INTRODUCTION

1. ROLES AND RESPONSIBILITIES
   1.1 Emergency Service Agency
   1.2 Emergency Service Worker
   1.3 Designated Officer
   1.4 Medical Officer of Health/Niagara Region Public Health

2. PREVENTION OF INFECTIOUS DISEASE
   2.1 The Body's Immune System
   2.2 Mode of Transmission
   2.3 Routine Practices and Additional Precautions
   2.4 Clean Your Hands Posters (x2)
   2.5 Recommended PPE - CSICN Sequence Chart (x2)

3. NOTIFICATION
   3.1 Method of Notification

4. ASSESSING EXPOSURES AND ACTIONS
   4.1 Diseases Spread by Blood Borne Route
      • Sites Where Post-exposure Prophylaxis is Available
   4.2 Diseases Spread by Airborne Route
   4.3 Diseases Spread by Droplet and/or Direct Contact

5. ANTIBIOTIC RESISTANT ORGANISMS (ARO’s)
   • MRSA
   • VRE

6. BILL 28/MANDATORY BLOOD TESTING ACT
   6.1 Background
   6.2 Questions and Answers

7. FACT SHEETS
   HIV/AIDS
   Hepatitis B
   Hepatitis C
   Tuberculosis
   Influenza
   H1N1
   Bacterial Meningitis
   Viral Meningitis
   Meningococcal Disease
   Group A Streptococcal
   Cleaning Up Spills Safely

   ** For more disease specific fact sheets please contact the Infectious Disease Program**

8. REFERENCES
Contact Information

Infectious Disease Program
905-688-8248 ext 7330
or
1-888-505-6074 ext 7330

Regular Public Health Office Hours
(8:30 am – 4:30 pm Monday to Friday)

After Hours and Weekends/Holidays
Contact 905-984-3690 or 1-877-552-5579
Ask the dispatch service to page the ID Manager
or Public Health Nurse on Standby

Manual adapted from the Durham Region Public Health
INTRODUCTION

Exposure of Emergency Service Workers to Infectious Diseases

The protocol for notification of Emergency Service Workers who may have been exposed to infectious diseases in the course of their work duties was established in 1994 by the Ontario Ministry of Health and Long Term Care.

The purpose of this protocol is to:
1. educate emergency service workers about the risk of occupational exposure to the infectious diseases;
2. encourage emergency service workers to adopt practices and procedures to protect themselves;
3. provide a system to ensure that emergency service workers can access advice regarding appropriate actions following possible exposure to specified infectious diseases.

Emergency response organizations are responsible for assessing potential risks of exposure to infectious disease, in the workplace and for providing appropriate measures to reduce the risks.
# Reportable Diseases List

A list of reportable diseases that are to be reported to the Medical Officer of Health under Ontario Regulation 559/91 and amendments of the Health Protection and Promotion Act.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquired Immunodeficiency Syndrome (AIDS)</td>
<td>Listeriosis</td>
</tr>
<tr>
<td>Acute Food Poisoning</td>
<td>Lyme Disease</td>
</tr>
<tr>
<td>Aspergillosis</td>
<td>Malaria</td>
</tr>
<tr>
<td>Anthrax</td>
<td>Measles</td>
</tr>
<tr>
<td>Anthraxan</td>
<td>Measles, acute</td>
</tr>
<tr>
<td>Arenaviridae</td>
<td>• lassa</td>
</tr>
<tr>
<td>Bocavirus</td>
<td>• viral</td>
</tr>
<tr>
<td>Campylobacter jejuni</td>
<td>• other</td>
</tr>
<tr>
<td>Chancroid</td>
<td>Measles, meningitis, acute</td>
</tr>
<tr>
<td>Chikungunya (Viequiena)</td>
<td>• lassa</td>
</tr>
<tr>
<td>Chlamydia trachomatis infections</td>
<td>• meningitis, acute</td>
</tr>
<tr>
<td>Cholera</td>
<td>• lassa</td>
</tr>
<tr>
<td>Clostridium difficile associated disease (CDAD)</td>
<td>Paralytic Shellfish Poisoning</td>
</tr>
<tr>
<td>outbreaks in public hospitals</td>
<td>Plague</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>Pneumococcal disease, invasive</td>
</tr>
<tr>
<td>Cystoisospora</td>
<td>Poliomyelitis, acute</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>Poliomyelitis, acute</td>
</tr>
<tr>
<td>Encephalitis, including:</td>
<td>Post-polio</td>
</tr>
<tr>
<td>• Primary, viral</td>
<td>Rubella</td>
</tr>
<tr>
<td>• Post-infectious</td>
<td>Respiratory infection outbreaks in institutions</td>
</tr>
<tr>
<td>• Vaccine-related</td>
<td>Rubella, congenital syndrome</td>
</tr>
<tr>
<td>• Subacute sclerosing panencephalitis</td>
<td>Scarlet fever</td>
</tr>
<tr>
<td>• Unspecified</td>
<td>Smallpox</td>
</tr>
<tr>
<td>Food poisoning, all causes</td>
<td>Syphilis</td>
</tr>
<tr>
<td>Gastroenteritis, institutional outbreaks</td>
<td>Tetanus</td>
</tr>
<tr>
<td>Giardiasis, except asymptomatic cases</td>
<td>Transmissible Spongiform Encephalopathy (TSE)</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>• Creutzfeldt-Jakob Disease - all types</td>
</tr>
<tr>
<td>Group A Streptococcal disease, invasive</td>
<td>Trichinosis</td>
</tr>
<tr>
<td>Group B Streptococcal disease, neonatal</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Haemophilus influenza b disease, invasive</td>
<td>Typhus</td>
</tr>
<tr>
<td>Hantavirus Pulmonary Syndrome</td>
<td>Typhoidal Fever</td>
</tr>
<tr>
<td>Hemorrhagic fevers, including:</td>
<td>Viruses producing E. coli infection</td>
</tr>
<tr>
<td>• Ebola virus disease</td>
<td>• Indicator conditions, including</td>
</tr>
<tr>
<td>• Marburg virus disease</td>
<td>• Naegleria Ulcerosa Syndrome (NUS)</td>
</tr>
<tr>
<td>• Other viral infections</td>
<td>West Nile Virus Infection</td>
</tr>
<tr>
<td>Hepatitis, viral</td>
<td>Yellow Fever</td>
</tr>
<tr>
<td>• Hepatitis A</td>
<td>Yaws</td>
</tr>
<tr>
<td>• Hepatitis B</td>
<td></td>
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<tr>
<td>• Hepatitis C</td>
<td></td>
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<tr>
<td>Influenza</td>
<td></td>
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<tr>
<td>Lassa Fever</td>
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<tr>
<td>Legionellosis</td>
<td></td>
</tr>
<tr>
<td>Leptospirosis</td>
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</tbody>
</table>

Note: Diseases bolded (including all respiratory outbreaks in institutions) must be reported immediately to the Medical Officer of Health by telephone. Other diseases are to be reported by the next working day.

Call the Infectious Disease Program at 905-683-4260 ext. 7330 or toll free at 1-866-500-0674 during business hours of Monday to Friday 6:20 a.m. to 4:30 p.m. After hours, please call 905-894-3650.

Updated December 2013
ROLES AND RESPONSIBILITIES

1.1 Emergency Service Agency:

- Appoint Designated Officer (DO);
- Assess the risks of occupational exposure;
- Set standards of practice, provide training, and appropriate personal protective equipment;
- Document exposure and complete the Workplace Safety and Insurance Board forms as required;
- Advise the Infectious Disease Program at Niagara Region Public Health of any new appointments of DO(s).

1.2 Emergency Service Worker (ESW)

- 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.

1.3 Designated Officers

- Receive and document reports of exposure from ESW;
- Assess the situation and determine if an exposure could have occurred;
- Refer to Designated Officer's Manual regarding assessment for post-exposure and recommendations for action;
- Contact Niagara Region Public Health and provide details of the incident if assistance is needed;
- Relay recommendations for post exposure follow-up to any exposed workers;
- Niagara Region Public Health may advise that a worker has been exposed to an infectious disease, it is the responsibility of the DO to notify the worker.

