



## Control Plan

Saskatoon & Area - Occupational Health & Safety

**Number:** 60-002-3

**Title:** Bloodborne Pathogens

**Saskatchewan Employment Act:**

**OHS Regulation:** 85

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### Purpose

Saskatchewan Health Authority – Saskatoon & Area is committed to providing a safe and healthy workplace for all SHA- Saskatoon & Area workers. In pursuit of this goal, the following exposure control plan is provided to eliminate or minimize occupational exposure to bloodborne pathogens (BBP) in accordance with the Saskatchewan Employment Acts and OHS Regulations, 1996, Regulation 85.

### 1. Definitions

**Bloodborne Pathogens** - pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV)

**Decontaminate** - the use of physical or chemical means to remove, inactivate, or destroy BBPs on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal

**Engineering Controls** - controls that isolate or remove the BBPs hazards from the workplace (e.g. safety engineered sharp devices, sharps containers, needless IV systems, blunt needles, plastic capillary tubes)

**Exposed Person** – the person who came in contact with another person’s blood or body fluids (BBF)

### Exposure

1. The fluid the person was exposed to is capable of transmitting BBP

AND

2. The fluid contacted the exposed person in such a way that would allow for transmission of BBP:

a. an object with the body fluid punctured or broke the skin of the exposed person

OR

b. the fluid came in contact with mucous membrane of the exposed person (e.g. occupational – splashes into eye, mouth or onto broken skin or non occupational – sexual exposure)

**Occupational Exposure** - percutaneous injury from equipment contaminated with BBFs, or mucous membrane or non-intact skin contact with BBFs

**Percutaneous Injury** – BBFs from one person is potentially introduced into the bloodstream of another person through the skin via needlestick, tattooing, body piercing, electrolysis, acupuncture, or other sharps injury

**Per mucosal Exposure** – BBFs from one person is introduced into the bloodstream of another person through contact with mucous membranes lining body cavities such as the eyes, nose, mouth, vagina, rectum and urethra

**Routine Practices (Standard Precautions)** – Routine Practices are interventions implemented to reduce the risk of transmission of recognized and unrecognized microorganisms from client to client, client to health care workers (HCWs) and HCW to client. Routine Practices apply to all clients regardless of their diagnosis or presumed infection status

**Principles of Routine Practices include:**

- Protecting clients and HCWs and everyone in the health care facility from transmission of potential harmful infection
- Considering all blood, body fluids, secretions, excretions, drainage, and tissues of all clients potentially infective
- Conducting a Point of Care Risk Assessment (POCRA) to determine the precautions required when providing care

**Routine Practices include:**

1. Hand hygiene
2. Point of Care Risk Assessment
3. Use of Personal Protective Equipment (PPE) – (gloves, mask/respiratory/eye protection, face shields and gowns) when splashes or sprays of blood, body fluids, secretions, or excretions are possible or when transmission of microorganisms are possible from contaminated items or surfaces
4. Respiratory hygiene (cough etiquette)
5. Environmental Controls – cleaning and disinfection of client care equipment, physical environment and soiled linen and patient placement/accommodation

**Source Person** – the individual whose BBFs came in contact with another person

**2. Identification of at Risk Workers:**

- Physicians
- Nursing
- Surgical
- Laboratory
- Morgue
- Sterile Processing Distribution (staff responsible for cleaning/disinfecting contaminated instruments)
- Housekeeping
- Laundry
- Security
- Maintenance
- Food & Nutrition
- Therapies: Occupational Therapy, Physical Therapy, Social Work, Speech Language Therapy
- Respiratory Therapy
- Perfusionists
- Diagnostic Imaging
- Nuclear Medicine
- Clinical Engineering
- Students working within the SHA – Saskatoon & Area facilities

### 3. Identification of At Risk Tasks and Procedures

- Surgical procedures involving scalpels or other sharps
- Medication administration (e.g. Intramuscular (IM), subcutaneous (SC), intravenous (IV))
- Suctioning, irrigation, instillation of solutions (wound, trach, oral-pharyngeal)
- Wound care (dressing changes, debriding, etc.)
- Handling, disposal of biohazardous materials and sharps
- Trauma, resuscitations
- Suturing
- Phlebotomy, blood collection, specimen collection
- Drainage devices
- Contaminated linen
- Cleaning up BBF spills
- Repair and maintenance of plumbing which may be contaminated with BBFs
- Working with violent clients
- Handling patient food trays
- Disposal of/cleaning up of sharps
- Handling contaminants, soiled/exposed materials

