Designated Officers Manual for Infection Prevention

REDUCING THE RISK FOR FRONT-LINE STAFF

Quick Reference Manual





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INTRODUCTION

The Notification of Emergency Service Workers Protocol was established in 1994 by the Ontario Ministry of Health and Long-Term Care. The purpose of the protocol –is to ensure emergency service workers are able to obtain appropriate advice following a possible exposure to specified infectious diseases. The Exposure of Emergency Service Workers to Infectious Diseases Protocol, 2008 replaces the previous version of this document.

The Exposure of Emergency Service Workers to Infectious Diseases Protocol, 2008 requires boards of health communicate with emergency services (i.e. police, firefighters, ambulance) in their jurisdiction and request the identification of designated officers (DO). DOs facilitate the exposure notification process.

The purpose of this protocol is to ensure:

Emergency service workers (ESWs) are notified by public health in the event that they may have been exposed to an infectious disease of public health importance, so that appropriate action can be taken.

DOs are able to obtain advice from public health regarding possible exposure(s) of ESWs to infectious diseases of public health importance.

Exposure of Emergency Service Workers to Infectious Diseases protocol, 2008 can be accessed at:

www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/exposure_emergency_service_workers.pdf

Ontario Public Health Standards 2008: Requirement

According to the Ontario Public Health Standards 2008, the board of health ensures that the medical officer of health or designate (usually public health staff) is available on a 24/7 basis to receive reports of, and respond to, infectious diseases of public health importance in accordance with the Health Protection and Promotion Act; the Mandatory Blood Testing Act; the Exposure of Emergency Service Workers to Infectious Diseases Protocol, 2008 (or as current); the Infectious Diseases Protocol, 2015 (or as current); the Institutional/Facility Outbreak Prevention and Control Protocol, 2015 (or as current); and the Public Health Emergency Preparedness Protocol, 2015 (or as current).

Ontario Public Health Standards, Revised October 2015 can be accessed at:

http://www.health.gov.on.ca/en/pro/programs/publichealth/oph standards/default.aspx

Confidentiality

The Simcoe Muskoka District Health Unit (SMDHU) adheres to privacy and information security legislative requirements and best practices.

When follow up of a potential exposure is required all DOs and SMDHU staff have/will:

- a duty to maintain confidentiality,
- limit the use and disclosure of confidential information,
- share only as much information as required to complete the follow up investigation.

"Any disclosed confidential information related to an investigation or the provision of services provided by the health unit should be treated in a confidential manner at all times."

Reportable Disease List



Simcoe Muskoka District Health Unit Communicable Disease Program

15 Sperling Drive Barrie, ON L4M 6K9

Phone: (705) 721-7520 ext 8809

After hours: 1-888-225-7851 Fax: (705) 733-7738

Communicable Disease Reporting

Timely reporting of communicable diseases is mandated and essential for their control. If you *suspect* or have confirmation of the following specified Reportable Diseases or their etiologic agents, (as per Ontario Regulation 559/91 and amendments under the *Health Protection and Promotion Act, R.S.O. c.H.7*) please report them to the local Medical Officer of Health.

REPORTABLE COMMUNICABLE DISEASES			
Note: Diseases highlighted (and influenza in institutions) should be reported immediately to the Medical Officer of Health. Other diseases can be reported by the next working day by fax, phone, or mail.			
Acquired Immunodeficiency Syndrome (AIDS) Acute flaccid paralysis (AFP)	Gonorrhoea Group A Streptococcal disease, invasive	Pertussis (Whooping Cough) Plague	
Amebiasis Anthrax	Group B Streptococcal disease, neonatal Haemophilus influenzae b disease, invasive	Pneumococcal disease, invasive Poliomyelitis, acute Psittacosis/Omithosis	
Botulism	Hantavirus pulmonary syndrome	Q Fever	
Brucellosis	Hemorrhagic fevers, including:	Rabies	
Campylobacter enteritis Chancroid	Ebola virus disease Marburg virus disease Lassa Fever	Respiratory infection outbreaks in institutions	
Chickenpox (Varicella)	4. Other viral causes	Rubella	
Chlamydia trachomatis infections Cholera	Hepatitis, viral	Rubella, congenital syndrome	
Clostridium difficile associated disease (CDAD) outbreaks in Public Hospitals	1. Hepatitis A 2. Hepatitis B 3. Hepatitis C Influenza	Salmonellosis Severe Acute Respiratory Syndrome (SARS)	
Creutzfeldt-Jakob Disease, all types Cryptosporidiosis	Legionellosis Leprosy Listeriosis	Shigellosis Smallpox Syphilis	
Cyclosporiasis	Lyme disease	Tetanus	
Diptheria Encephalitis, including: 1. Primary, viral	Malaria Measles	Trichinosis Tuberculosis	
Post-infectious Vaccine-related Subacute sclerosing panencephalitis	Meningitis, acute 1. bacterial 2. viral 3. other	Tularemia Typhoid Fever	
5. Unspecified Food poisoning, all causes	Meningococcal disease, invasive	Verotoxin-producing E. coli infection indicator conditions including, Haemolytic Uraemic Syndrome (HUS)	
Gastroenteritis, institutional outbreaks	Mumps Ophthalmia neonatorum	West Nile Virus Illness	
Giardiasis, except asymptomatic cases	Paralytic shellfish poisoning (PSP) Paratyphoid Fever	Yellow fever Yersiniosis	

For further information related to infectious diseases, please visit SMDHU's Primary Care Portal at: http://www.simcoemuskokahealth.org/JFY/PCPortal.aspx

Revised December 1, 2016

NOTIFICATION

Notification

The medical officer of health (MOH) or designate (public health staff) is available on a 24/7 basis to receive and respond to reports of infectious diseases of public health importance to ensure:

- Reports of a possible exposure of an ESW are received, assessed, and responded to as soon as possible but no later than 48 hours (depending on situation and disease, response may be required sooner) after receiving notification and
- Reports of all infectious disease of public health importance are received and assessed with particular consideration given to potential exposures of ESWs.
- If the ESW is confirmed as a contact, SMDHU staff will obtain demographic information and will contact the ESW directly providing health education and recommended actions including chemoprophylaxis (preventative treatment) if applicable.

Notification Initiated by Simcoe Muskoka District Health Unit staff

In the course of routine case management of infectious diseases, SMDHU staff may receive a report of an infectious disease where there is a concern that ESWs may have been exposed during their work. The notification of possible exposure may be received from several different sources, e.g. physicians, laboratories, infection control practitioners or other health units.

SMDHU will notify the DO of the appropriate Emergency Service Agency(s) of the possible exposure. SMDHU staff will provide the DO with enough information to assist in identifying the ESWs who attended to the patient, such as time, date of exposure and address. The type of infectious disease exposure will be disclosed.

