



## HOMES AND SENIORS SERVICES

**POLICY & PROCEDURE NUMBER: 4.18**

**DEPARTMENT:** *Infection Control*

**SUBJECT:** *Guidelines for Management of Blood Borne Illnesses*

**APPROVAL DATE:** April 2004

**REVISION DATE:** March 2016

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### **MANAGEMENT OF BLOOD-BORNE PATHOGENS**

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Health care workers (HCWs) who have potential contact with blood and/or body fluids of residents have an occupational risk of acquiring infection with hepatitis B virus (HBV), hepatitis C virus (HCV) and/or human immunodeficiency virus (HIV).

The purpose of this policy is to provide direction to the facility to prevent the transmission of blood-borne pathogens to health care workers (HCWs) and residents.

This policy applies to all persons carrying on activities in the facility who may have the potential for an occupational exposure to a blood borne pathogen, including but not limited to employees, physicians, nurses, contract workers, students, and volunteers. The term health care worker (HCW) is used to describe these individuals.

### **BACKGROUND INFORMATION ON HBV, HCV, AND HIV**

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#### **HEPATITIS B**

##### **What Is Hepatitis B?**

Hepatitis B Virus (HBV) is a blood borne virus that infects the liver and causes acute and chronic infection.

Symptomatic disease resulting from acute HBV infection occurs in less than 10% of children and 30 - 50% of adults; symptoms may include jaundice, fatigue, loss of appetite, nausea, joint and abdominal pain. Age at the time of exposure is a significant determinant of the likelihood of developing chronic infection, which occurs in approximately 90% of infants infected at birth, and less than 10% of adults. Chronic HBV infection may, over time, result in liver cirrhosis, liver cancer, decompensated liver disease and premature death.

##### **How Is HBV Transmitted?**

Transmission of HBV occurs through contact with infected blood and body fluids, most commonly through sexual or close personal contact with an infected person, use of contaminated drug injection equipment, and vertical (mother-to-child) transmission during pregnancy or birth. Hepatitis B is NOT spread by casual contact such as hugging, kissing or shaking hands. The virus is not found in food or water. HBV can survive outside the body for at least 7 days and has



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been implicated in both nosocomial transmission (via contaminated medical or dental equipment) and occupational exposure among health care workers.

Occupational transmission of HBV typically occurs through exposure to contaminated sharp instruments (e.g. needle stick injuries), or splash or spray to the mucous membranes.

### **HEPATITIS C**

#### **What Is Hepatitis C?**

Hepatitis C Virus (HCV) is a blood borne virus that causes both acute and chronic infection of the liver. It is estimated that in Canada there are 242,500 individuals infected with HCV. About 1 in 5 people who are infected with HCV are unaware of their infection, but they are still infectious.

Approximately 15 - 50% of individuals will spontaneously clear and recover from their infection. Spontaneous clearance has been found to occur more often among those who experience symptomatic HCV infection, which is thought to signal a more robust immune response. Symptoms of acute HCV infection include fatigue, loss of appetite, abdominal pain and nausea.

Approximately 50 - 85% of individuals with persistent HCV will progress to chronic infection and will remain asymptomatic for decades. Many of these people will have chronic liver disease, which can range from mild to severe, including cirrhosis and liver cancer.

#### **How Is Hepatitis C Transmitted?**

HCV is transmitted through blood-to-blood contact. The majority of new HCV infections in Canada occur in illicit drug users as a result of sharing injection or inhalation equipment. Hepatitis C is NOT spread by casual contact such as hugging, kissing or shaking hands. The virus is not found in food or water. HCV can survive outside the body at room temperature, on environmental surfaces, for up to 3 weeks.

Occupational transmission of HCV may occur as a result of a sharps injury; however, there have been rare case reports of infection related to a mucosal exposure (e.g. eye splash). Sharing equipment that might have blood on it such as razors, nail clippers and toothbrushes are potential vehicles for HCV transmission.

### **HIV/AIDS**

**What is HIV/AIDS?**



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AIDS is a severe, life threatening clinical condition and is an advanced HIV related disease. This syndrome represents the late clinical stage of HIV infection resulting from progressive damage to the immune system, leading to one or more of many opportunistic infections and cancers of which bacterial pneumonia is one of the common presentations.

Symptoms of acute HIV infection, while difficult to diagnose and non-specific, may include fever, arthralgia or myalgia, rash, lymphadenopathy, sore throat, fatigue, headache, oral ulcers and or genital ulcers, weight loss, nausea, vomiting or diarrhea. Acute symptoms, if present, occur two to four weeks after the initial infection and last from one to two weeks or as long as several months. The time from HIV infection to diagnosis of AIDS has an observed range of less than one year to 15 years or longer.

#### **How is HIV/AIDS Transmitted?**

HIV is transmitted through unprotected sexual intercourse with an infected partner, vertical (mother-to-child) transmission during pregnancy or birth and possibly through breastfeeding and through exposure to infected blood/blood products. Through epidemiologic evidence, only blood, semen, vaginal secretions and possibly breast milk have been implicated in transmission. HIV can only be passed on if a sufficient concentration of the virus enters the bloodstream. HIV is not highly contagious and is very fragile outside the body. The virus can be easily destroyed with drying heat, chlorine bleach, rubbing alcohol, hydrogen peroxide, etc.