### 4. Bloodborne Pathogen Overview

#### Fluids and tissues capable of transmitting bloodborne pathogens<sup>1</sup>

| FLUID   | HIV                                | HBV  | HCV   |
|---|------------------------------------|--|---|
| Lab specimens containing concentrated HIV, HBV or HCV                           | Yes                                | Yes  | Yes   |
| Blood, serum, plasma or other biological fluids visibly contaminated with blood | Yes                                | Yes  | Yes   |
| Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids   | Yes                                | Yes  | Yes   |
| Semen, vaginal secretions   | Yes                                | Yes  | Yes   |
| Saliva  | No, unless contaminated with blood | Yes  | No, unless contaminated with blood                                      |
| Breast milk   | Yes                                | Biologically plausible, particularly if nipples are cracked or bleeding or if mother is HBeAg positive | Biologically plausible, particularly if nipples are cracked or bleeding |
| Organ and tissue transplants  | Yes                                | Yes  | Yes   |
| Screened donated blood & manufactured blood products                            | Minimal risk in Canada             | Minimal risk in Canada   | Minimal risk in Canada  |

<sup>1</sup> Government of Saskatchewan, 2014

## **A) Hepatitis B Virus<sup>2</sup>**

- Is a vaccine – preventable disease
- Is a liver disease caused by the HBV
- Is far more infectious than HIV
- People who have not been vaccinated may be at risk of getting infected
- About 95 percent of adults will recover within 6 months of becoming infected (acute hepatitis B) and as a result will develop lifelong protection against it. The remaining 5 percent are unable to clear the virus and will become chronically infected
- Chronic hepatitis B infection is treatable

### **Mode of Transmission<sup>3</sup>**

- Routes of transmission through percutaneous and mucosal exposure to infected blood, body fluids and blood products. Includes sexual contact, percutaneous exposure (e.g. needle stick, intravenous injection or glucose monitoring using non sterile or shared equipment or devices), permucosal exposure and perinatal transmission, unfixed tissues and organs
- Perinatal transmission is highly efficient and usually occurs from blood exposures during labor and delivery
- Interpersonal contact with chronically infected persons within households over extended periods of times. Can include: sharing of razors/toothbrushes, contact with non-intact skin, open skin lesions and mucous membranes with bloody secretions

### **Incubation Period<sup>4</sup>**

- 45 – 180 days, with an average of 60 – 90 days

### **Period of Communicability<sup>5</sup>**

- All persons who are Hepatitis B Surface Antigen (HBsAg) positive are potentially infectious, from several weeks before first onset of symptoms until infection is resolved (HBsAg negative)

### **Signs and Symptoms<sup>6</sup>**

You may have hepatitis B and not have any signs or symptoms. About half of the people infected with HBV don't develop any symptoms until their liver has already been damaged.

### **Symptoms of HBV infection can include some or all of the following:**

- Fatigue
- Loss of appetite
- Fever
- Nausea
- Vomiting
- Dark urine
- Pale stools
- Stomach pain
- Joint pain
- Jaundice (yellowing of the skin and eyes)

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<sup>2</sup> Government of Canada, 2014

<sup>3</sup> Government of Saskatchewan, 2014

<sup>4</sup> Government of Saskatchewan, 2014

<sup>5</sup> Government of Saskatchewan, 2014

<sup>6</sup> Government of Canada, 2014

### **Survival Outside of Host<sup>7</sup>**

- HBV is stable on environmental surfaces in blood for at least 7 days making indirect transmission from objects contaminated with infected blood possible

### **Susceptibility to Disinfectants<sup>8</sup>**

- Hepatitis B is effectively disinfected with the use of Accel Intervention Wipe

### **Hepatitis C Virus<sup>9</sup>**

- Is not a vaccine-preventable disease
- Is a liver disease caused by the HCV

### **Mode of Transmission<sup>10</sup>**

- HCV is primarily transmitted through parenteral exposure to HCV infected blood
- Transmission is most efficient through large or repeated percutaneous exposures to blood such as transfusion of blood from unscreened donors or through injection drug use
- The risk of vertical transmission has been estimated to be between 1 to 6% and only from women who are HCV RNA positive at time of delivery
- Although less efficient, occupational and sexual exposures can also result in transmission of HCV

### **Incubation Period<sup>11</sup>**

- Ranges from 2 weeks to 6 months with an average of 6 to 9 weeks

### **Period of Communicability<sup>12</sup>**

- From one or more weeks before onset of the first symptoms; may persist in most persons indefinitely

### **Signs and Symptoms<sup>13</sup>**

You may have HCV and not have any signs or symptoms. About 60% to 70% of people with HCV do not develop symptoms until their liver has already been damaged.