Any disclosed confidential information related to an investigation or the provision of services provided by the health unit should be treated in a confidential manner at all times.

- Documentation of the exposure is the responsibility of the DO, and should be done on agency specific forms.
- After the DO has assessed the exposure based on the information provided by the ESW or SMDHU, the DO, in consultation with SMDHU, will determine whether the ESW could have been exposed to a specified infectious disease.
- DO to notify SMDHU of ESWs who are identified as confirmed contacts.
- Additionally, SMDHU may include assessing the possible risk of occupational exposure and setting standards of practice, discussing appropriate use of personal protective equipment and providing education to prevent possible future exposures.

Notification Initiated by a Designated Officer

When a DO reports an incident of a possible exposure to an infectious disease of public health importance, SMDHU staff will:

- Review and assess the information provided
- Contact health care facilities and other persons (e.g., infection control practitioners and/or attending physicians) to obtain additional information on the specific case, if applicable
- Inform the DO as soon as possible and no later than 48 hours after receiving notification (depending on the disease) of recommended actions
- The DO will assess the exposure based on the information provided by the ESW
- The DO will determine whether the ESW could have been exposed to a specified infectious disease
- DO to notify SMDHU of ESWs who are identified as confirmed contacts.

Notification Initiated By Emergency Service Worker

If an ESW is concerned about a possible or known exposure to an infectious disease of public health importance during their work:

- The ESW should notify a DO immediately and complete the appropriate forms (agency specific forms)
- The DO will assess the exposure based on the information provided by the ESW
- The DO will use the Infectious Diseases Quick Reference Guide For Designated Officers for information on assessment of exposure
- The DO will determine whether the ESW could have been exposed to a specified infectious disease
- DO to notify SMDHU of ESWs who are identified as confirmed contacts.

Roles and Responsibilities

Emergency Service Agency will:

- Appoint DO(s)
- Assess the risks of occupational exposure
- Set standards of practice, provide training as well as appropriate personal protective equipment (PPE)
- Document exposure and complete Workplace Safety and Insurance Board forms as required
- Advise SMDHU staff of any new appointments of DO(s).

Emergency Service Worker(s) will:

- Be aware of the risks of exposure to the specified infectious diseases and understand how to prevent or minimize the risk of exposure
- Prevent exposures by using routine practice and appropriate procedures and/or personal protective equipment
- Comply with workplace health and safety policies
- Report any possible exposure immediately to the DO.

Designated Officers(s) will:

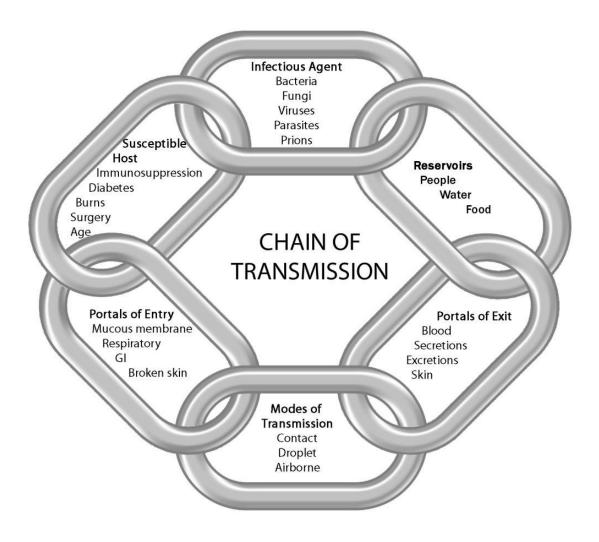
- Receive and document reports of exposure from ESW
- Assess the situation and determine if an exposure could have occurred
- Refer to Infectious Diseases Quick Reference Guide For Designated Officers or Reducing the Risk manual regarding assessment for post-exposure and recommendations for action
- Contact SMDHU if assistance is required
- Contact SMDHU and provide details of the incident, where there are ESW contacts and their demographic information.

Simcoe Muskoka District Health Unit will:

- Be available to the DOs in Simcoe Muskoka for consultation
- Review information on any reported incidents provided by a DO
- Assist the DO in assessing whether exposure may have occurred
- Provide education and counseling to the DO/ESW, including counseling on testing and chemoprophylaxis if recommended/appropriate
- Monitor reportable infectious diseases and notify contacts, including ESWs through the DO.

INFECTION PREVENTION AND CONTROL

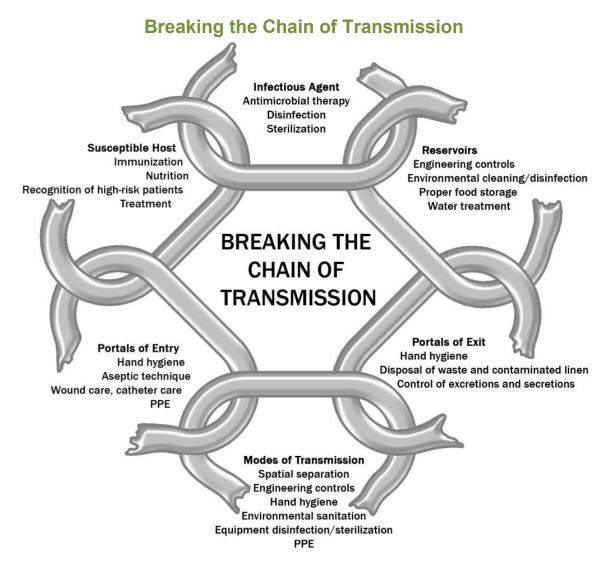
"Chain of Transmission" Infectious Disease Process



Source: Routine Practices and Additional Precautions, PIDAC, Nov. 2012

The transmission of microorganisms and subsequent infection may be likened to a "chain", with each link in the chain representing a factor related to the spread.

Transmission occurs when the <u>agent</u> in the reservoir, exits the <u>reservoir</u> through <u>a portal of exit</u>, travels via a <u>mode of transmission</u> and gains entry through a <u>portal of entry</u> to a susceptible host. Transmission does not take place unless all six of the elements in the chain of transmission are present. By eliminating any of the six links, or "breaking the chain", transmission does not occur.



Source: Routine Practices and Additional Precautions, PIDAC, Nov. 2012

Transmission may be interrupted when:

- the <u>agent</u> is eliminated or inactivated or cannot exit the reservoir;
- **portals of exit** are eliminated through safe practices;
- **transmission** between objects or people does not occur due to barriers and/or safe practices;
- portals of entry are protected; and/or
- **hosts** are not susceptible.

Routine Practices

Routine Practices are based on the premise that all clients are potentially infectious, even when asymptomatic, and that the same safe standards of practice should be used routinely with all clients to prevent exposure to blood, body fluids, secretions, excretions, mucous membranes, non-intact skin or soiled items and to prevent the spread of microorganisms.

The risk of transmission of microorganisms involves factors related to the microbe, the source client, the health care environment and the new host.