1.4 Medical Officer of Health/Public Health

Role of the Board of Health/Public Health – Exposure of ESW's

1. The board of health shall have an on-call system for receiving and responding to reports of infectious diseases of public health importance on a 24 hours per day, 7 days a week (24/7) basis.

2. The board of health shall ensure that the medical officer of health or designate is available on a 24/7 basis to receive and respond to reports of infectious diseases of public health importance in accordance with this protocol to ensure that:
i) Reports of a possible exposure of an ESW are received, assessed and responded to as soon as possible, but not later than 48 hours (depending on situation and disease, response may be required sooner) after receiving notification; and

ii) Reports of all infectious diseases of public health importance are received and assessed with particular consideration given to potential exposures of ESWs.

3. The board of health shall contact emergency services in their health unit region and request that they identify designated officers for their respective emergency service (i.e. police, firefighters, ambulance) in order to facilitate the exposure notification process.

4. The Board of Health* shall advise designated officers in their health unit regarding the possible exposure of an ESW to an infectious disease of public health importance when made aware by:

   i) Having the medical officer of health or designate actively seek out contacts of cases with infectious diseases of public health importance, even if a designated officer has not contacted the medical officer of health or designate regarding the possible exposure and no application has been made by an individual under the MBTA

   ii) Informing the respective designated officer that an ESW might have been exposed to an infectious disease of public health importance during his/her work. This is not dependent on laboratory confirmation – e.g. the case can exhibit clinical signs and symptoms of a particular infectious disease; and

   iii) Informing the designated officer regarding any specific actions to be taken based on the designated officer’s report, including advising ESWs to seek medical attention and the initiation of post-exposure prophylaxis if applicable.

5. When a designated officer makes an incident report of a possible exposure to an infectious disease of public health importance to the board of health, the board of health shall:

   i) Review and assess the information provided;

   ii) Contact health care facilities and other persons (e.g. infection control practitioners and/or attending physicians) to obtain additional information on the specific case, as necessary, based on the assessment of the incident by the medical officer of health, or designate; and

   iii) Inform the designated officer as soon as possible and no later than 48 hours after receiving notification (depending on the disease) of advised actions to be taken, including accessing medical care by the ESW.

   • Advice shall include, but is not limited to assessing the possible risk of occupational exposure and setting standards of practice, appropriate use of personal protective equipment, training for employees to prevent possible exposures; and

   • Follow up with the designated officer to ascertain what action has been taken.

6. In the event that there is a disagreement between the designated officer and the medical officer of health or designate regarding a possible exposure, the designated office may refer the matter to the Chief Medical Officer of Health or designate.
DO NOT expect Niagara Region Public Health to:

- Gather information from the ESW (role of the DO);
- Provide specific treatment advice (role of the ESW's physician);
- Provide information on the diagnosis of a patient (confidential).

* A decision by the Board of Health to contact the designated officer can be made on a case-by-case basis, based on clinical assessment, which could include, but is not limited to degree of risk, type of exposure, etc.
2.1 The Body’s Immune System

When the immune system is functioning effectively, it protects the body from most infectious organisms. The immune system does this both directly by cell attack, and indirectly by releasing chemicals and protective antibodies.

The body’s first line of defence against the invasion of disease-causing microorganisms is the skin and mucous membranes. As long as the skin is unbroken, it provides a physical barrier to most microorganisms. Intact mucous membranes provide similar mechanical barriers within the body. The mucous membranes also secrete chemicals to kill pathogens. For example, the stomach mucosa secretes acid that kills bacteria.

The body uses cells, mostly white blood cells, and chemicals released from cells, to directly attack and kill the pathogens and help repair tissues. This is seen in the inflammatory response surrounding an infected cut. This is the body’s second line of defence that is triggered whenever body tissues are injured.

The body’s third line of defence is the immune response. The immune response provides protection that is targeted against specific disease-causing organisms (antigens) and has memory. After initial exposure to the antigen, the body recognizes the antigen and reacts more vigorously at later meetings to destroy it anywhere in the body. The body produces “antibodies” against the disease and provides immunity.

Immunity to a disease is acquired either actively or passively. Active immunity is either naturally acquired after having the disease, or artificially acquired after receiving the vaccine for that disease. Vaccines are beneficial in that they provide the immunity without having to suffer the sometimes-severe symptoms of disease. Vaccines stimulate antibody production and promote immunological memory.

Passive immunity is immunity that is obtained from an outside source. Passive immunity is passed from mother to fetus through the placenta into the fetal circulation. This protects the infant from diseases the mother has immunity to, for several months after birth. Passive immunity can also be acquired artificially when a person receives an injection of immune globulin. This medication is derived from donated blood serum from a person who has the antibodies to that disease. The donated antibodies provide immediate protection but it only lasts a short period of time. This type of passive immunity (immune globulin) may be given to a person without immunity, for example: after exposure to Hepatitis B. Hepatitis B vaccine is also administered so that the person can produce his/her own antibodies to provide long-term protection.
The infection process can be described as a chain of infection. Understanding the chain must precede the breaking of the links, which leads to prevention of infection. Each component of this chain is connected to another link in the chain of infection (APIC, 2005).

**Infectious Agent** – The infectious agent is a biological, physical or chemical entity capable of causing disease. (i.e. virus, bacteria, parasite, fungus, vectorborne)

**Reservoir** – The reservoir is the place where the infectious agent can survive but may or may not multiply. Human reservoirs usually have the disease, they can be acute or carriers of the disease. A carrier is a person who is capable of spreading the disease, but has no identifiable signs or symptoms of the disease.

**Portal of Exit** – The portal of exit is the path by which the infectious agent leaves the reservoir i.e. respiratory tract, genitourinary tract, gastrointestinal tract, skin, mucous membranes, placental (mother to fetus), blood.

**Mode of Transmission** – Mode of transmission in the method by which the organism reaches a susceptible host. (i.e. direct contact, indirect contact, airborne, vehicle (food or water), vectorborne)

**Portal of Entry** – Portal of entry is the means the infectious agent enters the body; they are the same as portals of exit.

**Susceptible Host** – The susceptible host may have characteristics that influence the susceptibility and severity of disease.

The control of infectious disease involves breaking this chain of infection by altering the host, the environment or the agent. (i.e. hand washing or wearing of PPE)

### 2.2 Mode of Transmission

**Transmission**

Microorganisms are transmitted in by several routes, and the same microorganism may be transmitted by more than one route. There are five main routes of transmission: contact, droplet, airborne, common vehicle, and vectorborne.

1. **Contact transmission**, the most important and frequent mode of transmission of health care associated infections (HAI), is divided into direct and indirect contact transmission.
   - **Direct contact transmission** involves a direct body surface-to-body surface contact and physical transfer of microorganisms between an infected or colonized person.
   - **Indirect contact transmission** involves contact between a susceptible host and usually a contaminated inanimate object, such as equipment instruments, and environmental surfaces. This is often the result of contaminated hands that are not washed which contaminate the object or environment.

2. **Droplet transmission**, theoretically, is a form of contact transmission. However, the mechanism of transfer of the pathogen to the host is quite distinct from either direct or indirect contact transmission. Droplets are generated from the source person primarily during coughing, sneezing, and talking, and during the performance of certain procedures such as suctioning and administering nebulized medications. Transmission occurs when
droplets containing microorganisms generated from the infected person are propelled a short distance through the air (usually less than one metre) and deposited on the host’s conjunctivae, nasal mucosa, or mouth. Because droplets do not remain suspended in the air, special air handling and ventilation are not required to prevent droplet transmission; that is, droplet transmission must not be confused with airborne transmission. Droplets can also contaminate the surrounding environment and lead to indirect contact transmission.