#### **For those who do have symptoms, you may experience:**

- Fever
- Tiredness
- Joint pain
- Dark urine
- Pale feces
- Stomach pain
- Loss of appetite
- Nausea and vomiting
- Jaundice (yellowing of the skin and eyes)

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<sup>7</sup> Government of Saskatchewan, 2014

<sup>8</sup> Diversey Accel Intervention Wipes, 2016

<sup>9</sup> Government of Canada, 2016

<sup>10</sup> Government of Saskatchewan, 2014

<sup>11</sup> Government of Saskatchewan, 2014

<sup>12</sup> Government of Saskatchewan, 2014

<sup>13</sup> Government of Canada, 2016

HCV can lead to liver damage, as it causes swelling (inflammation). This swelling causes scarring (fibrosis) of the liver, which affects how the organ functions.

Liver scarring can worsen (called cirrhosis). This increases your chances of getting liver cancer.

#### **Survival Outside of Host**<sup>14</sup>

- HCV is relatively unstable; however, in plasma it can survive drying and environmental exposure to room temperature for at least 16 hours

#### **Susceptibility to Disinfectants**<sup>15</sup>

- Hepatitis C is effectively disinfected with the use of Accel Intervention Wipes

#### **Human Immunodeficiency Virus**<sup>16</sup>

- HIV infection is caused by a virus that attacks the body's immune system, making it unable to fight off certain infections. If the virus goes untreated, it can progress to AIDS
- Is not a vaccine-preventable disease

#### **Mode of Transmission**<sup>17</sup>

- Transmission of HIV infection occurs essentially through specific exposure to blood and/or body fluids from an HIV-infected person
- The risk of transmission decreases when the infected person is effectively responding to treatment
- In order to be infected, the virus must have an entry point, most directly through a person's bloodstream or mucous membranes (HIV cannot survive outside the body)

#### **HIV is transmitted from one person to another through:**

- Unprotected sexual intercourse (vaginal, anal or oral)
- Shared needles or equipment for injecting drugs
- Unsterilized needles and/or equipment for tattooing, skin piercing or acupuncture
- Pregnancy, delivery and breast feeding (i.e., from an HIV-infected mother to her infant)
- Occupational exposures in health care or other high risk settings
- In HIV/AIDS research, the seroconversion period refers to the period of time it usually takes to develop detectable antibodies to HIV following infection with HIV. In 75% of persons, antibodies are produced in 4 to 8 weeks; in almost all persons, antibodies are produced within 14 weeks.

#### **Incubation Period**<sup>18</sup>

- The incubation period varies on each individual's ability to develop antibodies to HIV
- Up to 90% of individuals experience symptoms within 2-4 weeks after infection

#### **Period of Communicability**<sup>19</sup>

- Communicability begins early after infection and extends throughout the individual's lifespan
- Infectiousness is related to an individual's HIV viral load (i.e., high viral load increases potential for transmission)
- The presence of sexually transmitted infections (STIs) can increase HIV viral load in genital secretions
- Although antiretroviral drugs can reduce HIV viral loads in blood and genital secretions, individuals on drug therapy should still be considered infectious

#### **Signs and Symptoms**<sup>20</sup>

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<sup>14</sup> Government of Canada, 2010

<sup>15</sup> Diversey Accel Intervention Wipes, 2016

<sup>16</sup> Government of Canada, 2015

<sup>17</sup> Government of Saskatchewan, 2015

<sup>18</sup> Government of Saskatchewan, 2015

<sup>19</sup> Government of Saskatchewan, 2015

Some people may not develop any symptoms immediately after being infected with HIV. You may develop mild flu-like symptoms 2 to 4 weeks after becoming infected with HIV.

**Common early symptoms include:**

- Fever
- Sore throat
- Headache
- Muscle aches
- Joint pain
- Swollen glands (lymph nodes)

**Survival Outside of Host**<sup>21</sup>

- HIV can remain viable in blood in syringes at room temperature for 42 days and in blood and cerebrospinal fluid from autopsies for up to 11 days
- Although drying in the environment is known to cause a rapid reduction in HIV concentration, under experimental conditions, cell-free HIV dried onto a glass coverslip in 10% serum can survive for longer than 7 days, depending on the initial titre

**Susceptibility to Disinfectants**<sup>22</sup>

- Human Immunodeficiency Virus is effectively disinfected with the use of Accel Intervention Wipes

**5. Infection Control Measures**

**A) Hand Hygiene**<sup>23</sup>

- If hands are not visibly soiled, perform hand hygiene with alcohol-based hand rub (ABHR) as the preferred method of hand hygiene

**Circumstances when hands must be cleansed thoroughly with liquid hand soap and water:**

- When ABHR is not available
- When hands are visibly soiled
- When a client has diarrhea of unknown cause
- When a client has Clostridium difficile
- When performing an invasive procedure (i.e., when placing a central intravascular catheter, injecting into the spinal canal or subdural spaces, inserting urinary catheter etc.)