ESWs must assess the risk of exposure to blood, body fluids, secretions, excretions and non-intact skin and identify the strategies that will decrease exposure risk and prevent the transmission of microorganisms. This risk assessment, followed by the implementation of Routine Practices to reduce or remove risk, should be incorporated into the daily practice of each ESW.

Elements of Routine Practices

Risk Assessment

+

Hand Hygiene + Barrier Equipment

+

Environmental Controls + Administrative Controls

Risk Assessment

Risk assessment is the first step of Routine Practices conducted before each client interaction, and determines which interventions are required to prevent transmission of an infectious agent.

Assess the risk of exposure to blood, body fluids, secretions, excretions, non-intact skin, mucous membranes, body tissues, and contaminated equipment/environment.

If there is a risk of exposure, identify the appropriate strategies:

- Hand Hygiene
- Barrier Equipment (PPE)
- Environmental Controls (Cleaning and Disinfection, Linen, Waste & Sharps management)
- Administrative Controls (IPAC Policies and Procedures).

Hand Hygiene

Hand hygiene is considered the most important and effective infection prevention and control measure to prevent the spread of health care-associated infections.

Hand hygiene is performed using alcohol-based hand rub or soap and water:

- Before and after each client contact
- Before performing invasive procedures
- Before preparing, handling, serving or eating food
- After care involving body fluids and before moving to another activity
- Before putting on and after taking off gloves and PPE
- After personal body functions (e.g., blowing one's nose)
- Whenever hands come into contact with secretions, excretions, blood and body fluids
- After contact with items in the C/P/R's environment.

When hands are visibly dirty and there is no access to a handwashing sink:

- Use a wet wipe to remove visible dirt
- Allow hands to dry
- Use an alcohol-based hand rub

Barrier Equipment or Personal Protective Equipment

PPE is used based on risk assessment.

Mask and Eye Protection or Face Shield [based on risk assessment]

- Protect eyes, nose and mouth during procedures and care activities likely to generate splashes or sprays
 of blood, body fluids, secretions or excretions
- Wear within two metres of a coughing client.

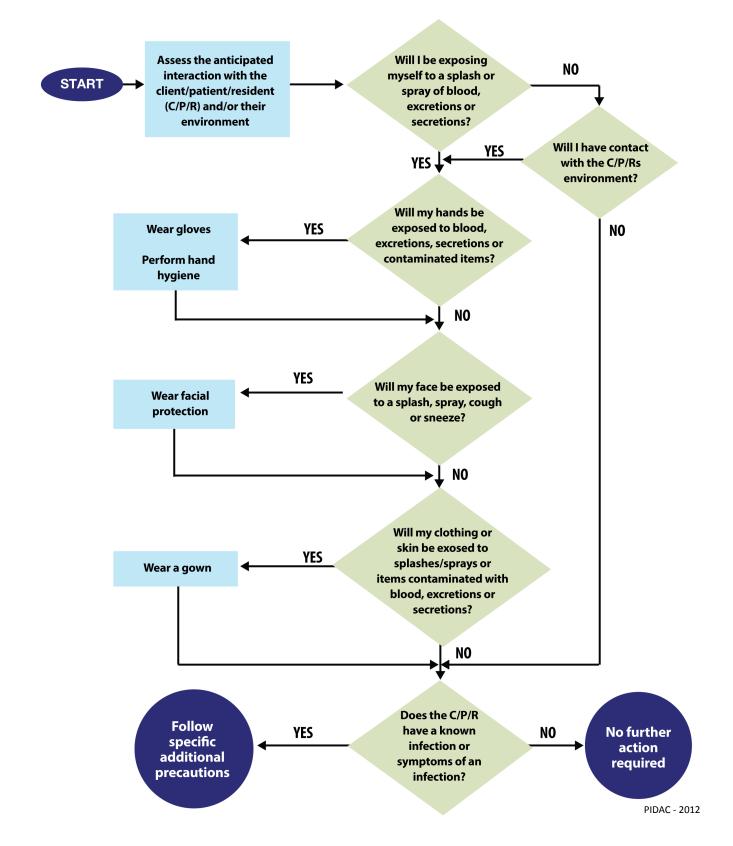
Gown [based on risk assessment]

• Wear a long-sleeved gown if contamination of skin or clothing is anticipated.

Gloves [based on risk assessment]

- Wear gloves when there is a risk of hand contact with blood, body fluids, secretions, excretions, nonintact skin, mucous membranes or contaminated surfaces or objects
- Wearing gloves is NOT a substitute for hand hygiene
- Remove gloves immediately after use and perform hand hygiene.

Routine Practices Risk Assessment Algorithm for All Client Interactions



Recommended Steps for Putting On and Taking Off Personal Protective Equipment

Putting On PPE

1. Perform hand hygiene

2. Put on gown

Tie neck and waist ties securely

3. Put on Mask/N95 Respirator

- Place mask over nose and under chin
- Secure ties, loops or straps
- Mold metal piece to your nose bridge
- For respirators, perform a seal-check

4. Put on protective eyewear

- Put on eye protection and adjust to fit
- Face shield should fit over brow

5. Put on gloves

- Put on gloves, taking care not to tear or puncture glove
- If a gown is worn, the glove fits over the gown's cuff

Taking Off PPE

1. Remove gloves

- Remove gloves using a glove-to-glove/skin-to-skin technique
- Grasp outside edge near the wrist and peel away, rolling the glove inside-out
- Reach under the second glove and peel away
- Discard immediately into waste receptacle

2. Remove gown

- Remove gown in a manner that prevents contamination of clothing or skin
- Starting at the neck ties, the outer "contaminated" side of the gown is pulled forward and turned inward, rolled off the arms into a bundle, then discarded immediately in a manner that minimizes air disturbance

3. Perform hand hygiene

4. Remove eye protection

- Arms of goggles and headband of face shields are considered to be "clean" and may be touched with the hands
- The front of goggles/face shield is considered to be contaminated
- Remove eye protection by handling ear loops, sides or back only
- Discard into waste receptacle or into appropriate container to send for reprocessing
- Personally-owned protective eyewear may be cleaned by the individual after use

5. Remove Mask/N95 Respirator

- Ties/ear loops/straps are considered "clean" and may be touched with hands
- The front of the mask/respirator is considered to be contaminated
- Untie bottom tie, then top tie, or grasp straps or ear loops
- Pull forward off the head, bending forward to allow mask/respirator to fall away from the face
- Discard immediately into waste receptacle

6. Perform hand hygiene

Environmental Controls

Environmental controls should be put in place to prevent exposure and transmission to others and includes:

- Cleaning of equipment that is being used by more than one client
- Cleaning of the health care environment, including safe handling of linen and waste
- Sharps containers and hand hygiene products available for use at point of care

Refer to Best Practices Routine Practices and Additional Precautions in all Health Care Settings (PIDAC, 2012)

https://www.publichealthontario.ca/en/eRepository/RPAP All HealthCare Settings Eng2012.pdf

Cleaning and Disinfection

Refer to Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices in All Health Care Settings (PIDAC May 2013).

