the precautions below the affected physician may perform routine physical examinations provided there is no evidence of open or healing wounds, or eczema on the physician’s hands.
2. 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 physician must wear gloves.
3. 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, then the affected physician must double glove to provide a physical examination. **Under such circumstances** the physician would be prohibited from doing any examination of a body orifice whether that be oral, vaginal, or rectal.

Non-exposure Prone Procedures

Routine physical examinations, oral, vaginal and rectal examinations may be performed. (1) (2) and (3) above are applicable at all times.

Such procedures should be performed in the **co-operative patient only**.

Examples of such procedures 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 surface suturing
- The incision of external abscesses
- Routine vaginal or rectal examinations
- Simple endoscopic procedures
- A decision as to whether an affected physician 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 (refer to *Endoscopy, Laparoscopy*).

The Committee recognizes that infection control procedures 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.

III. SPECIFIC RECOMMENDATIONS BY DISEASE

	Procedures		
	HBV DNA	Exposure Prone	Non-Exposure Prone
Hepatitis B (HB surface antigen positive)	>10 ⁵	Prohibited	Prohibited refer to I.a), b), II. 1, 2, 3, on pg 2
	between 10 ³ & 10 ⁵ copies per ml*	Prohibited	Not restricted but refer to I.a), b), II. 1, 2, 3, on pg 2
	<10 ³ copies per ml*	Not restricted	Not restricted
HIV Positive		Prohibited	Not restricted <i>provided HIV is undetectable on PCR</i> Refer to I. a), b), II. 1, 2, 3 on pg 2
Hepatitis C (RNA Positive)		Prohibited	Not restricted

* or the International Unit equivalent (IU)/ml

a. Hepatitis B

Hepatitis B infected physicians whose viral load does not exceed 10³ copies per ml* may perform exposure prone procedures. However such physicians must have their viral load retested at six monthly intervals owing to fluctuation in the viral load.

If the viral load rises above 10³ copies per ml* such physicians must cease to perform exposure prone procedures. It is the Committee's recommendation that if the HBV viral load is between 10³ & 10⁵ copies per ml* an affected physician may continue to perform non-exposure prone procedures. Refer to II 1, 2, 3 for routine physical, oral, vaginal and rectal examinations

However, above 10^5 per ml* the physician would be prohibited from performing non-exposure prone procedures as the risk of transmission increases substantially over and above that number, were there to be an inadvertent exposure.

In addition, HBV DNA testing must be carried out immediately if a physician becomes immunosuppressed or develops symptoms suggestive of a reactivation of their Hepatitis B, or investigation of a case of Hepatitis B in a patient suggests the possibility of transmission from the physician to the patient.

b. HIV:

With respect to HIV, a physician so affected, must not perform exposure prone procedures.

A physician may perform non exposure prone procedures only if there is no evidence of detectable virus on HIV RNA ultra sensitive PCR.

Refer to II 1,2,3 for routine physical, oral, vaginal and rectal examinations

c. Hepatitis C:

With respect to Hepatitis C, exposure prone procedures are prohibited if Hepatitis C virus RNA is positive.

IV. SPECIFIC RECOMMENDATIONS BY SPECIALTY AND PROCEDURE

In considering guidelines with respect to specialties and procedures the Committee reviewed recommendations from Canada, the United States, Europe and the United Kingdom. The following advice provided by the United Kingdom Advisory Panel on Blood Borne Communicable Disease was considered the most appropriate and comprehensive. Consequently it has been adopted by the Committee on Blood Borne Communicable Disease of the College of Physicians and Surgeons of BC.

Accident and Emergency:

Accident and Emergency staff restricted from performing EPPs should not provide pre-hospital trauma care, should not physically examine or handle acute trauma patients with open tissues owing to the unpredictable risk of injury from sharp tissues such as fractured bones. Colleagues who are allowed to perform EPPs are to be included in the patient's care.

Other EPPs, which may arise in an accident and emergency setting, would include:

- Rectal examination in the presence of suspected pelvic fracture
- Deep suturing to arrest hemorrhage
- Internal cardiac massage

Anesthesia:

Procedures performed purely percutaneously are not considered to be exposure prone, nor have endotracheal intubation or the use of a laryngeal mask been considered so.