**In healthcare settings, there are four moments to perform hand hygiene:**

- Before initial client/client environment contact (Moment 1)
- Before aseptic procedures (i.e., insertion of IVs, dressing changes, insertion of urinary catheters, handling medications, etc.) (Moment 2)
- After body fluid exposure (Moment 3)
- After client/client environment contact (Moment 4)

**B) Vaccination**

**Hepatitis B**

- Hepatitis B vaccination is the best way to protect yourself against becoming infected<sup>24</sup>
- The hepatitis B vaccination series is available at no cost to all SHA – Saskatoon & Area workers

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<sup>20</sup> Government of Canada, 2015

<sup>21</sup> Government of Canada, 2016

<sup>22</sup> Diversey Accel Intervention Wipes, 2016

<sup>23</sup> SHA – Saskatoon & Area Infection Prevention & Control Manual, 2014

<sup>24</sup> Government of Canada, 2014

- Workers that decline the vaccination must sign a declination. Workers who decline may request and obtain the vaccination at a later date at no cost to them. Documentation of refusal of the vaccinations is kept in the OHS Parklane database
- All SHA – Saskatoon & Area workers that have completed their Hepatitis B vaccine series, are recommended to have Hepatitis B surface Antibody serological testing completed to determine if they have developed protective antibodies to hepatitis B
- SHA – Saskatoon & Area workers that do not have protective antibodies to hepatitis B are informed and a booster dose of hepatitis B vaccine is recommended as per the *'Medical Directive – 011 Saskatchewan Health Authority – Saskatoon & Area Occupational Health & Safety Vaccine Administration – Hepatitis B'*
- Although the majority of persons vaccinated against hepatitis B successfully respond to vaccination, an estimated 5-15% of persons may not respond due to older age, obesity, smoking, and other chronic illness<sup>25</sup>, these individuals would be considered a Hepatitis B vaccine non-responder
- Hepatitis B vaccine non-responders do not have any protection against the hepatitis B virus and are unlikely to benefit from further immunization and should be counselled on alternative risk reduction measures
- SHA – Saskatoon & Area OHS notifies workers via letter if they are found to be a hepatitis B vaccine non-responder
- Hepatitis B vaccine non-responder status is documented in the OHS Parklane database

#### **Hepatitis C**<sup>26</sup>

- There is no vaccine available for the prevention of hepatitis C

#### **Human Immunodeficiency Virus**<sup>27</sup>

- There is no immunization available for the prevention of HIV infection

### **C) Post Exposure Prophylaxis**

#### **Hepatitis B**

- The Emergency Department Physician will determine if Hepatitis B Immune Globulin (HBIG) is recommended
- If HBIG is indicated, it is recommended that it be provided within 48 hours after an exposure
- The efficacy of HBIG decreases significantly after 48 hours but may be given up to 7 days after exposure<sup>28</sup>

#### **Hepatitis C**<sup>29</sup>

- None available

#### **Human Immunodeficiency Virus**<sup>30</sup>

- The Emergency Department Physician/Infectious Disease Physician will determine if HIV Post Exposure Prophylaxis (PEP) is recommended
- If HIV PEP is indicated, it is recommended the antiretroviral therapy medications be initiated as soon as possible, preferably within 2 hours of the exposure
- Early use of antiretroviral therapy (ART) can prevent infection with HIV
- Antiretroviral therapy can reduce the risk of transmission by 86%
- A multi-drug regime is used to increase protection and overcome the risk of the source virus being resistant to one of the HIV PEP medications.
- Antiretroviral therapy taken for 28 days is considered to have few long-term side effects despite the morbidity in the short term and rare mortality

<sup>25</sup> Hepatitis B Foundation, 2018

<sup>26</sup> Government of Saskatchewan, 2014

<sup>27</sup> Government of Saskatchewan, 2015

<sup>28</sup> Government of Saskatchewan, 2013

<sup>29</sup> Government of Saskatchewan, 2014

<sup>30</sup> Government of Saskatchewan, 2013s

- If HIV PEP is taken and HIV infection still occurs, the early use of antiretrovirals may favorably alter the course of subsequent infection

#### **D) Engineering Controls**

Are important in eliminating or minimizing worker exposure to BBP, and reduce worker exposure in the workplace by either removing or isolating the hazard or isolating the worker from exposure. Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

##### **Engineering Control Equipment includes:**

- Safety Engineered Sharps Devices
- Blunt suture needles
- Mechanical devices in the laboratory
- Needless intravenous systems
- Disposable resuscitation equipment
- Disposable pipette bulbs
- Autoclave
- Biological Safety Cabinet
- Sharps Containers
- Airborne Infection Isolation Rooms