It is important that policies and procedures are in place to clean and disinfect equipment. Manufacturer's instructions for product use, concentration of product and exposure time must be followed.

Cleaning

Physical action of cleaning is more important than the cleaning product used. Cleaning must always be performed from clean areas to dirty areas. Cleaning must always be done before disinfection.

The key to cleaning is the use of friction to remove microorganisms and debris.

- Cleaning removes foreign material (e.g., dust, soil, organic material such as blood, secretions, excretions and microorganisms) from a surface or object.
- Cleaning physically removes, rather than kills microorganisms, reducing the organism load on a surface. It is accomplished with water, detergents and mechanical action.
- Thorough cleaning is required for any equipment/device to be disinfected, as organic material may
 inactivate a disinfectant. This may be accomplished through a two-step process involving a cleaner
 followed by a disinfectant, but is more commonly accomplished in the health care setting through a
 one-step process using a combined cleaner/disinfector product.

Disinfection

Level of disinfection required for reusable equipment is determined by the degree of contact it will have with a client and where this contact is likely to occur. Follow manufacturer's recommendations when using disinfection products to ensure best results.

- Disinfection is a process used on inanimate objects and surfaces to kill microorganisms.
- Disinfection will kill most disease-causing microorganisms but may not kill all bacterial spores. Only sterilization will kill all forms of microbial life.

Refer to Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings, (PIDAC, May 2012).

Contact time is required for proper disinfection to occur (refer to manufacturer instructions).

Low level disinfection: Kill most vegetative bacteria, and some fungi, as well as enveloped (lipid) viruses (e.g. hep B, C, HIV, Hantavirus); does not kill mycobacterium or bacterial spores.

High level disinfection: Destroy vegetative bacteria, mycobacterium (TB), fungi and enveloped (lipid) virus such as HIV, herpes, HCV, HBV and non-enveloped (non-lipid) viruses such as enterovirus, but not necessarily bacterial spores.

Administrative Controls

Administrative controls should include:

- Policies and procedures in place to assist with the management of transmission risks to infectious disease
- Staff education on infectious diseases transmission and prevention of transmission
- Healthy workplace policies
- Respiratory etiquette cough or sneeze into your sleeve or tissue
- Accessible PPE

EXPOSURE

Diseases Spread by Blood Borne Route

For SMDHU fact sheets about specific diseases, go to simcoemuskokahealth.org

Hepatitis B - FACT SHEET

Hepatitis B is a liver infection caused by the hepatitis B virus. It is spread through exposure to blood, blood products, saliva, semen and vaginal secretions, or any other fluid containing blood of an infected person. Hepatitis B vaccination is the most effective measure to prevent hepatitis B virus infection.

Hepatitis C - FACT SHEET

Hepatitis C virus is a chronic liver disease caused by the hepatitis C virus. It can be transmitted through exposure to blood of an infected person. There is currently no vaccine for Hepatitis C.

Human Immunodeficiency Virus (HIV) - FACT SHEET

HIV is a virus that weakens the immune system. HIV can be transmitted in a variety of ways, the most common being unprotected sex, sharing needles or other drug equipment. HIV can also be transmitted through the use of non-sterilized instruments that enter the body (e.g. tattooing or skin piercing equipment) that have been previously used on HIV-positive individuals. HIV can also be passed from an HIV positive woman to her baby during pregnancy, at birth or via breastfeeding.

An exposure to Hepatitis B, Hepatitis C and HIV viruses can occur as a result of:

- A needle stick injury with a used needle
- An injury with a sharp object that has been in contact with body fluids
- When damaged skin (rash, or open wound) comes in contact with body fluid
- Splashing of blood or body fluids into the mouth or eye
- Splashing of mouth, eye, or open wound with another body fluid (i.e. vomit) that has blood in it
- A bite that breaks the skin

An exposure to these viruses does NOT occur as a result of:

- A needle stick, where the needle has not been used
- Blood or body fluids coming in contact with hands covered by intact gloves
- Blood or body fluids coming in contact with protective clothing, where no fluid comes in contact with the non-intact skin, or if it does soak through, the skin beneath is intact
- Splashing of blood or body fluids into the face where a mask and goggles are worn

Assessing the exposure - FORM

Did the blood or body fluid enter the ESW's body through a break in the skin (needle stick, cut from a sharp object, or bite that breaks the skin or through mucosal lining (i.e. eyes, nose, and mouth) or non-intact skin (i.e. chapped or scraped)?

Has the ESW been immunized for Hepatitis B? (Antibody levels can be measured to ensure immunity.)

Actions:

- 1. Provide immediate care to the exposure site:
 - a. Allow injury to bleed freely, then cover lightly, do not promote bleeding
 - b. Remove clothing that is contaminated with blood and body fluids
 - c. Thoroughly flush exposed area with water or saline
 - d. Clean area with soap and water and dry.
- 2. ESW notifies the DO to provide information on the exposure.
- 3. If there has been an exposure to blood or body fluids, the ESW should go immediately to one of the hospital emergency departments for medical assessment by a physician.
- 4. For assistance or more information contact staff at the SMDHU.
- 5. If the emergency room physician examines the ESW and determines that an exposure has occurred, the ESW should ensure they have baseline testing for Hepatitis B, Hepatitis C and HIV. If blood tests are negative, they should be repeated at three months and six months after the exposure.
- 6. The physician who assesses the ESW will determine the need for post exposure prophylaxis (PEP) treatment or vaccination to prevent infection from occurring. The attending physician could recommend that the ESW be referred to an infectious disease physician for further follow up and counseling if appropriate.
- 7. The ESW will be counseled to take the following precautions to protect others until they are certain that they are not infected (this may take several months).
 - a. **Practice safe sex by using a condom** with lubricant at all times during intercourse or abstain from sexual intercourse
 - b. **Do not donate** blood, plasma, organs, tissue or sperm
 - c. **Do not share** toothbrushes, razors, needles or other implements or instruments which may be contaminated with blood or body fluids
 - d. **Avoid pregnancy.** If the ESW is pregnant a referral to an infectious disease specialist is recommended
 - e. If breastfeeding, it is recommended the ESW be referred to an infectious disease specialist. Breast milk can be pumped and discarded until blood results become available.

Post exposure prophylaxis may be offered, after assessment by a physician, at hospital emergency departments.

Diseases spread by Airborne Route

For SMDHU fact sheets about specific diseases, go to simcoemuskokahealth.org

Small bacteria and viruses (for example: tuberculosis, measles and chicken-pox) can be spread through the air. These micro-organisms are so small that they can float in the air and can be spread through coughing, sneezing, laughing, talking and singing.