3. **Airborne transmission** occurs by dissemination of either airborne droplet nuclei (small particle residue [5 mm or smaller in size] of evaporated droplets containing microorganisms or dust particles containing the infectious agent (e.g. dust created by rotary powered foot care tools). Microorganisms carried in this manner remain suspended in the air for long periods of time and can be dispersed widely by air currents. These may become inhaled by a susceptible host within the same room or over a longer distance from the source client depending on environmental factors. Environmental controls are important — special air handling and ventilation help reduce airborne transmission. Microorganisms transmitted by airborne transmission include *Mycobacterium tuberculosis*, *Rubeola (Measles)*, *Varicella (Chickenpox)*, and *Disseminated Zoster* (widespread shingles).

4. **Common vehicle transmission** applies to microorganisms transmitted by contaminated items such as food, water and medications to multiple hosts and can cause explosive outbreaks. Control is through using appropriate standards for handling food and water and preparing medications.

5. **Vectorborne transmission** occurs when vectors such as mosquitoes, flies, rats, and other vermin transmit microorganisms; this route of transmission is of less significance in health care facilities in Canada than in other settings.
2.3 Routine Practices and Additional Precautions

Routine practices and additional precautions are a set of infection control precautions that should be used for the care of all individuals, regardless of their diagnosis or presumed infection status. Routine practices apply to:

- Blood
- All bodily fluids, secretions and excretions regardless of whether they contain visible blood
- Non-intact skin and mucous membranes

Personal Protective Equipment (PPE)

To protect yourself, it is essential to have a barrier between you and the potentially infectious material. These barriers include; gloves, gowns, masks, eye shields, and mouth guards.

- Always wear appropriate PPE in exposure situations.
- The necessary PPE should be readily available in the work area.
- Remove the PPE that is torn or punctured, or has lost its ability to function as a barrier to blood borne pathogens.
- Remove PPE before leaving the work area and place in appropriately labelled bags to be disposed of or decontaminated. (Refer to the order for putting on and taking off personal protective equipment fact sheets that follow)

Clean Your Hands

Cleaning your hands is one of the most important, and easiest, practices used to prevent transmission of many infectious diseases, including blood borne pathogens.

- Wash hands, or exposed skin, as soon as possible (i.e. after an exposure incident, removal of gloves or other PPE.)
- Familiarize yourself with location of the nearest hand washing facilities.
- An alcohol based hand rub (ABHR) may be used until soap and running water are available.
- The use of an ABHR is the preferred method of decontamination of hands that are visibly clean and should be available at point of care/readily accessible.

Note: Alcohol-based hand rub should contain at least 70% of ethyl or isopropyl alcohol

- In the event hands are visibly soiled but a handwashing sink is not accessible along with soap and water carry out the following steps:
  a. Use a wet wipe to remove as much visible soil/organic material as possible from hands
  b. Allow hands to dry
  c. Use alcohol-based hand rub
  d. Wash hands when a handwashing sink along with soap and water become available
- Cleaning your hands also includes maintaining intact skin. Regular use of hand lotion is recommended to prevent chapping/cracking of the skin.

Download Clean Your Hands posters and Cover Your Cough posters from the Niagara Region website at www.niagararegion.ca.
Gloves
- Wear gloves when touching blood, body fluids, secretions, excretions, non-intact skin and contaminated items.
- Change gloves between tasks and procedures on the same individual and after contact with material that may contain infectious agents.
- Remove gloves promptly after use, before touching non-contaminated items and environmental surfaces, and before going to another individual.
- Wash hands immediately after removing gloves to avoid transfer of infectious agents to other individuals and environments.

Mask, Eye Protection, Face Shield
- Wear a mask, as per employer policy, and eye protection or a face shield to protect mucous membranes of the eyes, nose and mouth during procedures and activities that are likely to generate splashes, sprays, aerosolization of blood, body fluids, secretions and excretions.

Protective Clothing
- Wear clothing to protect skin and wear extra protective clothing to prevent uniforms or personal clothing during procedures that are likely to generate splashes and sprays of blood, body fluids, secretions or excretions.

Other Precautions
- Safe Handling of needles and other sharp instruments.
- Handle and dispose of potentially contaminated items using carefully established procedures.
- Cover all personal abrasions and areas of damaged skin before contact.
- Refrain from direct care or handling equipment if you have lesions or dermatitis.
- Do not eat, drink or smoke in areas where there is potential for exposure.

For further information on Routine Practices and Additional Precautions, please refer to the following website:
http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_routine.html

For the Ontario Best Practice Manual: Hand Hygiene, please refer to the following website:
STOP

Clean your hands
with soap and water for at least 15 seconds

Clean hands:
• before preparing meals
• before eating
• after using the washroom
• after coughing or sneezing
• after blowing your nose
• after playing with pets
• after playing outdoors

1. Wet hands and wrists
2. Apply soap
3. Lather soap and scrub hands, palm to palm
4. Scrub in between and around fingers and thumbs
5. Scrub back of each hand with palm of other hand
6. Scrub fingertips of each hand in opposite palm
7. Scrub each thumb clasped in opposite hand
8. Scrub each wrist clasped in opposite hand
9. Rinse well under running water
10. Wipe and dry hands with paper towel
11. Turn off water using paper towel

www.niagararegion.ca
STOP

clean your hands

with hand rub until hands are dry

Hand rubs should contain 70-90% alcohol.
Use hand rub when you cannot see dirt on your hands.
If you can see dirt, clean your hands with soap and water.

1. Apply a loonie size amount of hand rub to open palms
2. Rub fingertips of each hand in opposite palm
3. Rub hands together palm to palm
4. Rub in between and around fingers
5. Rub the back of each hand with palm of other hand
6. Rub each thumb with opposite hand
7. Rub each wrist with the opposite hand
8. Keep rubbing until hands are dry

www.niagararegion.ca
Cover your Cough

1. Cover your mouth and nose with a tissue when you cough or sneeze.
   - Or cough or sneeze into your upper sleeve, not your hands.

2. Put your used tissue in the waste basket.

3. You may be asked to put on a surgical mask to protect others.

Clean your Hands after coughing or sneezing.

- Clean hands with soap and warm water.
- Or clean with alcohol-based hand rub.

www.niagararegion.ca
## PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clean Your Hands</td>
<td>Alcohol-based hand rub, OR... Soap &amp; water</td>
</tr>
<tr>
<td>2</td>
<td>Put on Gown</td>
<td>![Image of person putting on gown]</td>
</tr>
<tr>
<td>3a</td>
<td>Put on Mask</td>
<td>![Image of person putting on mask]</td>
</tr>
<tr>
<td>3b</td>
<td>Or N95 Respirator</td>
<td>![Image of person putting on N95 respirator]</td>
</tr>
<tr>
<td>4</td>
<td>Put on Eye Protection (Unless one step mask with attached eye protection)</td>
<td>![Image of person putting on eye protection]</td>
</tr>
<tr>
<td>5</td>
<td>Put on Gloves</td>
<td>![Image of person putting on gloves]</td>
</tr>
</tbody>
</table>

### HOW TO SAFELY USE PPE
- Keep gloved hands away from face
- Avoid touching or adjusting other PPE
- Take off gloves if they become torn; clean your hands before putting on new gloves
- Limit surfaces and items touched

Adapted from the Center for Disease Control: Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007
PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. Clean Your Hands
   - Alcohol-based hand rub is the preferred method for cleaning hands (when hands are not visibly soiled)
   - Clean between fingers, backs of hands, fingertips and thumbs
   - Clean hands for a minimum of 15 seconds

2. Put on Gown
   - Select appropriate size and type
   - Opening to the back
   - Secure neck and waist
   - If gown is too small, use two gowns:
     1. Gown #1 ties in front
     2. Gown #2 ties in back

3a. Put on Mask
   - Use a fluid resistant procedure mask or surgical mask or one-sip mask with attached eye protection
   - Place over nose, mouth and chin
   - Fit flexible nose piece over nose bridge
   - Secure on head with ties or ear loops
   - Adjust fit

3b. Use N95 Respirator
   - Select respirator according to fit testing
   - Place over nose, mouth and chin
   - Fit flexible nose piece over nose bridge
   - Secure on head with top elastic followed by bottom elastic
   - Adjust to fit
   - Perform a fit check:
     1. Inhale – respirator should collapse
     2. Exhale – check for leakage around face

