

# Blood and Body Fluid Exposure Management

A guide for dental hygienists



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# BLOOD AND BODY FLUID EXPOSURE MANAGEMENT

## DEFINITIONS:

HBC = hepatitis B virus

HCV = hepatitis C virus

HIV = Human Immunodeficiency Virus

HCW = Health Care Worker

OHSR = Occupational Health and Safety Regulation, WorkSafeBC

PEP = post exposure prophylaxis

## PURPOSE:

To provide guidance for dental hygienists in a clinical practice setting to:

- Minimize the risk for occupational exposure to blood & body fluids.
- Minimize the risk related to the transmission of hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency (HIV), in persons exposed to blood or bodily fluids.
- Undertake appropriate management, documentation, and follow-up after potential exposure to a blood-borne virus due to contact with blood and body fluids.

## BACKGROUND:

This document relates to blood and body fluid exposure in a clinical dental hygiene setting (e.g. private practice, educational institutions, community, etc.) and is primarily based on the BC Centre for Disease Control's (BCCDC) publication [Communicable Disease Control - Blood and Body Fluid Exposure Management](#) (October 2017). HIV, HBV and HCV are the blood-borne viruses of greatest concern for causing disease in a clinical dental hygiene setting.<sup>1</sup> It is not the intent of this document to discuss the assessment of risk and management of exposures to viruses other than HIV, HBV, and HCV.



In a clinical dental hygiene setting, exposure scenarios typically involve a dental hygienist being exposed to blood or body fluid from a client source (e.g. needlestick injuries). The source of the blood or body fluid may be known (e.g. if the instance occurs during direct client care) or unknown (e.g. a sharps puncture experienced while preparing instruments for sterilization).

To cause infection, blood and body fluid containing HIV, HBV or HCV must have a port of entry to the bloodstream. The highest risk comes from percutaneous injury (e.g. a sharps puncture or a cut), permucosal exposure (e.g. a splash to the eyes, nose or mouth), or exposure of non-intact skin to blood and body fluid.<sup>1-3</sup> Although the risk may be lower, bites may carry a risk of infection transmission *if blood is present in the saliva of the biter*.<sup>3</sup>

The BCCDC Guidelines recommend that health care workers who have had either a percutaneous injury or a permucosal exposure with blood or body fluids in a health care setting attend their local emergency department, public health unit or occupational health clinic as soon as possible following the exposure, to be assessed for potential risk of infection, and be provided with appropriate counselling and treatment (if indicated). The BCCDC Guidelines specify that all aspects of exposure management should strive to maintain the confidentiality of the individuals involved and be carried out while following principles of cultural safety, equity, and trauma-informed practice.<sup>1</sup>


## IMMUNIZATION AVAILABILITY & RECOMMENDATIONS

### Hepatitis B (HBV)

It is recommended that dental hygienists ensure that their immunizations are up to date. The risk of developing HBV infection following exposure is extremely low. Most of B.C.'s population under the age of 35 have been vaccinated since the introduction of a grade 6 hepatitis B immunization program in 1992 and a universal hepatitis B infant program in 2001. Most health care workers (HCW) have undergone HBV testing and vaccination-related-to-workplace screening. If the exposed person has documentation of immunity after completion of a full hepatitis B vaccine series, the risk of HBV from a bloodborne exposure is virtually zero. For this reason, dental hygienists should ensure that their vaccinations are current.<sup>1</sup>

### Hepatitis C (HCV)

Immunization against HCV is not available; however, if an exposure leads to HCV infection, approximately 25% of infections clear spontaneously and >95% of people can be cured with treatment.<sup>1</sup>



## Human Immunodeficiency Virus (HIV)

Approximately 78% of people living with HIV in B.C. who are receiving anti-retroviral therapy (ART) have an undetectable viral load and likely have a negligible risk of transmission to others from bloodborne exposures. Prompt administration of post exposure prophylaxis (PEP) in the exposed person can significantly reduce the risk of infection if the source person has a detectable viral load.<sup>1</sup>