The only procedure currently performed by an anesthetist that would constitute an exposure prone procedure would be the insertion of a chest tube in a trauma case for a patient with multiple rib fractures.

The insertion of a chest drain may or may not be considered to be exposure prone depending on how it is performed. Procedures where, following a small initial incision, the chest drain with its internal trocar is passed directly through the chest wall (as may happen e.g. with a pneumothorax or pleural effusion) and where the lung is well clear of the chest wall, would not be considered to be exposure prone. However, where a larger incision is made, and a finger is inserted into the chest cavity, as may be necessary, e.g. with a flail chest, and where the physician could be injured by the broken ribs, the procedure should be considered exposure prone

Arterial or Venous Cut Down:

As the operator's hands are always visible this procedure should not be considered exposure prone.

Bone Marrow Transplantation:

Not exposure prone.

Cardiology:

Percutaneous procedures including angiography/cardiac catheterization are not exposure prone. Implantation of permanent pacemakers (for which a skin tunnelling technique is used to site the pacemaker device subcutaneously) may or may not be exposure prone. This will depend on whether the operator's fingers are or are not concealed from view in the patient's tissues in the presence of sharp instruments during the procedure

Ear, Nose and Throat Surgery:

ENT surgical procedures generally should be regarded as exposure prone with the exception of simple ear or nasal procedures, and procedures performed using endoscopes (flexible and rigid) provided fingertips are always visible. Non-exposure prone ear procedures include:

- stapedectomy/stapedotomy
- insertion of myringotomy tubes
- insertion of a titanium screw for a bone anchored hearing aid

Endoscopy:

Simple endoscopic procedures (i.e. gastroscopy, bronchoscopy) have not been considered exposure prone. In general there is a risk that surgical endoscopic procedures (cystoscopy, laparoscopy) may escalate due to complications which may not have been foreseen and may necessitate an open EPP. The need for coverage from a colleague who is allowed to perform EPPs should be considered as a contingency.

General Practice:

Refer to accident and emergency, minor surgery, obstetrics, resuscitation.

Gynecology (see Laparoscopy):

Open surgical procedures are exposure prone. Many minor gynecological procedures are not considered exposure prone, such as a dilatation and curettage (D&C), suction termination of pregnancy, colposcopy, surgical insertion of depo-contraceptive implants/devices, fitting intrauterine contraceptive devices, vaginal egg collection provided fingers remain visible at all times when sharp instruments are in use.

Performing cone biopsies with a scalpel with suturing of the cervix would be considered exposure prone. Cone biopsies performed with a laser would not be considered exposure prone but if local anesthetic was administered to the cervix other than under direct vision, the latter would be considered an exposure prone procedure.

Intensive Care:

Intensive care does not generally involve EPPs on the part of physicians.

Laparoscopy:

Mostly non-exposure prone because fingers are never concealed in a patients' tissues. The procedure is exposure prone if the main trochar is inserted using an open procedure, as for example in a patient who has had previous abdominal surgery. It is also exposure prone if the rectus sheath is closed at port sites using a needle and fingers rather than needle holders and forceps.

There is a risk in general that a therapeutic rather than a diagnostic laparoscopy may escalate due to complications which may not have been foreseen, necessitating an open exposure prone procedure. Coverage from colleagues allowed to perform EPP would be needed at all times to avoid this eventuality.

Obstetrics:

Simple vaginal delivery, amniotomy using a plastic device, attachment of fetal scalp electrodes, infiltration of local anesthetic prior to an episiotomy and the use of scissors to make an episiotomy cut are not exposure prone. A simple episiotomy repair with the hands visualized and a no touch technique would not be considered exposure prone. However a repair of a significant laceration would be considered exposure prone and should be performed by a physician who is not restricted from EPP.

Minor Surgery:

In the context of general practice, minor surgical procedures such as excision of sebaceous cysts, skin lesions, cauterization of skin warts, aspiration of bursae, steroid injections into joints, vasectomies, are generally not considered to be exposure prone.