4. Put on Eye Protection
   - Position goggles over head and secure to the head using the ear pieces or headband
   - Position face shield over face and secure brow with head band
   - Adjust to fit comfortably

5. Put on Gloves
   - Select correct type and size
   - Put on gloves
   - Extend gloves over cuffs of isolation gown

Adapted from the Center for Disease Control. Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007
# THE ORDER FOR TAKING OFF PERSONAL PROTECTIVE EQUIPMENT (PPE)

<table>
<thead>
<tr>
<th>Where to Take Off PPE</th>
<th>1</th>
<th>Take Off Gloves</th>
<th><img src="image1.png" alt="Image" /></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>Take Off Gown</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Clean Your Hands</td>
<td>Alcohol-based hand rub, OR… <img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Take Off Eye Protection</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>5a</td>
<td>Take Off Mask</td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>5b</td>
<td>Take Off N95 Respirator</td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Clean Your Hands</td>
<td>Alcohol-based hand rub, OR… <img src="image7.png" alt="Image" /></td>
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</tbody>
</table>

**How to Safely Use PPE**
- Keep gloved hands away from face
- Avoid touching or adjusting other PPE
- Take off gloves if they become torn; clean your hands before putting on new gloves
- Limit surfaces and items touched

Adapted from the Center for Disease Control Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007
Version Date: December 11, 2008
THE ORDER FOR TAKING OFF PERSONAL PROTECTIVE EQUIPMENT (PPE)

Where to Take Off PPE

- At doorway, before leaving patient/resident room

1. Take Off Gloves
   - Grasp outside edge near wrist
   - Peel away from hand, turning glove inside-out
   - Hold in opposite gloved hand
   - Slide ungloved finger under the wrist of the remaining glove
   - Peel off from the inside, creating a bag for both gloves
   - Discard

2. Take Off Gown
   - Unfasten ties
   - Peel gown away from neck and shoulders
   - Turn contaminated outside toward the inside
   - Fold or roll into a bundle
   - Discard in laundry hamper or garbage

3. Clean Your Hands
   - Alcohol-based hand rub is the preferred method for cleaning hands (when hands are not visibly soiled)
   - Clean between fingers, backs of hands, fingertips and thumbs
   - Clean hands for a minimum of 15 seconds
   - Refrain from using patient/resident sink

4. Take Off Eye Protection
   - Grasp ear or head pieces with ungloved hands
   - Lift away from face
   - Place in garbage or clean reusable eye protection

5a. Take Off Mask
   - Untie the bottom, then top tie or remove ear loops
   - Lift away from face while holding the ties or loops
   - Discard

5b. Or Take Off N95 Respirator
   - Lift the bottom elastic over your head first
   - Then lift off the top elastic
   - Lift away from face while holding the elastic
   - Discard

6. Clean Your Hands
   - Immediately after taking off PPE
   - Anytime you think your hands have become contaminated
   - Avoid from using patient/resident sink if possible

NOTIFICATION

3.1 Method of Notification

Notification of a possible exposure to one of the specified infectious diseases specified in the Designated Officer (DO) Protocol can occur in the following methods listed below. Procedure for assessing possible exposures following notification is reviewed for each section.

**Method 1**

Notification Initiated by an Emergency Service Worker (ESW)

- An ESW who believes that he/she may have been exposed to one of the specified infectious diseases should immediately report the incident to the DO.
- The ESW should provide detailed information of the situation, and any other information the DO may need.
- The DO then contacts Niagara Region Public Health, as necessary, for recommended actions.

**Method 2**

Notification Initiated by Niagara Region Public Health

- In the course of routine case management for infectious diseases, Niagara Region Public Health may receive a report of an infectious disease where there is a concern that ESW’s could have been exposed. This notification of possible exposure may come to Niagara Region Public Health from several different sources (e.g. physicians, hospitals or other health units)
- The Niagara Region Public Health routinely follows up reports of specific Infectious diseases and inquiries regarding potential contacts.
- The Niagara Region Public Health shall notify the DO of the appropriate Emergency Service Agency (police, fire, EMS) of the possible exposure.
- Notification will include recommendations for action. **Notification will NOT include disclosure of any information concerning the source of the possible infection in order to maintain confidentiality.**
- **Proper documentation of the exposure is the responsibility of the DO,** and should be done on agency specific forms. There is no requirement to forward these forms to Niagara Region Public Health
- If the ESW is confirmed as having had exposure to an infectious disease, Niagara Region Public Health will notify them of recommended actions or prophylactic medications (i.e. antibiotics) if necessary. All contact information will be kept confidential.
Method 3

Notification Initiated by Designated Officer

- If an ESW is concerned about a possible or known exposure to one of the specified Infectious diseases while offering emergency services, the ESW should notify a DO immediately and complete the appropriate forms (agency specified forms).
- The DO will assess the exposure based on the information provided by the ESW.
- The DO should refer to the appropriate section of this manual for information on assessment of exposure. (Section 5)
- The DO should determine whether the ESW could have been exposed to a specified Infectious disease.
- If the DO determines that an exposure could have occurred, he/she will provide the ESW with recommendations for post-exposure action based on the information in the Designated Officer’s Resource Manual.
- If the DO is not sure of the appropriate recommendations for post exposure, the DO should phone Niagara Region Public Health, see Niagara Region Public Health Contact Information for numbers) The Niagara Region Public Health will contact the DO as soon as possible after receiving a call.
- The DO should notify the ESW of the appropriate actions.
Criteria Form 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
  - Type of body fluid: ___________________________
  - Location of splash: ___________________________

- 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 a mouthpiece

- Human bite

- Other: _________________________________________
2. Worker’s Vaccination Status

- Workers Hepatitis B vaccination Status
  - Date of Series: 1. __________/________/______  2. __________/________/______  3. __________/________/______  
  - Antibody level: ___________________________  Date: __________/________/______

- Tetanus/Diphtheria
  - Date of immunization: __________/________/______

3. Personal Protective Equipment

- Did the worker wear the following?:
  - Face Shields/Goggles  - Gloves  - N – 95 Mask  - Protective clothing

- Was the personal protective equipment intact (e.g. were the gloves torn? Did any body fluids soak through)?:
  - Yes  - No

4. Assessment Results

- Exposure occurred?:  - Yes  - No

5. Recommendations:

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Completed By: ______________________________  Date: ______________________________
Designated Officer – Incident Assessment Form
(Sample)

1. How did the exposure occur?
   - Needlestick/punctured by sharp object
   - Splashed in the eye by ________________________ (type of body fluid)
   - Laceration of the skin splashed in the mouth by ________________________ (type of body fluid)
   - Non-intact skin exposed to _______________________________________ (type of body fluid)
   - Close contact with someone with a cough, possibly TB
   - Close contact with someone suspected of having meningococcal disease
   - Confinement in an enclosed area (e.g. vehicle, aircraft) with someone who was coughing
   - Giving mouth to mouth resuscitation to someone without using a mouthpiece
   - Human, animal or insect bite
   - Shared drinking glasses and other utensils other (describe in detail)
   - Other, please describe

2. What is the worker’s immune status? Are his/her immunizations up to date for:
   - Tetanus and Diphtheria
   - Rubella
   - Polio
   - Measles
   - Tuberculosis

   Has he or she received a full course of hepatitis B vaccine?
   - Yes
   - No

   When did he or she receive the last dose of hepatitis B vaccine?

   Was serology testing done to determine that he or she responded to the vaccine?
   - Yes
   - No

   When was the last testing done for the antibody?

3. What barrier precautions did the worker wear or use during the incident?
   - Goggles
   - N-95 Mask
   - Gloves
   - Apron or protective clothing
   - Other (describe in detail):

4. Were the barriers intact? (e.g. were the gloves torn?)
5. Did any body fluids soak through?
______________________________________________________

6. What body fluids was the worker exposed to?

☐ Blood
☐ Saliva
☐ Wound Drainage
☐ Vomitus
☐ Faeces
☐ Urine

7. How long was the contact/exposure? (e.g. the worker was in the same aircraft or vehicle for # hours, the worker was soaked with (type of body fluid) for at least (length of time) before washing it off.