##### **Additional Engineering Controls used throughout the facility include:**

- Hand washing facilities which are readily accessible to all workers who have exposure to BBFs
- ABHR as the preferred method of hand hygiene, except in the circumstance in Section 5. A (if a hand washing facility is not readily available) for those situations, use ABHR and then find the nearest hand washing sink to perform hand hygiene

#### **E) Safe Work Practices and Procedures**

- Safety engineered sharps devices are immediately activated and then placed into an appropriate sharps container
- All sharps are immediately disposed of into an appropriate sharps container
- Contaminated needles and sharps are not bent, broken, recapped, removed, sheared or purposely broken
- Eating, drinking, applying cosmetics or lip balm, smoking or handling contact lenses is prohibited in working areas where occupational exposures may occur
- Mouth pipetting/suctioning is prohibited
- Food and drink are not kept in refrigerators, freezers, shelves, cabinets or on countertops or bench tops where blood or other body fluids are present
- All procedures in which BBFs are present should be performed in such a manner as to minimize splashing, spraying, splattering and generation of droplets of these materials
- All occupational BBF exposures must be reported to the Safety Alert System or the Incident Report Line
- Sharps containers<sup>31</sup>
  - Only approved sharps containers can be used
  - Must be sturdy enough to be puncture resistant under normal conditions of use and handling
  - Should be color-coded yellow but must be labeled with the biohazard symbol and have lids that can be tightly secured
  - Sharps containers used for cytotoxic waste must also be properly labelled and identified
  - If sharps containers are to be autoclaved, they must remain functionally intact at high autoclaving temperatures

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<sup>31</sup> Saskatchewan Biomedical Waste Management Guidelines, 2008

- Must have a fill line and they should not be filled to more than three-quarters of their useable volume in order to prevent injuries due to overfilling
- Have handles that permit the safe movement of the containers before disposal
- A means by which unauthorized individuals are prevented from removing items from the container or from removing the container itself
- A design that allows stacking
- A means that allows the container to be attached to medications carts, treatment carts or in ambulance or other mobile applications
- Should be conveniently located close to the point of use to reduce the likelihood of injury
- Wall-mounted or “fixed” sharps containers must be at an appropriate height for use, to allow proper viewing of the disposal slot in client and procedural rooms
- Portable sharps containers should be used when a wall-mounted container is not within close proximity to allow for point of use disposal
- Ensure that the correct type of sharps container is being used. Some IV devices such as PICC lines, needles that have long guide wires, or longer needles such as biopsy needles can be difficult to dispose of, and need deeper containers such as a 5 gallon unit
- Sharps should never be forcibly pushed into the containers
- Containers should not be filled or partially filled with a liquid disinfectant solution
- Containers must have a fixed top or lid that prevents the contents from spilling out if tipped or knocked over
- Lids should have a means of “locking” to prevent access to the contents when full

#### **F) Personal Protective Equipment**

- Where occupational exposure remains after institution of engineering controls and safe work practices, personal protective equipment is used.
- PPE is provided by the employer without cost to the worker
- SHA – Saskatoon & Area workers will use Routine Practices (Standard Precautions) which requires the use of appropriate PPE when direct contact with blood, body fluids, secretions, excretions, mucous membranes, non-intact skin and contaminated items is anticipated
- If it is likely that a SHA – Saskatoon & Area worker may be exposed to a client’s BBF, they must wear the appropriate PPE such as: gloves, visor mask or full face shield and mask, gowns

#### **Gloves**<sup>32</sup>

- SHA – Saskatoon & Area workers will wear gloves when there is the potential for hands to come into direct contact with BBFs (open lesions should be covered by an occlusive water-proof bandage)
- SHA – Saskatoon & Area workers will select their gloves based on the type of procedure being done, likelihood of exposure to body fluid, length of use and amount of stress on the glove
- Gloves are a single use only item
- Hand hygiene must be performed before and after the use of gloves

#### **Visor mask or full face shield with a mask or N95 single use disposable respirator (Airborne Precautions)**

- SHA – Saskatoon & Area workers will wear the visor mask when there is a potential for a splash or spray of BBFs
- An acceptable alternative to the visor mask is a full face shield with a mask or N95 single use disposable respirator (Airborne Precautions)
- Visor mask or full face shield with a mask/N95 respirators are single use only items

#### **Gowns**<sup>33</sup>

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<sup>32</sup> SHA – Saskatoon & Area Infection Prevention & Control Manual, 2006