Active Tuberculosis (TB) - FACT SHEET

TB is spread when people who have TB disease (active pulmonary TB) in their lungs or throat, cough, sneeze or speak, and send the bacteria into the air. Close and prolonged contact with someone who has TB disease can cause others to become infected with the bacteria.

An exposure to TB could occur when:

- An individual who is coughing vigorously is enclosed in a confined area (e.g. ambulance, car) over a long period of time
- Giving mouth-to-mouth resuscitation without barrier protection.

An exposure to TB is unlikely to occur when:

- ESW is confined in an enclosed area with a coughing individual, when either or both are wearing a mask that covers mouth and nose (for near 100% protection)
- Mouth-to-mouth resuscitation is performed using a barrier protection or bag valve mask.

Assessing exposure:

- Was the DO notified of ESW contact with an active pulmonary tuberculosis case by SMDHU?
- Was the ESW exposed to a client with active pulmonary TB?
- How often, and for how long was the ESW in contact with the individual?
- How close was the ESW to the individual?
- Did the ESW perform any procedures that resulted in face-to-face contact with the individual?
- Was the ESW in a confined space with the patient and for how long?
- Did the ESW wear appropriate PPE?

Actions:

- 1. SMDHU will contact DO if ESW have been identified in the care of an active pulmonary TB patient which may have placed the ESW at risk of exposure.
- 2. DO to conduct initial assessment confirming exposure.
- 3. If ESW is assessed as a confirmed contact, the DO will notify SMDHU providing demographic information.
- 4. SMDHU will contact the ESW and provide education and recommendations for health care provider assessment, testing and skin testing if required.
- 5. If required and directed by SMDHU testing for TB may include two skin tests: one after exposure and repeated at least eight weeks after exposure. The test must be read 48-72 hours later by a doctor or nurse. If the skin test is positive, a chest x-ray is performed to assess for active TB disease. If the ESW has a positive skin test antibiotics may be recommended.
- 6. If the ESW has had a previous positive skin test, a TB skin test will not be repeated. A chest x-ray and referral to a health care provider is recommended.

Measles - FACT SHEET

Transmission of measles is spread by airborne droplet nuclei, close personal contact or direct contact with the respiratory secretions of a case. Articles of clothing or bedding freshly soiled with infectious discharge occasionally transmit the disease. Measles virus can remain active and contagious in the air or on infected surfaces for up to two hours.

An exposure to measles could occur if:

• The ESW shared the same airspace with a confirmed case of measles

An exposure to measles is unlikely to occur when:

- ESW shared the same airspace with an individual with confirmed measles and appropriate PPE was worn
- ESW's immunization is up to date
- Resuscitation is performed using a barrier protection or bag valve mask

Assessing exposure:

- Was the DO notified of ESW contact with measles by SMDHU?
- Was the ESW exposed to a client with measles?
- How often, and for how long was the ESW in contact with the individual?
- How close was the ESW to the individual?
- Did the ESW wear appropriate PPE?
- Is the ESW immunized against measles?

Actions:

- 1. SMDHU will contact DO if ESW has been identified in the care of a patient diagnosed with measles (a laboratory confirmed report is required), which may have placed the ESW at risk of exposure.
- 2. DO to conduct initial assessment confirming exposure.
- 3. If ESW is assessed as a confirmed contact, the DO will notify SMDHU providing demographic information.
- 4. SMDHU will contact the ESW and will provide education and recommendations for immunization if required.

Diseases Spread Through Direct Contact or Droplets

For SMDHU fact sheets about specific diseases, go to simcoemuskokahealth.org

Meningococcal Disease (meningitis/meningococcemia)

Transmission is from direct contact with the nose and throat secretions of an infected person, and often with an asymptomatic carrier or by respiratory droplets. Close and prolonged contact, such as kissing, sneezing, and sharing eating and drinking utensils facilitates the spread of disease.

Meningococcal Disease - Link

Invasive Group A Streptococcus (GAS)

Transmission is generally person to person most commonly by:

- Droplet spread when an infected individual coughs or sneezes
- Direct or indirect contact of the oral or nasal mucus membranes with infectious respiratory secretions or with exudates from wound or skin lesions
- Direct or indirect contact of non-intact skin with infectious respiratory secretions or skin wound exudates
- Sharing of contaminated needles

Group A Streptococcal Infection - Link

An exposure to these infections could occur when:

- Giving mouth-to-mouth resuscitation without barrier protection or bag valve
- Someone with one of these infections, coughs, sneezes, spits or vomits directly into the face of an ESW
- Unprotected suctioning or intubation where nasal or oral secretions come in contact with mucous membranes

An exposure to these infections does NOT occur when:

- Barrier protection or bag valve is used for mouth-to-mouth resuscitation
- Uncovered intact skin comes in contact with the saliva or nasal secretions of someone with these infections
- Routine Practices are used
- Appropriate PPE is used

Assessing exposure:

- Did the ESW perform any procedures that put them in direct contact with oral/nasal secretions?
- Did the ESW wear appropriate PPE? Did the ESW have any broken areas on their skin?

Actions:

 SMDHU will contact DO if ESW have been identified in the care of a patient diagnosed with meningococcal disease or iGAS (a laboratory confirmed report is required), which may have placed the ESW at risk of exposure.

- 2. DO to conduct initial assessment confirming exposure.
- 3. If ESW is assessed as a confirmed contact, the DO will notify SMDHU and provide demographic information.
- 4. SMDHU will contact the ESW and will provide education and recommendations for chemoprophylaxis if required.

Prophylactic medication is not routinely indicated for ESWs

Rabies Exposure and Mandatory Animal Bite Reporting

Report all animal bites and scratches!

Rabies is spread through the bite or scratch of a warm-blooded mammal, including dogs, cats, skunks, raccoons, foxes, and bats. The rabies virus is concentrated in the saliva of the infected mammal.

The vast majority of animal bite investigations undertaken by the health unit involve vaccinated and non-vaccinated domestic animals such as cats and dogs. However, it's required that human contact with any warm blooded animal, whether it is domestic or wild (fox, raccoon, bat, etc.), be immediately reported to the health unit as specified in the Health Protection and Promotion Act , Regulation 557 (Communicable Diseases General) by contacting:

Simcoe Muskoka District Health Unit Rabies Line

- Monday to Friday 8:30-4:30
- 705-721-7520 x 8894 or 1-877-721-7520 x 8894
- If after hours contact 1-888-225-7851; ask for the on-call public health inspector

Reports can also be faxed to 705-725-8132. For a copy of the form to complete and fax, visit our website at

http://www.simcoemuskokahealth.org/JFY/PCPortal/ResourcesTools/Forms1.aspx

Include in the report the name, address and phone number of the animal owner and victim.