______________________________________________________
______________________________________________________
______________________________________________________

8. Did a significant exposure occur?

☐ Yes
  ○ Blood borne or
  ○ Respiratory

☐ No

9. What other information is available that will help assess exposure? (e.g. suspected diagnosis of the contact, location of the exposure, such as a crack house, shooting gallery, homeless shelter, center for the developmentally challenged, animal shelter or place with pets, school for children, rock concert hall)

10. Was the Medical Officer of Health contacted?

☐ Yes Name and Phone Number: __________________________________________________

☐ No

11. What advice was given to the worker?

☐ Reassurance
☐ Reinforce infection control procedures
☐ Informed that an exposure has occurred
☐ If an exposure has occurred to follow-up with family physician
☐ To seek medical attention at nearest hospital emergency
☐ Other _________________________________________________________________________

Signature of Designated Officer ____________________________________________

Date __________________________
ASSESSING EXPOSURES AND ACTIONS

4.1 Diseases Spread by Blood Borne Route

A significant exposure to an infectious disease is one in which the risk of transmission of microorganisms is relatively high. Criteria such as the type of exposure, length of exposure and the nature of the disease help determine the significance.

Blood and Body Fluids:
The following body fluids can transmit certain viruses from one person to another. This occurs when infected fluid enters the body of an uninfected person.
- blood
- semen
- vagina fluids

These fluids could be infected with:

- **Human Immunodeficiency Virus (HIV)**
  HIV, the virus that causes AIDS, attacks and seriously damages the body’s immune system. An individual who is infected with HIV may suffer more frequent minor illnesses than someone with an intact immune system, and will also be more likely to develop serious health problems such as pneumonia and certain types of cancer. They can also pass this virus on to others for the rest of their lives.

- **Hepatitis B**
  Hepatitis B virus (HBV) is a virus that is found in blood, vaginal secretions and semen of people who carry the virus. Only a small percentage of people who get this virus will become ill, and some will carry the virus for the rest of their lives. Most people will recover from the infection, and not carry the virus. The virus affects the liver of those who are infected and those who are carriers of the virus. Hepatitis B can be prevented through vaccination.

- **Hepatitis C**
  Hepatitis C virus (HCV) is a virus that is found in blood. Only some of the people who are infected will become ill within weeks or months of exposure, most of the time the illness is mild. Most people who are infected have no symptoms, but carry the virus and can give it to others. People who carry this virus are at risk of developing liver disease (cirrhosis) or liver cancer over time.

An exposure to these 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
- 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 bodily fluids coming in contact with intact skin
- Blood or body fluids coming in contact with protective clothing
- Splashing of blood or body fluids into the face where a mask and goggles are worn

Assessing the exposure:

- Did the blood or body fluid enter the ESW’s body-through a break in the skin or through mucosal lining (eyes, mouth)?
- Has the ESW been immunized for Hepatitis B? (Even with immunization there is a small risk that a person is not fully immune to Hepatitis B, antibody levels can be measured to ensure immunity).

ACTIONS:

1. ESW notifies DO to provide information on the exposure.

2. If there has been an exposure to blood or body fluids, the ESW should go immediately to one of the Hospital Emergency Departments for a medical assessment by a physician.

3. If the Emergency room physician examines the ESW and determines that an exposure has occurred, the ESW should have baseline testing for HIV, Hepatitis B and Hepatitis C. If the blood tests are negative, they should be repeated at three months and six months after the exposure. Baseline testing is important to assess infection from the exposure.

4. The physician who assesses the ESW will determine the need for prophylactic treatment or vaccination to prevent infection from occurring.

5. The ESW should be counselled that certain precautions be taken to protect others until the ESW is certain that he/she has not been infected (this may take several months).
   - **Practice safer sex by using a latex condom** with non-petroleum based lubricant at all times during intercourse or abstain from sexual intercourse.
   - **Do not donate** blood, plasma, organs, tissue or semen.
   - **Do not share** toothbrushes razors, needles or other implements which may be contaminated with blood or body fluids.
   - Speak to your Physician if you are considering becoming pregnant.
   - Speak to your Physician if you are breastfeeding and considering taking HIV medications.
Sites Where Post Exposure Prophylaxis Is Available in Niagara Region

Post exposure prophylaxis is offered, after assessment by a physician, and where risk is deemed to be significant, at the following Hospital Emergency Departments:

For the following sites contact: 905-378-4647

- Greater Niagara General Hospital, Niagara Falls
- Welland County General Hospital, Welland
- St. Catharines General Hospital, St. Catharines
- Port Colborne General Hospital, Port Colborne
- Douglas Memorial Hospital, Fort Erie

For the following site contact: 905-945-2253

- West Lincoln Memorial Hospital, Grimsby
4.2 Diseases Spread By Airborne Route

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)
Tuberculosis (TB) is caused when tiny bacteria, that infect the lungs, cause infection. Most people with TB infection will not get sick or spread TB to others (latent TB infection). Latent TB infection (LBTI) occurs when the TB bacteria lives in your body but does not make you sick. For those who do get sick with TB, the illness may occur months or years later (TB disease). TB disease occurs when TB bacteria are multiplying in your body. TB is treatable with medications. TB usually attacks the lungs, but it can affect any organ including the brain, kidneys or spine. Extrapulmonary TB (TB outside the lungs) is not infectious.

An exposure to TB could occur when:
- Enclosed in a confined area (e.g. ambulance, car) over a long period of time with an individual who is coughing vigorously
- 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 an N-95 mask that covers mouth and nose (for near 100% protection, use an appropriately fit tested mask)
- Mouth-to-mouth resuscitation was performed using barrier protection or bag valve

Assessing exposure:
- 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 put him/her in face to face contact with the individual?
- Was the ESW in a confined space with the patient? Was there any air circulation?
- Did the ESW use appropriate PPE?

ACTIONS:

1. ESW should notify DO immediately

2. ESW should see family physician for assessment of exposure to TB. Alternately, the ESW may attend Niagara Region Public Health for a TB skin test.

   NOTE: Recommendations for TB skin testing may differ depending on timing of exposure.

3. Testing for TB usually includes skin testing done after exposure and again at 8 weeks. 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 or other tests indicative of infection, medications may be recommended.
4.3 Diseases Spread by Droplet and/or Direct Contact

**Meningococcal Disease (meningitis)**
Meningococcal disease is caused by bacteria called *Neisseria meningitidis*. Two serious forms of the disease are meningitis and meningococcaemia. Meningococcal meningitis occurs when the bacteria inflame the membrane that surrounds the brain and spinal cord.

**Invasive Group A Streptococcus (GAS)**
There are two serious forms of GAS infection. “Streptococcal Toxic Shock Syndrome” is a severe infection associated with shock and multi-organ failure. “Necrotizing Fascitis” or “flesh-eating disease” is a soft tissue infection characterized by rapidly spreading inflammation and breakdown necrosis of muscle fascia (covering of the muscles) and fat.

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 directly into the face of an ESW without proper PPE (mask and eyewear)
- Suctioning or intubation without proper PPE (mask and eyewear) where nasal or oral secretions come in contact with mucous membranes
- Contact with fluid from a wound without proper PPE

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, nasal secretions or fluid from a wound of someone with these infections
- Routine Practice is used
- Being in an enclosed space with someone who has one of these infections

Assessing exposure:
- Did the ESW perform any procedures that put him/her in direct contact with oral/nasal secretions?
- Did the ESW wear appropriate personal protective equipment (PPE)?
- Did the ESW have any broken areas on their skin?

Actions:
1. The ESW should notify the DO immediately. The DO should notify the Niagara Region Public Health contact to determine whether the Niagara Region Public Health is recommending preventative antibiotics (and vaccine for vaccine preventable strains of meningococcal diseases).
2. The ESW should seek assessment from his/her family physician as soon as possible. Prophylactic medication may be recommended for ESW’s in direct contact with oral/nasal secretions or direct contact with lesions with inappropriate PPE.
3. Prophylactic medication is not routinely indicated for ESW’s unless there is a confirmed exposure.
Antibiotic Resistant Organisms (ARO’s)

These infections are NOT part of the Designated Officer Program. This section on Antibiotic Resistant Organisms is for information only.