- SHA – Saskatoon & Area workers will wear gowns when there is the potential for clothing to be soiled with BBFs
- SHA – Saskatoon & Area workers will select a gown that is appropriate for the activity and amount of fluid likely to be encountered
- Long-sleeved gowns serve to protect the forearms and clothing of the worker from splashing and soiling with body substances
- Use fluid resistant gowns or plastic aprons if soiling of clothes is likely
- Gowns are a single use only item

#### **G) Routine Practices (Standard Precautions) <sup>34</sup>**

- Interventions implemented to reduce the risk of transmission of microorganisms from client to client, client to health care worker and health care worker to client
- Should be appropriate for the procedure being performed and the type of exposure anticipated
- Apply to all clients receiving care regardless of their diagnosis or presume infection status

#### **Routine Practices (Standard Precautions) apply to:**

- Blood
- All body fluids, secretion and excretions (except sweat) regardless of whether or not they contain visible blood
- Non-intact skin
- Mucous membranes

#### **H) Point of Care Risk Assessment (POCRA) <sup>35</sup>**

- This is a systematic process of reviewing work activities, evaluating the possible hazards/risks and implementing suitable control measures to eliminate, reduce or minimize these hazards/risks
- Part of basic Routine Practices (Standard Precautions) that are used with all clients at all times to reduce the risk of transmission of microorganisms to and from the client or their environment
- Must be completed before each interaction with a client and their environment in acute care, long term care, and in the community throughout SHA – Saskatoon & Area
- Appropriate PPE must be worn for the type of hazard/risk identified

### **6. Limitations of Infection Control Measures**

- Unsafe work practices
- Lack of on-the-job training
- Rushing, fatigue, frustration, and complacency
- Safety Engineered Safety Devices not being used or used improperly
- Sharps containers not positioned at the point of use
- Sharps containers of the wrong size or type
- PPE not worn
- ABHR and hand washing sinks not always being readily accessible

### **7. Blood or Body Fluid Spill Management <sup>36</sup>**

- Spills should be cleaned up immediately
- Appropriate PPE should be worn for cleaning up a spill. Gloves should be worn. If the possibility of splashing exists, a visor mask or face shield with mask and gown and shoe covers should be worn

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<sup>33</sup> SHA – Saskatoon & Area Infection Prevention & Control Manual, 2006

<sup>34</sup> SHA – Saskatoon & Area Infection Prevention & Control Manual, 2006

<sup>35</sup> SHA – Saskatoon & Area Infection Prevention & Control Manual, 2010

<sup>36</sup> SHA – Saskatoon & Area Infection Prevention & Control Manual, 2007

- The blood spill area must be cleaned of organic matter (BBFs) first with paper towels
- After the area is cleaned it should be decontaminated with a hospital-grade disinfectant (i.e. Accelerated Hydrogen Peroxide wipes)
- The hospital-grade disinfectant needs to remain wet on the surface being disinfected for the time recommended by the manufacturer for proper disinfection to occur

#### **For spills containing large amounts of blood or body fluid**

- Wear appropriate PPE such as: visor mask or full face shield with mask, gown, gloves and shoe covers
- Remove the visible blood/body fluid with an absorbent material (i.e. disposable paper towels) and discard into biohazardous waster container
- Then clean and disinfect the area with a hospital-grade disinfectant

### **8. BBF Exposure Management**<sup>37</sup>

In the event of a BBF Exposure, or if the worker is unsure if a BBF exposure has occurred, the worker will:

- Review the ['SHA – Saskatoon & Area Staff Blood or Body Fluid Exposure Assessment Tool'](#)

#### **Step 1: Determine if a BBF Exposure has occurred**

The fluid contacted the exposed person in such a way that would allow for transmission of a BBP such as:

- An object with the body fluid punctured or broke the skin of the exposed person (e.g., needle stick or cut with a sharp object)  
OR
- The fluid came in contact with the mucous membrane (splashes into eyes, nose, or mouth) of the exposed person or onto non-intact skin (e.g., chapped, abraded or afflicted with dermatitis, etc.)

#### **Step 2: Determine if the fluid is capable of transmitting a BBP**

These fluid(s)/tissue are capable of transmitting a BBP:

- Lab specimens containing concentrated HIV, HBV or HCV
- Blood serum, plasma or other biological fluids visibly contaminated with blood
- Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids, semen and vaginal secretions
- Saliva (HBV)
- Breast milk
- Organ and tissue transplants
- Screened donated blood and manufactured blood products (minimal risk in Canada)

**These fluids(s) are not capable of transmitting a BBP** (unless they contain visible blood)

- Tears, vomit, urine, feces

#### **Step 3: Complete First Aid Action and notify your manager/supervisor**

##### **Needle poke/sharps puncture/human bite:**

- Quickly remove gloves or clothing to determine any injury to the hand(s) or affected body area
- Allow injury to bleed
- Wash the injured area well with soap and water