#### **HBV, HCV AND HIV/AIDS PREVENTION IN THE WORKPLACE**

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##### **Blood borne Pathogen (BBP) Occupational Exposure Risk**

HBV is transmitted more easily than HIV in the health care setting. After a needle-stick injury from a needle contaminated with HBV, there is a 6-30% chance that an exposed susceptible person will be infected. In a similar situation with HIV, there is a 0.3% risk of infection. Occupational acquisition of HCV infection after exposure is approximately 1.8%.

**HBV is a vaccine-preventable disease** and HBV vaccine has been widely available since 1983. The vaccine is safe and effective, and immunization should be initiated at the earliest opportunity for all persons who may have occupational exposure to HBV (see Immunization below).

##### **HBV Immunization**

Susceptible staff that has the potential for exposure to the blood and/or body fluids of residents will be encouraged to receive the hepatitis B vaccine. This should include staff that may not be in



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direct contact with residents or gross blood, but may be at risk for sharps injuries (e.g., laundry, housekeeping, etc.). Immunization is the primary method of preventing the transmission of HBV. For all full time staff, the vaccine may be covered by the Employee Benefits Plan. For all part time staff, the vaccine is available through Elgin St. Thomas Public Health. For students and agency workers, the facility should ensure that the supplying school or agency accepts responsibility for their immunization.

### **BLOODBORNE INFECTION PREVENTION PROGRAM**

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- **Surveillance/Screening:**
  - Residents will not be screened for HBV, HCV or HIV on admission to the home. All blood and body fluids should be considered potentially infectious.
  - A known positive resident will have a red logo placed on the visual care plan over their bed and on the spine of their chart to indicate an infectious disease exists.
- **Routine practices** should be used to prevent exposure to blood and body fluids. Refer to policy and procedure “Infection Control 2.2 a) Routine Practices and 2.2 b) Routine Practices -Additional Precautions”.
  - Wash hands before and after all contact with residents or their blood/body fluids.
  - Cover open skin, lesions on hands or forearms with a dry dressing at all times while at work. If hand hygiene is impeded by dressing, consult with supervisor.
  - Wash all body surfaces exposed to blood or body fluids with soap and water as soon as possible after contact.
  - Use personal protective equipment (i.e. goggles, mask or face shield and a gown during any procedure where droplets of blood or other body fluids may be produced).
  - Do not allow sharing of razors, nail clippers and toothbrushes among residents.
  - Clean and disinfect equipment and potentially contaminated or contaminated surfaces after use with approved disinfectant or a 1:10 solution of household bleach.
  - Place materials soiled with blood or body fluids in leak-proof, appropriately labelled waste bags/containers.
- **Prevent needle-stick injuries:**
  - Use safety-engineered needles.
  - Do not recap used needles. Immediately dispose of needles and other single-use sharps after they are used into a designated puncture-resistant container that is easily accessible at the point-of-care.



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- Do not over fill sharps containers. Remove the sharps container from use and seal when the fill line has been reached
- **Glucose monitoring:**
  - Single-use, auto-disabling finger-stick blood sampling devices are preferred in LTC.
  - Lancet devices should never be used on more than one resident and glucose monitors should preferably also be used on only one resident. Glucometers should never be shared as Hepatitis C can be found in microscopic blood that remains on the device after use.

### **PRE-PLACEMENT**

Most persons infected with HBV, HCV or HIV can work safely with residents without risk of transmission of the virus, as long as reasonable precautions are taken. No routine screening of persons carrying on activities in the facility is needed. Transmission of HBV, HCV and HIV from HCWs to patients has been documented. This emphasizes the need for compliance with precautions and primary prevention. Susceptible HCWs who have the potential for exposure to the blood and/or body fluids of patients must be protected by hepatitis B vaccination. This should include HCWs who may not be in direct contact with patients or gross blood, but may be at risk for sharps injuries (e.g., laundry, housekeeping). For students and agency workers, the facility should ensure that the supplying school or agency accepts responsibility for their immunization. Refusal of immunization should be documented in the HCW's health record.

### **CONTINUING SURVEILLANCE**

No routine ongoing serologic screening of any persons carrying on activities in the facility is needed.

### **REPORTING AND FOLLOW-UP EXPOSURE:**

Employees must report all incidents of exposure to contaminated or potentially contaminated blood or body fluids to their supervisor. The employer must keep appropriate records of employee's exposures, and follow up as per policy Infection Control policy 4.3 Sharps Injury or Mucosal Exposure to Blood or Bodily Fluids.

**The consistent use of Routine Practices will decrease the risk of transmission between residents and staff.**



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**Refer also to infection control policies 4.19 Hepatitis B; 4.22 Hepatitis C; 4.24 HIV AIDS and 4.3 Sharps Injury or Mucosal Exposure to Blood or Bodily Fluids.**

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