5. Antibiotic Resistant Organisms

Antibiotic resistant organisms (ARO’s) are becoming more common. These bacteria cannot be killed with the usual antibiotic medicines. ARO’s are commonly found in hospitals, long-term care facilities and in the community. They are mainly spread by contact with unwashed hands. A person who is colonized with an ARO and is not ill, is considered a “carrier”. Persons who are ill with ARO’s are considered “infected”.

Treatment of those ill with an antibiotic resistant organism may be complex, since regular antibiotic treatment does not work. Some carriers of ARO, may be treated to eliminate the ARO.

The most common antibiotic resistant organisms are Methicillin Resistant Staphylococcus Aureus (MRSA), Vancomycin Resistant Enterococci (VRE). Fact Sheets are at the end of section 6.

Preventing Transmission of Antibiotic Resistant Organisms (ARO)

Clean Your Hands
- Is the simplest and yet the MOST effective method for controlling the spread for ARO’s.
- Cleaning your hands should be done between patient/client care, after removing gloves, following wound care, or other procedure(s).
- Where soap and water are not available, alcohol based hand rubs containing >70-90% are effective.

Routine Practices
- Hands should be washed after removing gloves.
- Disposable gloves should be used for any contact with secretions or with wounds and non-intact skin.
- Gowns are not indicated unless there is high risk of soiling clothes with body fluids during care, or if there are large colonized or infected wounds present.
- Masks are usually not required.

Environmental Cleaning
- MRSA/VRE live on surfaces. Equipment must be cleaned prior to re-use.
- Follow Emergency Service Agency procedures for disinfecting equipment.

For further information on Routine Practices and Additional Precautions, please refer to the following websites:
http://www.health.gov.on.ca/english/providers/program/infectious/pidac/pidac_mn.html
http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_cds.html
MRSA (Methicillin Resistant Staphylococcus Aureus)

What is MRSA?

*Staphylococcus aureus* (*S. aureus* or *staph* bacteria) is a common bacteria that lives on the skin and in the nose and rectum of many healthy people. People who carry the staph bacteria without causing illness are known as carriers. Carriers can unknowingly spread the bacteria to others. These bacteria are the most common causes of skin infections. The usual antibiotic used to treat *S. aureus* infections is called methicillin. Some strains of *S. aureus* are not killed by methicillin and are called Methicillin Resistant Staphylococcus Aureus (MRSA).

MRSA occurs most often in hospitals, long term care facilities, and dialysis units because patients may have weakened immune systems. People at greatest risk of developing an MRSA infection are those with open wounds, drainage tubes, catheters, intravenous (IV), frequent hospital admissions and people who have received frequent antibiotic treatment.

Community-associated MRSA (CA-MRSA) is MRSA that develops in healthy people who have not recently been hospitalized, or had medical procedures.

What are the symptoms?

MRSA infections may be minor, and appear as pimples or boils. Infection causing symptoms occur when the bacteria is able to get into the body. If left untreated, the infection may cause serious skin infections with redness, discharge from a wound, fever and general unwell feelings. MRSA can also cause pneumonia, and infections in bones or blood.

How is it spread?

The single most important way MRSA is spread is by the hands of health care workers. It may be on hands after contact with articles that were soiled by the skin of a person with MRSA. This can include towels, sheets, wound dressings, and frequently touched items such as phones, equipment, nurse call bell, faucets, etc. It is also spread by close skin to skin contact with an infected person.

How long is it contagious?

A person is contagious as long as the bacteria is present in their nose or rectum.

How is it diagnosed?

MRSA is diagnosed through a swab taken from the nose, the rectum or any open wounds. In general, a person with MRSA remains a carrier until a negative swab is obtained for 3 consecutive weeks.

What is the treatment?

Since MRSA is resistant to certain antibiotics your health care provider may prescribe a combination of other antibiotics that might get rid of the infection. It is important to take all of your medication even if the infection is getting better. Some people who have been treated for an MRSA infection will continue to be a carrier of the bacteria.
How can it be prevented?

Institutions such as hospitals and long term care facilities must take special precautions to make sure that the bacteria does not spread to other patients, staff, friends and family. These include:

- Regular hand cleaning with either soap and water, or an alcohol based hand sanitizer
- Keeping any wounds covered with a clean dry bandage
- Appropriate patient/resident placement
- Wearing gloves and long sleeved gowns when entering patient’s room in hospital, OR
- Wearing gloves and long sleeved gown when providing direct care* to residents in long term care facilities
- Daily cleaning of all touched surfaces in the room
- Dedicated equipment or cleaning and disinfecting of shared equipment

*Direct care is providing hands on care such as bathing, washing, turning resident/patient, changing clothes/diapers, dressing changes, toileting, care of open wounds.

In the home setting, very few precautions are needed other than good hygiene and cleaning your hands.

This information is intended to provide general health-related information about MRSA. It is not intended to replace medical consultation by your physician and/or other health care professionals.

Vancomycin Resistant Eterococcus (VRE)

What is it?
*Enterococci* are usually harmless bacteria which can live in the intestines of people. Vancomycin is an antibiotic that is often used to treat very serious infections. VRE is a bacteria that cannot be destroyed by vancomycin.

What are the symptoms?
Persons with VRE are usually “colonized”. This means that the bacteria is present in the bowel and is not making you sick. The concern about VRE is that if very sick, weak patients develop VRE infections of the urinary tract, wounds or bloodstream then there is no proven effective antibiotic treatment.

Who is at risk of infection?
VRE infection is rare. Patients most at risk of getting VRE are those who have:

- Been in an intensive care unit
- Long term illness
- Been on many types of antibiotics
- Had major surgery or are being treated for illnesses such as cancer or severe kidney disease
- Had an organ transplant
- Been treated with Vancomycin in the past

How is it spread?
The most common way VRE is spread is touching someone who is colonised or infected, or touching a surface that has the bacteria on it, such as a hospital bed or table.

How is it diagnosed?
A doctor orders a sample of your blood, urine or stool to be sent to a laboratory for testing.

How long is it contagious?
VRE infected/colonized persons must have regular testing to keep an eye on their status. Rectal swabs should be taken approximately one week apart and until three consecutive cultures have been received. Persons with a history of VRE should have periodic examinations, especially after antibiotic therapy to monitor re-colonization/re-infection.

How is it treated?
VRE is often resistant to commonly used antibiotics. Patients with a VRE infection may need to be cared for by a specialist so they can get the right treatment and antibiotics.

How can the spread of VRE be prevented?
At home:
- The bathroom should be cleaned regularly
- Areas contaminated by hands, such as toilet flushes, taps and other surfaces should be wiped with a diluted bleach solution (one part household liquid bleach to nine parts water)

In hospitals and nursing homes:
- Practice infection prevention and control measures regularly
- create procedures for screening on admission
- Handwashing is essential before and after you leave the patient's room
- If handwashing facilities are not available, use an alcohol based hand rub containing 70–90% alcohol
- Gowns and gloves must be used when there may be contact with stool or when providing wound care
- Patient care equipment should not be shared until thoroughly cleaned and sanitized
- Enhanced environmental cleaning

This information is intended to provide general health-related information about VRE. It is not intended to replace medical consultation by your doctor and/or other health care professionals.


6. Bill 28/Mandatory Blood Testing Act
The Mandatory Blood Testing Act, 2006 permits a person who, as a result of being a victim of a crime, or while providing emergency health care services or emergency first aid, or in the course of his or her duties (if the person belongs to a prescribed class or while carrying out a prescribed activity) came into contact with the bodily substance of another person to apply to a medical officer of health to have the blood of the other individual analyzed for: Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS), Hepatitis B and Hepatitis C.

The Mandatory Blood Testing Act (MBTA), received Royal Assent on December 20, 2006, and came into force on August 10, 2007. Both the Act and Ontario Regulation 449/07 (the Regulation), made under the Act, establish the requirements and procedures which must be followed with respect to an application for mandatory blood testing.