To report lost, injured, wild or stray animals call contact your local Ontario SPCA at www.ontariospca.ca - Link

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MANDATORY BLOOD TESTING ACT (MBTA), 2006

The MBTA Act is managed by the Ministry of Community Safety and Correctional Services (MCSCS). This legislation allows certain individuals who are exposed to the blood or body fluids of another person under certain conditions, i.e. victims of crime, emergency service workers and good Samaritans, to apply to have the other person's blood tested for HIV and hepatitis B and C.

www.mcscs.jus.gov.on.ca/english/LinksResources/MandatoryBloodTesting/blood testing.html

Mandatory Blood Testing Act (MBTA), 2006 Frequently Asked Questions

What is the purpose of the Mandatory Blood Testing Act, 2006?

The Mandatory Blood Testing Act, 2006, reduces the time for getting a mandatory blood test to less than three weeks. Before the act, the process could take more than two months.

What diseases are listed as communicable diseases under the act?

- Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS)
- Hepatitis B
- Hepatitis C

Should I start treatment immediately following exposure, or wait for my application to be processed?

Anyone who believes they have been exposed to a communicable disease as a result of coming into contact with a bodily substance of another person should immediately contact a medical professional who can help assess the risk of infection and decide whether to start treatment or preventive measures.

Who can submit an application under the Mandatory Blood Testing Act, 2006?

Anyone may apply to a MOH to have a blood sample of another person analyzed if they have come into contact with a bodily substance from that person in any of the following circumstances:

- As a result of being a victim of crime
- While providing emergency health care services or emergency first aid to the person or
- In the course of his or her duties, if the person belongs to an identified group of individuals, including:
 - i. Persons who are employed in a correctional institution, place of open custody or place of secure custody
 - ii. Police officers, civilian employees of a police service, First Nations constables and auxiliary members of a police service
 - iii. Firefighters (including volunteer firefighters)
 - iv. Paramedics and emergency medical attendants
 - v. Members of the College of Nurses of Ontario
 - vi. Paramedic students engaged in field training

Where applications should be submitted?

Applications must be submitted to the MOH in the health unit where the respondent lives. At the bottom of the application form there is a phone number that applicants can call to obtain a list of health units and the areas they cover.

Who is responsible for screening the application?

The MOH is responsible for screening the application to make sure it meets the requirements of the act and for seeking voluntary compliance from the respondent.

Is there a time restriction on making an application under the Mandatory Blood Testing Act, 2006?

The MOH in the health unit where the respondent lives must receive an application no more than seven days after the date of the occurrence. However, if the deadline falls on a Saturday, Sunday or other holiday, the deadline is extended by one day.

What happens when a medical officer of health receives an application?

Once the application has been screened to make sure it meets the requirements of the act, the MOH will attempt to contact the respondent and request that the respondent voluntarily provide a blood sample for testing.

What happens with the respondent's blood test results?

The results of the blood tests will be reported to SMDHU. SMDHU will contact the applicant's health care provider with results. SMDHU will contact the applicant to notify them that their health care provider has the respondent's blood test results.

What steps are taken if the respondent fails to provide a blood sample voluntarily?

If the respondent does not provide a blood sample within two days of the MOH receiving the applications, or if the respondent cannot be located in time, the application will be referred to the Consent and Capacity Board. The board will hold a hearing to decide whether to issue a mandatory order.

When will the Consent and Capacity Board hold the hearing?

The Consent and Capacity Board must begin and complete a hearing within seven days of receiving an application from a MOH. The board must make its decision within one day after the hearing ends. However, if this day falls on a Saturday, Sunday or any other holiday, the deadline will be extended by one day.

How will the Consent and Capacity Board inform me of their decision?

The board will provide the applicant and the respondent (or their representative), as well as the MOH, with a copy of the board's decision and a copy of any order made by the board.

What can I do if I disagree with the Consent and Capacity Board's decision?

A decision of the board is final. There is no right of appeal. However, both the applicant and the respondent have the right to apply for a judicial review of the decision by the Superior Court of Justice.

How long does the respondent have to comply with an order of the Consent and Capacity Board?

The respondent has seven days from the date the order is made to comply.

What are the penalties for failing to comply with an order made by the Consent and Capacity Board?

Every person who fails to obey an order made by the board is guilty of an offence and is liable on conviction to a fine of not more than \$5,000 for every day or part of a day on which the offence occurs or continues.

Where can I find the mandatory blood testing forms?

All relevant forms, (including the applicant report, respondent report and physician report) can be found here.

http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/MinistryResults?Openform&SRT=T&MAX=5&ENV=WWE&STR=1&TAB=PROFILE&MIN=008&BRN=10&PRG=11



GLOSSARY

Additional Precautions: Infection prevention and control interventions (e.g. barrier equipment, additional environmental controls) to be used in addition to Routine Practice to protect staff and clients/patients to interrupt transmission of infectious agents that are suspected or identified in a client/patient/resident. There are three categories of Additional Precautions: Contact Precautions, Droplet Precautions and Airborne precautions based upon the mode of transmission of the infectious agent.

Administrative Controls: Measures put in place to reduce the risk of infection to staff or to patients (e.g., infection prevention and control policies/procedures, education/training).

Airborne Precautions: Used to reduce the transmission of infectious agents present on airborne droplet nuclei (< 5 microns) that can remain suspended in the air and travel some distance, greater than two metres from the source client/patient/resident (e.g. use of a N95 respirator).

Alcohol-Based Hand Rub (ABHR): A liquid, gel or foam formulation of alcohol (e.g., ethanol, isopropanol) that is used to reduce the number of microorganisms on hands in clinical situations when the hands are not visibly soiled. ABHRs contain emollients to reduce skin irritation and are less time-consuming to use than washing with soap and water. Hand sanitizing with a 70-90% alcohol-based hand rub is the preferred method (when hands are not visibly soiled)

Applicant: A person who applies to a medical officer of health under section 2 of the Mandatory Blood Testing Act

Barrier Equipment: Personal protective equipment (PPE) used to prevent contamination of skin, mucous membranes or clothing of staff in order to prevent transmission from person to person (also refer to Personal Protective Equipment).

Blood or body fluid (BBF) exposure: An event where blood or potentially infectious body fluid comes into contact with skin, mucous membranes, or subcutaneous tissue (via percutaneous injury)

Case: An individual who is infected or colonized with an infectious agent.

Chain of Transmission: A model used to understand the infection process.

Cleaning: The physical removal of foreign material (e.g. dust, soil) and organic material (e.g. blood, secretions, excretions, microorganisms). Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents and mechanical action.

Contact Precautions: Additional practices to reduce the risk of transmitting infectious agents via contacts with an infectious person. Contact Precautions are used in addition to Routine Practices.

Contamination: Presence of an infectious agent on hands or on a surface, such as clothing, gloves, bedding, patient care equipment, dressings, etc.