The following table indicates the risk of transmission from needlestick injuries

Type of exposure	Risk for transmission from needlestick injuries in a health care setting		
Percutaneous exposure	HBV	HBeAg positive	<ul style="list-style-type: none"> <li>• 30% if the exposed person has not been previously vaccinated</li> <li>• Virtually zero if previously vaccinated</li> </ul>
		HBeAg negative	<ul style="list-style-type: none"> <li>• 5-10% if the exposed person has not been previously vaccinated</li> <li>• Virtually zero if previously vaccinated</li> </ul>
	HCV		<ul style="list-style-type: none"> <li>• 2% (20 in 1000)</li> </ul>
	HIV		<ul style="list-style-type: none"> <li>• 0.3% (3 in 1000)</li> <li>• Assumes person has a detectable HIV viral load</li> </ul>
Permucosal exposure	HIV		<ul style="list-style-type: none"> <li>• 0.1% (1 in 1000)</li> <li>• Assumes person has a detectable HIV viral load</li> </ul>

BCCDC, Table 3-2<sup>1</sup>

## BEST PRACTICES TO AVOID A BLOOD OR BODY FLUID EXPOSURE & REDUCE RISK OF INFECTION

To reduce the risk and potential occurrence of exposure to blood and body fluid, dental hygienists should:

- Follow the [CDHBC Infection Prevention and Control Guidelines](#) for routine practices including hand hygiene, personal protective equipment, and safe handling and disposal of sharps.<sup>4</sup>
- Know their vaccination status with respect to blood-borne pathogens.<sup>4</sup>
- Know the blood and body fluid exposure plan for each of their clinical practice settings.<sup>4</sup>



## PROTOCOL FOR BLOOD AND BODY FLUID EXPOSURE

The BCCDC Guidelines state that management of blood and body fluid exposure must be undertaken when the following conditions are present<sup>1</sup>:

- Exposure is through a needlestick/scratch, permucosal contact or contact with compromised (damaged) skin.
- Exposure is to blood or high-risk body fluids from a source that is either known to be infectious or might be potentially infectious (high-risk source or in settings where individuals engage in high-risk activities).
- The exposed person is known or considered to be at risk for HBV, HCV or HIV.

### Initial Care for the Area Exposed to Blood and Body Fluid<sup>3</sup>

The management process that is established for a person with blood and body fluid exposure is as follows:

- Needlestick/percutaneous wound:
  - Allow the wound to bleed freely.
  - DO NOT promote bleeding by squeezing the wound. This may damage the tissues and increase uptake of any pathogen(s).
  - Wash well with soap and water.
- Mucous membrane or eye:
  - Irrigate with water or normal saline.
- Skin:
  - Wash well with soap and water.
- Do not apply bleach or other disinfectant to the wound or mucosa.
- 

### Seek Medical Care for a Risk Assessment:

Determine if the source of the blood or body fluid is known and have a risk assessment of the incident performed by a qualified health professional in a local hospital emergency department, occupational health department, or public health unit as soon as possible after the event.

The timing of the exposed person's assessment is critical due to the windows of greatest effectiveness for the post-exposure prophylaxis treatments available (e.g. preferably within 2 hours for HIV prophylaxis and within 48 hours for HBV).<sup>1</sup>

For high-risk exposures to HIV in a non-urban area, the BC Centre for Excellence in HIV/AIDS can be contacted (1-888-511-6222) to determine the closest health facility that carries anti-retroviral starter kits.<sup>5</sup> For more information visit<sup>5</sup> <http://cfenet.ubc.ca/post-exposure-prophylaxis>.

The BCCDC recommends that if the source person is known that they go to the hospital emergency department, occupational health department or public health unit along with the exposed person as soon as possible after the incident.<sup>1</sup>

On arrival, the exposed person should identify him/herself as having been exposed to blood and body fluid and indicate whether the incident was an occupational exposure.