Section 22.1 of the Health Protection and Promotion Act (Bill 105) and Ontario Regulation 166/03 have been repealed and are no longer in force.

The Mandatory Blood Testing Act allows for applications to be made by the following classes of persons:

- An Applicant who came into contact with a bodily substance of the Respondent in any of the following circumstances:
  1. As a result of being the victim of crime;
  2. While providing emergency health care services or emergency first aid to the Respondent, if the Respondent was ill, injured or unconscious as a result of an accident or other emergency;
  3. In the course of his or her duties if the Applicant belongs to one of the following prescribed classes:
     - Persons employed in a correction institution, place of open custody or place of secured custody, as those terms are defined in the Ministry of Correctional Services Act;
     - Police officers as defined in the Police Services Act, employees of a police force who are not police officers, First Nations Constables and auxiliary members of a police force;
     - Firefighters, as that term is defined in the Fire Protection and Prevention Act, 1997;
     - Paramedics and emergency medical attendants, as those terms are defined in the Ambulance Act;
     - Paramedic students engaged in field training;
     - Members of the College of Nurses of Ontario; and
     - Members of the College of Physicians and Surgeons of Ontario and medical students engaged in training.

### 6.1 Background
The Mandatory Blood Testing Act 2006, came into force on August 10, 2007. The act reduces the time needed to obtain a mandatory blood test to less than three weeks. Previously, the process could take more than two months.

The new law ensures that police officers, firefighters, correctional services staff and others get faster access to information that can help them decide on the best way to reduce the risk of illness should they be exposed to a serious disease.

In the course of their work, emergency first aid providers can be exposed to bloodborne diseases such as HIV/AIDS, hepatitis B or C. Victims of crime, Good Samaritans and others could be similarly exposed.

**Eligible applicants**
Anyone may apply to a Medical Officer of health to have a blood sample of another person analyzed if he or she has come into contact with a bodily substance of 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:
  - Persons who are employed in correctional institution, place of open custody or place of secure custody
  - Police officers, civilian employees of a police service, First nations constables and auxiliary members of a police service
  - Firefighters (including volunteer firefighters)
  - Paramedics and emergency medical attendants
  - Members of the College of Nurses of Ontario
  - Paramedic students in the field of training
  - Members of the College of Physicians and Surgeons of Ontario
  - Medical students engaged in training

**Application process**
Applications must be submitted to the Medical Officer of Health in the health unit where the respondent lives.

Applicants can find the phone number of health units and the areas they cover on the application form.

All relevant forms, including the application report, respondent report and physician report, can be accessed via the Ministry of Community Safety and Correctional Services website at http://www.mcscs.jus.gov.on.ca/english/LinksResources/MandatoryBloodTesting/blood_testing.html

All forms related to the Mandatory Blood Testing Act 2006, can be found on the following website: http://www.mcscs.jus.gov.on.ca/english/LinksResources/MandatoryBloodTesting/Forms/mbt_forms.html

The Laboratory Requisition (form #008-004) is only available in hardcopy from your nearest Public Health Unit or Regional Public Health Laboratory. The contact information for the Public
Health Units and Regional Laboratories is available from the Ministry of Health and Long Term Care at: [http://www.health.gov.on.ca/english/public/contact/contact_mn.html](http://www.health.gov.on.ca/english/public/contact/contact_mn.html)

**Role of the Medical Officer of Health**

The Medical Officer of Health screens applications to make sure they meet the requirements of the act.

- The Medical Officer of Health will notify the applicant in writing within two days of making a decision not to proceed with the application if the application does not meet the requirements of the act.
- If the requirements are met, the Medical Officer of Health will attempt to contact the respondent and request that the respondent provide a voluntary blood sample for analysis.
- If the respondent does not provide a blood sample voluntarily within two days of the Medical Officer of Health receiving the application, the application will be referred to the Consent and Capacity Board, which will hold a hearing to decide whether to issue a mandatory order.*

* **NOTE:** The Medical Officer of Health can continue to seek voluntary compliance even after the application is referred to the Consent and Capacity Board. If the respondent provides a sample voluntarily after the application is referred to the Consent and Capacity Board, the Medical Officer of Health shall notify the Board and withdraw the referral of the application.

**Role of the Consent and Capacity Board**

The Consent and Capacity Board is an independent body that conducts hearings under the Mental Health Act, the Health Care Consent Act, the Personal Health Information Protection Act and the Substitute Decisions Act. The members of the Board include psychiatrists, lawyers and members of the general public.

The Consent and Capacity Board must begin and complete a hearing within seven days after receiving a referral of an application and must make its decision within one day of the hearing ending.

The Board will provide the applicant, the respondent and the Medical Officer of Health with a copy of the Board’s decision and a copy of any order made by the Board within one day after the day the hearing concludes.

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

- If the respondent voluntarily complies, he/she has a blood sample taken by a physician. The respondent may also provide other evidence of whether he or she is infected with one of the listed communicable diseases. This evidence may include a Laboratory Report or a report or letter signed by a physician.
If the respondent does not comply with an order made by the Board, the applicant may apply to a judge of the Superior Court of Justice for an order requiring the respondent to comply with the order of the Board.

The following processes are applicable to blood samples provided both voluntarily or by order of the Consent and Capacity Board:

**Identification of respondent**

At the time of the blood test, the respondent must present valid photo identification. If the person does not have photo identification they will be required to provide two pieces of identification with both their name and signature.

If proper identification is not produced, the blood sample will not be taken.

**Notification protocol for blood sample results:**

The Central Public Health Laboratory will send the results of the blood test to the applicant’s and respondent’s physicians. At the same time, notice is sent to the applicant and respondent that the results of the blood test have been sent to their respective physicians.

**Penalty for non-compliance**

Anyone who fails to obey an order of the Consent and Capacity Board, or contravenes or fails to comply with any requirement under the Mandatory Blood Testing Act, 2006, or of a regulation under the act is guilty of an offence and liable on conviction to a fine of not more than $5000 for every day or part of a day on which the offence occurs or continues.
6.2 Questions and Answers

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.

The new law makes sure that police officers, firefighters, correctional services staff and others get faster access to information that can help them decide the best way to reduce the chances of getting sick should they be exposed to a serious disease.

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 he or she has 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 Medical Officer of Health to have a blood sample of another person analyzed if he or she has 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
- Persons who are employed in correctional institution, place of open custody or place of secure custody
- Police officers, civilian employees of a police service, First nations constables and auxiliary members of a police service
- Firefighters (including volunteer firefighters)
- Paramedics and emergency medical attendants
- Members of the College of Nurses of Ontario
- Paramedic students in the field of training
- Members of the College of Physicians and Surgeons of Ontario
- Medical students engaged in training
- Paramedic students engaged in field training
Where should applications be submitted?

Applications must be submitted to the Medical Officer of Health 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 Medical Officer of Health 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 Medical Officer of Health 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 Medical Officer of Health will attempt to contact the respondent and request that the respondent voluntarily provide a blood sample for testing.

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 Medical Officer of Health receiving the application, 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 Medical Officer of Health. 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 Medical Officer of Health, 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.

I submitted an application under the previous provisions of the Health Protection and Promotion Act 1990. My application has not been processed. Do I have to make a new application now that the Mandatory Blood Testing Act, 2006, is in effect?

Any order that was made by a Medical Officer of Health under the previous legislation (section 22.1 of the Health Protection and Promotion Act) before the new legislation came into effect remains effective after the new Act comes into effect.

If an application was made to a Medical Officer of Health under the previous legislation, but an order has not yet been made, the application will be processed under the new Act.

If the Medical Officer of Health began a hearing under the previous legislation before the Mandatory Blood Testing Act, 2006, came into force, the application will be dealt with under the previous legislation.

Where can I find the mandatory blood testing forms?