Designated Officer (DO): A person identified in an emergency service (i.e., police, firefighters, ambulance) who is responsible for receiving and assessing reports regarding the possible exposure of an emergency service worker to an infectious disease of public health importance and then contacting the medical officer of health or designate.

Direct Care: Providing hands-on care to a client/patient/resident.

Disinfection: The inactivation of disease-producing microorganisms. Disinfection does not destroy bacterial spores. Medical equipment/devices must be cleaned thoroughly before effective disinfection can take place.

Droplet Precautions: Used to reduce the transmission of infectious agents presents on large droplets (≥ 5 microns) that can travel up to two meters from the source client/patient/resident (e.g. mask, eye protection).

Eye Protection: A device that covers the eyes and is used by health care providers to protect the eyes when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions, or within two metres of a coughing client/patient/resident. Eye protection includes safety glasses, safety goggles, face shields and visors.

Facial Protection: A device that covers the eyes and is used by health care providers to protect the eyes when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions. Facial protection may include a mask or respirator in conjunction with eye protection, or a face shield that covers eyes, nose and mouth.

Hand Hygiene: A general term referring to any action of hand cleaning. Hand hygiene relates to the removal of visible soil and removal or killing of transient microorganisms from the hands. Hand hygiene may be accomplished using soap and running water or an alcohol-based hand rub.

Health Care Provider: Person conducting activities within a health care setting that brings the person into contact with clients/patients/residents or their environment including emergency medical services personnel, etc.

Infection: The entry and multiplication of an infectious agent in the tissues of the host. Asymptomatic or subclinical infection is an infectious process running a course similar to that of clinical disease but below the threshold of clinical symptoms. Symptomatic or clinical infection is one resulting in clinical signs and symptoms (disease).

Infectious diseases of public health importance: Diseases include, but are not limited to: those specified reportable diseases as set out by O. Reg. 559/913 (as amended) under the HPPA1, and include zoonotic diseases.

Infection Prevention and Control (IPAC): Evidence-based practices and procedures that when applied consistently in health care settings, can prevent or reduce the risk of transmission of infectious agents to health care workers and other clients/patients/residents.

Infectious Agent: A microorganism, such as a bacterium or virus, that is capable of invading body tissues, multiplying and causing disease.

Mask: A device that covers the nose and mouth is secured in the back and is used by health care providers to protect the mucous membranes of the nose and mouth.

Mode of Transmission: The method by which an infectious agent can be transferred to a susceptible host. There are six modes of transmission; contact (direct or indirect), droplet, airborne, vector, vehicle and parenteral. In some cases, transmission may occur by more than one mode.

Percutaneous exposure: blood or body fluid from one person is potentially introduced into the bloodstream of another person through the skin via needle stick, tattooing, body piercing, or other sharps injury.

Personal Protective Equipment (PPE): clothing or equipment worn by health care providers for protection against hazards (e.g. gown, gloves, mask/95 respirator, face shield/eye goggles, etc.).

Pre-hospital Care: Acute emergency patient assessment and care delivered in an uncontrolled environment by a designated practitioner (e.g. EMS, fire, police), performing delegated medical acts at the beginning of the health care continuum.

PIDAC: Provincial Infectious Disease Advisory Committee

Respiratory Etiquette: Personal practices that help prevent the spread of bacteria and viruses that cause respiratory infection (e.g. cough/sneeze into tissue or arm).

Respondent: The person who the applicant identifies as a person with whose bodily substance the applicant came into contact (Mandatory Blood Testing Act).

Risk Assessment: An evaluation by the health care provider of the client/patient/resident, their environment, type of contact and the task/procedure to be performed in order to identify hazards and risks associated with exposure to potentially infectious disease, blood, body fluids, respiratory secretions, excretions, non-intact skin, mucous membranes, body tissues and contaminated equipment. A risk assessment is the initial step performed in order to carry out Routine Practices.

Routine Practices: The system of infection prevention and control practices recommended by the Public Health Agency of Canada to be used by all health care providers with all clients/patients/residents during all care to prevent and control transmission of microorganism.

Sharps: Objects capable of causing punctures or cuts (e.g., needles, syringes, blades, clinical glass).

RESOURCES AND REFERENCES

Immunization Information

Immunization will help to protect you and your patients from some very serious and potentially life threatening illnesses. Not all recommended vaccines listed below are publicly funded. It is important to keep a copy of your immunization record (yellow card) to ensure you have all recommended immunizations.

Vaccine	Indication	Further Doses	
Measles, Mumps, Rubella	All adults born after 1970 should have 2 live vaccinations or documented immunity. Persons born before 1970 are usually immune.	Not Required	
Tetanus, Diphtheria, Acellular Pertussis (Tdap - Adacel®)	For adults aged 19-64	1 lifetime dose	
Tetanus, Diphtheria	theria All Adults		
Polio	Unimmunized healthcare workers or those with an unknown polio immunization history require 3 doses of inactivated poliomyelitis vaccine (IPV)	Not required	
Hepatitis B	For health care workers with no history of immunization for Hepatitis B, 3 doses should be administered Since 2000 Grade 7 students have been receiving two doses of Hepatitis B	Not required	
Varicella (Chickenpox)	Two adult doses recommended if no evidence of immunity	Not required	
Influenza	Recommended for all health care workers	1 dose annually (given in Fall)	

Women of Child Bearing Age		
Rubella Titre	Recommended if MMR vaccine not received	
Parvovirus B19 (Fifth Disease) Titre Recommended to determine susceptibility to infection		

Tuberculin Skin Test (TST)		
Two-step TST	Recommended for all healthcare workers who have never been tested, is only done ONCE if done correctly and documented	
Baseline two-step TST for all ESW's upon starting work. If previous positive, TST is not repeated and chest x-ray is recommended		
The two-step TST should only be done once if done correctly and documented. It does not need to be repeated.		
Annual TST should be one-step regardless of the length of time since the last TST.		