##### **Splash to eyes/nose/mouth/non-intact skin:**

- Flush area well with running water
- For eye splashes, use the nearest eye wash station for 15 minutes

**Step 4: Report immediately to the nearest open Emergency Department for BBF exposure assessment if the incident is deemed a BBF exposure**

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<sup>37</sup> SHA –Saskatoon & Area Staff Blood or Body Fluid Exposure Assessment Tool

**Step 5: Call the SHA – Saskatoon & Area Safety Alert System (SAS)/Incident Report Line (IRL) to report your incident as a BBF Exposure after you have been assessed in the Emergency Department**

SHA- Saskatoon & Area SAS Contact Numbers

Saskatoon: 306-655-1600

Rural (Toll-Free): 1-844-655-1600

SHA- Saskatoon & Area IRL Contact Numbers

Saskatoon: 306-655-0820

Rural (Toll-Free): 1-866-966-0820

## **9. Cleaning/Disinfecting/Disposal**

### **Personal Protective Equipment**

- Wash hands immediately after removing gloves or other PPE
- Remove PPE after it becomes contaminated and before leaving the work area
- Used PPE may be disposed of in the regular garbage unless it is saturated and/or dripping with BBFs in which case it should be disposed into a yellow container or plastic bag
- PPE that is identified as single use is disposed of immediately after use, as identified above

### **Linen<sup>38</sup>**

#### **Collection and handling**

- Handle linen with a minimum of agitation and shaking
- Sorting and rinsing of linen should not occur in patient care areas, except in facilities that use compartmented soiled linen bag carts into which different types of linen are sorted
- Heavily soiled linen should be rolled or folded to contain the heaviest soil in the center of the bundle. Large amounts of solid soil, feces or blood clots should be removed from linen with a gloved hand and toilet tissue and placed into a bed pan or toilet for flushing. Excrement should not be removed by spraying with water

#### **Bagging and containment**

- Soiled linen should be bagged at the site of collection
- To prevent contamination or soaking through, a single, leak proof bag or a single cloth bag can be used. The only indication for a second outer bag is to contain a leaking inner bag
- Bags should be tied securely and not overfilled when transported

#### **Transport**

- When a laundry chute is used, all linen should be bagged. The chute should discharge into the soiled linen collection area. Laundry chutes should be cleaned on a regular basis with a germicide solution
- Separate carts should be used for dirty and clean linens. Carts used to transport soiled linens should be cleaned with a germicide after each use
- Clean linen should be transported and stored in a manner that prevents its contamination and ensures its cleanliness

#### **Washing and drying**

- If low temperature water is used for laundry cycles, chemicals suitable for low temperature washing at the appropriate concentration should be used
- High temperature (>71.1<sup>o</sup>) are necessary if cold water detergents are not used
- Use of a laundry detergent with bleach and a normal machine wash and dry are sufficient to clean soiled linen in areas with their own washer and dryer

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<sup>38</sup> SHA- Saskatoon & Area Infection Prevention and Control Manual, 2006

## **Waste Management**<sup>39</sup>

### **Waste Segregation**

All waste shall be:

- Segregated at the point of generation
- Contained in packaging that holds the contents until the point of disposal
- Disposed of in a manner that is practical and efficient, yet minimizes hazards

**General Waste** (Black, Green or Clear Bag) means waste that does not pose a disease-related risk or threat to people or the environment.

#### **The general waste category includes:**

- Office waste
- Kitchen waste
- Waste without BBF, or contains only a trace amount of blood in diluted form i.e. suction liners, IV bags and tubings, urinary drainage systems, incontinent pads, gloves, rinsed hemodialysis tubing, peritoneal dialysis tubing
- Extracted teeth
- Nail clippings
- Hair
- Animal waste and bedding, that is non-pathogenic all other waste not included in other categories

Items that have only scant/trace amounts of blood, exudates or secretions do not require segregation, labeling or special transport and disposal procedures

### **Biomedical Waste**

Refers to a portion of medical wastes that require special precautions due to the waste being:

- a) Infectious
- b) Sharps
- c) Cytotoxic
- d) Especially sensitive due to the nature of the waste (i.e., human body parts)

This category represents only a small portion of the total waste generated but it is important that this waste be handled and disposed of properly due to the environmental, aesthetic and occupational concerns as well as risks to human health.