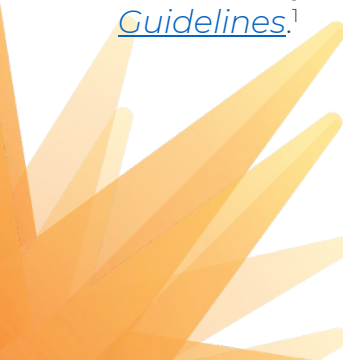
Additional detailed information on risk factors for bloodborne pathogen transmission is available in the BCCDC's [Guidelines](#) (2017), which dental hygienists are encouraged to review.

### Baseline Testing and Consent:

Assessment of the exposed person and source person will include determining their hepatitis B vaccine history, baseline immune status, and personal risks for HCV and HIV.

Informed consent can be expected to be sought from the source person and the exposed person to perform baseline testing and recommended follow up, including disclosure on an 'as needed' basis to relevant parties (e.g. attending physician, WorkSafe BC, if applicable). The BCCDC's Guidelines direct attending health professionals that **confidentiality of the information gathered on the source person and exposed person must conform to current laws.**<sup>1</sup>

Additional detailed information on the protocols for testing, timing, and consent to be obtained by the attending health professional can be located in the BCCDC's [Guidelines](#).<sup>1</sup>



Post-exposure prophylaxis may be recommended for the risk of exposure to HBV and HIV; however, post-exposure prophylaxis for HCV does not currently exist.

Additional detailed information on post-exposure prophylaxis can be found in the BCCDC's [Guidelines](#).

### Post-exposure Counselling and Follow Up:

Post-exposure counselling and education should be provided in the health care facility for the newly exposed person (e.g. the use of condoms during intercourse, breastfeeding considerations, not to share toothbrushes, etc.). It is important that potential transmission is a consideration within the workplace as well as in the personal life of the newly exposed person.<sup>1</sup>

Recommendations for any clinical and laboratory follow-up should also be explained.<sup>1</sup>

Professional counselling may be warranted to provide support for the anxiety, fear, embarrassment, or anger that may be experienced following a blood and body fluid exposure.<sup>1</sup>

Additional information with common questions and answers for individuals who have been exposed to blood and body fluids can be found in Appendix 4 of the BCCDC's [Guidelines](#) (see pages 17-20).

BCDHA members have access to the [Member & Family Assistance Program](#), which provides free and confidential counselling. A blood or body fluid exposure can cause a significant amount of anxiety, fear, embarrassment or anger and it is recommended that members reach out for assistance for either themselves or their families. Information on how to access this service is located [here](#).<sup>6</sup>

### PROVINCIAL OCCUPATIONAL HEALTH AND SAFETY REGULATION & DOCUMENTATION

The Occupational Health and Safety Regulation (OHSR) contains legal requirements that must be met by all workplaces under the inspectional jurisdiction of WorkSafeBC. The purpose of the OHSR is to promote occupational health and safety and to protect workers and others present at workplaces from work-related risks to their health, safety, and well-being. Section 6.34 of the OHSR requires employers to establish an



Refer to WorkSafeBC's website for details on how to [Report a Workplace Injury or Disease](#), as well as appropriate occupational health and safety guidelines.

Dental hygienists who own and operate a dental hygiene practice are responsible for having an exposure plan in place for their employees, as per [WorkSafeBC](#).<sup>2</sup>

## RETURNING TO PRACTICE

### BCCDC Guidelines

The BCCDC Guidelines establish that healthcare professionals who have been exposed to blood and body fluid may continue to practice, if:

- Follow-up testing is completed.
- Counselling is received regarding the use of routine practices for infection prevention and control (e.g. from a public health or a practitioner knowledgeable in infection control).
- Based on their risk exposure there is virtually no risk to the public.
- The professional seeks immediate assessment if symptoms or signs of infection develop.
- 

### CDHBC Requirements post-exposure

Dental hygienists are required to protect the health and safety of their clients, and this obligation includes preventing the transmission of bloodborne viruses (BBVs) from themselves to their clients.

CDHBC publishes '[Dental Hygienists Infected with Bloodborne Pathogens](#),' an interpretation guideline which outlines the CDHBC reporting requirements and guidelines for registrants who are infected with one or more bloodborne virus type infections of HBV, HCV, or HIV.<sup>8</sup>



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