Criteria for Assessment of Exposures

(Sample)

1. Type of Exposure

□ Needlestick
Size/type of needle:
Type of body fluid:
Degree of injury:
Location of injury:
☐ Sharp Object
Size/type of object:
Type of body fluid:
Degree of injury:
Location of injury:
☐ Splashed in Mouth
Type of body fluid:
☐ Splashed in Eye
Type of body fluid:
□ Laceration of Skin
Type of body fluid:
Location of injury:
□ Non-intact Skin Exposure
Type of body fluid:
Location on skin:
☐ Confined, enclosed area with a coughing victim
Length of time:
☐ Mouth-to-mouth resuscitation without barrier protection
☐ Human bite
□ Other

2.	Worker's Vaccination Status			
	Worker's Hepatitis B Vaccination Status			
	Date of series: 1/			
	Antibody level: Date:			
	Tetanus/Diphtheria			
	Date of immunization:/			
3.	Personal Protective Equipment			
	Did the worker wear the following?:			
	☐ Face Shields/Goggles ☐ Gloves ☐ Mask ☐ Gowns/Protective clothing			
	Was the personal protective equipment intact (e.g. were the gloves torn? Did any body fluids soak through)?: Yes $\ \square$ No $\ \square$			
4.	Assessment Results			
	Exposure occurred: Yes No			
5.	Recommendations:			
				
Co	mpleted By: Date/Time:			

Designated Officer – Incident Assessment Form

(Sample)

7.	How did the exposure occur?		
	☐ Needlestick/punctured by sharp object		
	☐ Splashed in the eye by	(type of body fluid)	
	☐ Splashed in the mouth by	(type of body fluid)	
	☐ Non-intact skin exposed to	(type of body fluid)	
	☐ Identified as a close contact of an infectious di	isease by the health department	
	☐ Mouth to mouth resuscitation to someone wit	thout using a mouthpiece	
	☐ Human, animal or insect bite		
	☐ Shared anything that was in contact with saliv	a, nose or throat secretions	
	☐ Other, please describe		
8.	8. What is the emergency service worker's immune status? Are immunizations up to date for:		
	☐ Tetanus and Diphtheria		
	□ Rubella		
	□ Polio		
	☐ Measles		
	☐ Mumps		
	Has he/she completed hepatitis B immunization?	□ Yes □ No	
Was blood testing done to determine if the ESW has immunity to hepatitis B ☐ Yes ☐ No When was this testing done?		as immunity to hepatitis B?	
9.	9. What personal protective equipment (PPE) did the worker wear or use durir incident?		
	☐ Gloves		
	☐ Goggles/ face shield		
	□ N-95 mask		
	☐ Protective clothing		
☐ Other, please describe			

11.	Did any body fluids soak through?
12.	What body fluids was the worker exposed to?
	Blood
	□ Saliva
	□ Wound drainage
	□ Vomitus
	□ Faeces
	☐ Urine
13.	How long was the contact/exposure?
14.	Did a significant exposure occur?
	☐ Yes, specify blood borne or respiratory
	□ No
15.	Was SMDHU staff contacted?
	☐ Yes, Name and contact number:
	□ No
16.	What advice or recommendations were given?
	☐ Reassurance
	☐ Reinforce infection prevention and control procedures
	☐ Informed that an exposure has occurred
	☐ If an exposure has occurred to follow-up with medical assessment
	□ Other

Routine Practices to be used with All Clients

*PIDAC's Routine Practices Fact Sheet for All Health Care Settings, PIDAC 2012

Hand Hygiene

Hand hygiene is performed using alcohol-based hand rub or soap and water;

- Before and after each client/patient/resident contact
- Before performing invasive procedures
- Before preparing, handling, serving or eating food
- After care involving body fluids and before moving to another activity
- Before putting on and after taking off gloves and PPE
- After personal body functions (e.g., blowing one's nose)
- Whenever hands come into contact with secretions, excretions, blood and body fluids
- After contact with items in the client/patient/resident's environment

Mask and Eye Protection or Face Shield [based on risk assessment]

- Protect eyes, nose and mouth during procedures and care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions
- Wear within two metres of a coughing client/patient/resident

Gown [based on risk assessment]

• Wear a long-sleeved gown if contamination of skin or clothing is anticipated

Gloves [based on risk assessment]

- Wear gloves when there is a risk of hand contact with blood, body fluids, secretions, excretions, nonintact skin, mucous membranes or contaminated surfaces or objects
- Wearing gloves is not a substitute for hand hygiene
- Remove immediately after use and perform hand hygiene after removing gloves

Environment and Equipment

- All equipment that is being used by more than one client must be cleaned between clients
- All high-touch surfaces in the client/patient/resident's room must be cleaned daily

Linen and Waste

 Handle all soiled linen and waste carefully to prevent personal contamination and transfer to other clients/patients/residents

Sharps Injury Prevention

- NEVER RECAP USED NEEDLES
- Place sharps in sharps containers
- Prevent injuries from needles, scalpels and other sharp devices
- Where possible, use safety-engineered medical devices

Patient Placement/Accommodation

- Use a single room for a client/patient/resident that contaminates the environment.
- Perform hand hygiene on leaving the room

Spaulding's Classification of Medical Equipment/Devices and Required Level of Processing/Reprocessing

Classification	Definition	Level of Processing/ Reprocessing	Level of Processing/ Reprocessing
Critical Equipment/ Device	Equipment/device that enters sterile tissues, including the vascular system	Cleaning followed by sterilization	 Surgical instruments Implants Biopsy instruments Foot care equipment Eye and Dental equipment
Semi critical Equipment/ Device	Equipment/device that comes in contact with non-intact skin or mucous membranes but do not penetrate them	Cleaning followed by High- Level Disinfection (as a minimum). Sterilization is preferred	 Respiratory therapy equipment Anaesthesia equipment Tonomoter
Noncritical Equipment/ Device	Equipment/device that touches only intact skin and not mucous membranes, or does not directly touch the C/P/R	Cleaning followed by Low- Level Disinfection (in some cases, cleaning alone is acceptable	 ECG machines Oximeters Bedpans, urinals, commodes

Best Practices for Cleaning, Disinfection and Sterilization in All Health Care Settings May 2013

REFERENCES

Mandatory Blood Testing Act, 2006

Ministry of Community Safety and Correctional Services (Mandatory Blood Testing) retrieved from: www.mcscs.jus.gov.on.ca/english/LinksResources/MandatoryBloodTesting/blood testing.html

Public Health Ontario Best Practice Guidelines including:

Routine Practices and Additional Precautions In All Health Care Settings, 3rd Edition retrieved from: www.publichealthontario.ca/en/eRepository/RPAP All HealthCare Settings Eng2012.pdf

Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices in All Health Care Settings, 3rd Edition retrieved from: www.publichealthontario.ca/en/eRepository/PIDAC Cleaning Disinfection and Sterilization 2013.pdf

Best Practices for Environmental Cleaning for Prevention and Control of Infections – In All Health Care Settings, 2nd Edition retrieved from: www.publichealthontario.ca/en/eRepository/PIDAC Cleaning Disinfection and Sterilization 2013.pdf

Best Practices for Hand Hygiene in All Health Care Settings, 4th Edition retrieved from: www.publichealthontario.ca/en/eRepository/2010-12%20BP%20Hand%20Hygiene.pdf

Ministry of Health and Long-Term Care, Ontario Public Health Standards Protocol 2008

www.health.gov.on.ca/en/pro/programs/publichealth/oph standards/docs/exposure emergency service workers.pdf

Ministry of Health and Long-Term Care, Ontario Public Health Standards 2008

www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/default.aspx

Simcoe Muskoka District Health Unit

www.simcoemuskokahealth.org/Home.aspx