Ophthalmology:

With the exception of orbital surgery where there have been significant fractures and bone spicules, routine ophthalmological surgical procedures are not exposure prone as the operator's fingers are not concealed in the patient's tissues. Exceptions may occur in some acute trauma cases, which should be avoided by EPP restricted surgeons.

Orthopedics:

Exposure prone procedures:

- open surgical procedures;
- procedures involved in the cutting or fixation of bone, including the use of K-wire fixation and osteotomies;
- procedures involving the distant transfer of tissues from a second site i.e. digit reconstruction;
- acute hand trauma

Non-exposure prone procedures:

- Manipulation of joints with intact skin;
- Arthroscopy provided that if there is a possibility an open procedure might become necessary, the procedure is undertaken by a colleague able to perform the appropriate open surgical procedure;
- Superficial surgery involving the soft tissue of the hand;
- Work on tendons using purely instrumental tunneling techniques that do not involve fingers and sharp instruments together in the tunnel;
- Procedures for secondary reconstruction of the hand, provided that the operator's fingers are in full view;
- Carpal tunnel decompression provided fingers and sharp instruments are not together in the wound;
- Closed reductions of fractures and other percutaneous procedures

Pathology:

In the event of injury to an EPP restricted pathologist performing a post mortem examination, the risk to other workers handling the same body subsequently is so remote that no restriction is recommended.

Pediatrics:

Neither general nor neonatal/special care pediatrics has been considered likely to involve any EPPs. Pediatric surgery is considered exposure prone.

Radiology:

All percutaneous procedures including imaging of the vascular tree, biliary system and renal system, drainage procedures and biopsies as appropriate, are not EPPs.

Renal Medicine:

Obtaining vascular access in a distressed patient may constitute an exposure prone procedure as the risk of injury to the physician may be significant. If the operator's fingers remain visible at all times during the procedure, the procedure would not be considered exposure prone. Neither hemofiltration nor hemodialysis, constitute exposure prone procedures.

Resuscitation:

Resuscitation wearing appropriate protective equipment does not constitute an EPP. Pocket masks should be utilized as they incorporate a filter and are for single use.

Surgery:

Open surgical procedures are exposure prone. This applies equally to major organ retrieval.

Exercising appropriate care:

There are no restrictions to observing any of the above procedures.

The Committee wishes to acknowledge the Guidelines provided by the UK Advisory Panel for Healthcare Workers Infected with Blood Borne Viruses. These guidelines have been modified slightly from the original to comply with the views of the Committee on BBVD of the CPSBC. To access the *UK Guidelines of the Advisory Panel* available on UK Department of Health website, go to: <http://www.dh.gov.uk>.

From their homepage, go to the following:

- Publications and Statistics
<http://www.dh.gov.uk/en/Publicationsandstatistics/index.htm>
- Publications
<http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/index.htm>
- White Papers - Policy and Guidance Publications
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/DH_4122399
- HIV – Infected Health Care Workers: Guidance on Management and Patient Notification
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH_4118230

V. UNDERGRADUATE AND POSTGRADUATE REQUIREMENTS

The recommendations as outlined in the guidelines apply with respect to all rotations.

A. Medical Students

The following clinical preceptors should be informed of the individual's Blood Borne Communicable Status:

- Family Practice Preceptors (years I & II)
- Clinical Skills Instructors (years I & II)
- Rural Practice Preceptors (summer between years II & III)
- Clerkship Directors (year III)
- Selective/Elective Preceptors (year IV)
- Although this list is not comprehensive, it indicates those members of faculty who must be aware of the affected student's status. Students would be required to inform clinical preceptors and residents with whom they work such that the preceptor could aid the student in observing these restrictions.

B. Residents in Training

Residents would be required to inform the Postgraduate Dean(s) of Medicine, their Department Chair, and Program Director. The Program Director may inform clinical preceptors of the affected physician's status depending upon the nature of the rotation.

The suitability of a postgraduate residency program should be discussed at length with the Program Chair, and the Postgraduate Dean(s) of Medicine.

Where the physician is precluded from performing EPPs more suitable programs may include Psychiatry, Pathology, Community Medicine, Radiation Oncology, Research, Dermatology, and Ophthalmology. Family Medicine may be considered but the above guidelines would be applicable.

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