#### **The biomedical waste includes:**

- **Human Blood and Body Fluid Waste** (Yellow Bag). This consists of items with more than scant/trace amounts of blood and body fluids removed for diagnosis during surgery, treatment or autopsy. This does not include urine or feces
- **Waste Sharps** (Yellow Bins). Waste sharps are clinical and laboratory materials consisting of needles, syringes, blades or laboratory glass, broken culture dishes, medical glassware, broken blood tubes and any other material capable of causing punctures or cuts that can penetrate skin or plastic disposal bags
- **Human Anatomical Waste** (Red Bag or Recognized Symbol). This consists of human tissues, organs, and body parts (e.g. placentas, limbs, organs, tissues) but does not include teeth, hair and nails
- **Microbiology Laboratory Waste** (Yellow Bag). This consists of laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human or animal cell cultures used in research and laboratory material that has come into contact with any of these aforementioned items

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<sup>39</sup> Saskatoon Health Region, 2013

- **Animal Biomedical Waste** (Orange or Red bag) Waste that contains or is suspected of containing a pathogen that consists of animal tissues, organs, body parts, carcasses, bedding, fluid blood and blood products, items saturated or dripping with blood, body fluids contaminated

Items contaminated with more than scant/trace amounts of blood/body fluids or secretions need to be treated as biomedical waste. If in doubt treat as biomedical waste.

#### **Non Critical Patient Care Equipment**<sup>40</sup>

- Clean and disinfect reusable equipment that has been in direct contact with the patient before use in the care of another patient
- Establish procedures/schedules for assigning responsibility and accountability for routine cleaning and disinfection of all patient care equipment. Documentation is to be completed when equipment has been cleaned and disinfected
- Train a designated person to do cleaning and disinfection. This person will be trained in use of appropriate protective barriers and cleaning, handling of cleaning supplies and equipment in a safe manner
- Clean and disinfect reusable equipment in a designated area. This area is to be separated from the areas where clean or sterile equipment is stored
- Some reusable equipment may require high-level or sterile reprocessing in a designated Medical Device Reprocessing department. Follow manufacturer's instructions for type of disinfection/reprocessing required for each piece of reusable equipment

#### **10. Training**

- All staff to review the 'SHA – Saskatoon & Area Staff Blood or Body Fluid Exposure Assessment Tool' on an annual basis
- All SHA – Saskatoon & Area workers to receive annual education and training on Blood and Body Fluid Exposure management
- Annual education and training can be completed through the E-learning, OHS Department, BBF presentation

#### **Materials**

- [SHA – Saskatoon & Area Staff Blood or Body Fluid Exposure Assessment Tool](#)
- E-Learning Site, OHS, BBF presentation available here:  
<https://learning-saskatoonhealthregion.ca/course/index.php?categoryid=9>

#### **11. Documentation**

SHA – Saskatoon & Area workers shall report all BBF exposures or BBF near miss incidents to the SHA – Saskatoon & Area SAS/IRL

#### **SHA – Saskatoon & Area worker BBF records shall include:**

- The worker's name and Provincial Health Number
- Hepatitis B vaccination status, including the dates of all the Hepatitis B vaccinations
- Date of the injury
- Type and brand of the device involved
- Department or work area where the incident occurred
- Explanation of the incident occurred
- SHA – Saskatoon & Area worker's confidentiality is maintained
- SHA – Saskatoon & Area worker's incident report will be maintained in the SHA – Saskatoon & Area OHS Parklane database

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<sup>40</sup> SHA – Saskatoon & Area Infection Prevention and Control Manual, 2012

## 12. Investigation

### SHA – Saskatoon & Area OHS will <sup>41</sup>

- Receive all Exposure Incident Report Forms for SHA – Saskatoon & Area workers that experienced an occupational exposure
- Track occupational exposures and do a root cause analysis and implement measures to prevent future incidents, maintaining confidentiality for the exposed worker
- Provide workers with support and counselling as appropriate
- Ensure follow-up tests for the worker are conducted in partnership with their family physician
- Ensure workers have access to pre-exposure hepatitis B immunization
- Maintain worker immunization records including Hepatitis B Surface Antibody test results
- Facilitate hepatitis B vaccinations for workers who were non-immune at the time of the exposure
- Provide the Regional Medical Health Officer with a summary of incidents on an annual basis (or as directed by the Regional MHO)
- Complete WCB claim form and submit to WCB (SHA – Saskatoon & Area Employee Wellness & Accommodation)
- Facilitate coverage with WCB (SHA – Saskatoon & Area Employee Wellness & Accommodation)

### **Non-Compliance/Breach:**

Non-compliance with this policy will result in a review of the incident. A review for non-compliance may result in disciplinary action, up to and including termination of employment or privileges; fines and /or prosecution of individuals under the Saskatchewan Employment Act and OHS Regulations.

Review Dates:

January 1, 2017

August 8, 2018

May 9, 2019

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<sup>41</sup> Government of Saskatchewan, 2013

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