All forms related to the Mandatory Blood Testing Act 2006, can be found on the following website:
http://www.mcsks.jus.gov.on.ca/english/LinksResources/MandatoryBloodTesting/Forms/mbt_forms.html
7. FACT SHEETS

Human Immunodeficiency Virus (HIV)
Acquired Immunodeficiency Syndrome (AIDS)

What is it?

AIDS stands for Acquired Immunodeficiency Syndrome and is caused by the Human Immunodeficiency Virus (HIV). This virus attacks and seriously damages the body’s immune system. The immune system acts as a defence against disease, and, when it is damaged, the individual is more susceptible to disease and infection. This means that someone who is infected with HIV may suffer from more frequent minor illnesses than someone with an intact immune system, and will also be more likely to develop serious health problems such as pneumonia and certain types of cancer.

Transmission

HIV is carried in the blood, semen, vaginal fluid and breast milk. To become infected with HIV, the virus must have access to your blood stream through one of these fluids. Social or community contact with an HIV-infected person carries no risk of transmission. Only sexual exposure, exposure to blood or infected bodily fluids including direct inoculation from contaminated sharps (needlesticks and injection drug use) and an infected mother to baby during pregnancy, at birth or during breast feeding carries a risk.

The incubation period for HIV is variable 3-12 weeks. Although the time from infection to the development of detectable antibodies is generally 1 months, the time from HIV infection to diagnosis of AIDS has an observed range of about 2 months to 15 years or longer. Treatment lengthens the incubation period.

The period of infectiousness is not precise. It is believed to begin early after an individual becomes infected with HIV and to extend throughout life. More virus is present (the individual is more infectious) in the first few months, after infection and during advanced illness, when the immune system is severely damaged (AIDS).

Everyone is susceptible to HIV infection. Anyone can become infected with HIV if they are exposed to the virus through infected body fluids. Anyone who has unprotected sexual intercourse (including oral sex), shares needles, has had a blood transfusion prior to 1985, or is born to a mother who is HIV positive is at risk.

Symptoms

Some people may develop flu-like illness within several weeks of infection. After this an individual may have no signs or symptoms of infection for a very long time, often years. When signs of immune problems start to appear they are related to the breakdown of the immune system, and often are unusual or opportunistic infections.
Treatment/Management

There is no cure for HIV at this time, although there are many medications that allow individuals to remain healthy for a long time.

Prevention and Protection

- There is currently no vaccine available for HIV.
- Care should be taken in handling, using and disposing of needles and other sharp instruments.
- Avoid direct contact with blood/body fluids. Gloves should be worn if contact with blood or body fluids is likely to occur. Blood on the worker’s skin should be washed off with soap and water without delay.
- Avoid contact with open lesions. Cover any draining wounds with a dressing.
- Assume that everyone’s blood has the potential to be infected, and always take precautions.

Is there a test for HIV?

A test is available for HIV infection. The test detects the body’s immune response to the virus. However, it can take up to 12 weeks (rarely 6 months) for the body to have a strong enough immune response that the test will pick it up accurately. This means that tests conducted too soon after exposure may be negative even though the virus is in the body. It is best to have a test immediately after a possible exposure to see if infection has occurred earlier to have a second test after twelve weeks, and a third test six months after the possible exposure.

If infection with HIV has occurred, many effective medications are available to slow the progression of this virus. See a physician for more information and educational material on HIV/AIDS. People infected with HIV must practice safe sex, not share needles, consider discontinuing breast-feeding and avoid pregnancy until they seek medical advice so that other people do not become infected with HIV.

Adapted from the Durham Region Health Department, 2006.
Hepatitis B

What is it?
Hepatitis B is a liver disease caused by the Hepatitis B virus. The word “hepatitis” means inflammation of the liver.

What are the symptoms?
Many adults and most children who become infected with this virus do not have symptoms. People who do develop symptoms complain of weakness and feeling tired. They may have vomiting and/or diarrhea, dark urine and yellowing of the skin and eyes (jaundice). Some people also have abdominal pain.

Most adults who become infected recover completely and develop antibodies that protect them for life against infection. There are a small number of adults (10%) who cannot clear the virus and become carriers of Hepatitis B. Carriers may have symptoms that come and go throughout their lives, or carriers may have no symptoms at all, but they can still infect others. Some carriers develop scarring on their liver (cirrhosis). There is a risk of liver cancer in those who are carriers of Hepatitis B.

How soon do symptoms start?
If symptoms develop, it is usually within 60-90 days, but can range from 45-180 days, after being exposed to the virus.

How is hepatitis B diagnosed?
Hepatitis B can only be diagnosed through a blood test.

How is it spread?
The virus is found in blood, semen, vaginal secretions or saliva of an infected person. It can be spread through sexual contact, used needles, body piercing/tattooing with unsterilized equipment and close household contact with an infected person. Mothers who are Hepatitis B carriers can also spread the infection to their babies and up to 90% of these infants become Hepatitis carriers. Hepatitis B is not spread by water or food.

How is Hepatitis B prevented?
Vaccination for Hepatitis B is the best protection!

- Hepatitis B vaccination has been offered in Ontario schools to all Grade 7 students since 1994.
- All pregnant women receiving prenatal care are screened for Hepatitis B. Babies born to mothers who are Hepatitis B carriers will receive the recommended vaccinations for free.
- Household and/or sexual contacts of persons infected with Hepatitis B and patients receiving renal dialysis, or frequent blood products can also receive the vaccination for free.
- Vaccination is also recommended for high risk behaviours such as multiple sexual partners, injection drug use and men having sex with men.
- Health care and public safety workers who may come into contact with blood or bodily fluids should be vaccinated against Hepatitis B.
- Tattooing and body piercing procedures should involve clean and sterilized equipment.
People who are planning to travel internationally may be advised to have the Hepatitis B vaccination.

**What should I do if I have the Hepatitis B virus?**

1. Encourage your sex partners to see a doctor for a Hepatitis B blood test, assessment and possible immunization.

2. Use a condom if you have sex with a person who is not immune to Hepatitis B.

3. If you become pregnant, tell your doctor that you have Hepatitis B so that your infant can be protected at birth by receiving the vaccine and immune globulin.

4. Tell your doctor and dentist that you have Hepatitis B infection.

5. Never share your toothbrush, razor, nail file or other items that may contain tiny amounts of blood (i.e., drug equipment).

6. Never donate blood, tissue or semen.

7. Clean up spills of blood with soap and water, then wipe the surface with freshly diluted household bleach (i.e., one part bleach mixed with nine parts water) and let it stand for 10 minutes before wiping off. The bleach will kill any Hepatitis B virus left on the surface.

8. Get rid of articles stained with blood (e.g., tampons, dental floss, bandages, etc.) by putting in a plastic bag in garbage, or flushing down a toilet (small items only).

9. You can prepare and serve food as long as you do not have bleeding or oozing cuts and sores on your hands. Other sores and cuts on your body should be covered.

10. Health care workers should always practice Routine Practices when handling blood or body fluids. This practice will prevent the spread of infection.

11. You can swim in public pools if you do not have open cuts or sores.

12. Avoid alcohol as this can further damage your liver.

13. Get the Hepatitis A and pneumococcal vaccine to protect your liver from these infections (provided free from the Ministry of Health for those at high risk). Speak to your doctor regarding these 2 vaccines.

This information is intended to provide general health-related information about Hepatitis B. It is not intended to replace medical consultation by your physician and/or other health care professionals.


David L. Heymann

Hepatitis C

What is it?
Hepatitis C virus is a liver disease caused by the Hepatitis C virus (HCV). The word “hepatitis” means inflammation of the liver. Almost 1% of the Canadian population carry HCV, although many do not know they have Hepatitis C. About 20-30% of persons infected with HCV will recover without treatment. Those who do not clear the virus are at risk of developing cirrhosis (scarring of the liver) and liver cancer. This slow and silent virus can take 20-30 years to cause liver damage.

What are the symptoms?
Most people who become infected do not have symptoms. About 2 weeks to 6 months after exposure, some may develop fatigue, nausea, loss of appetite, jaundice (yellow skin and eyes) and dark urine. Symptoms may also develop very late in the course of the disease when liver damage has occurred.

How is it spread?
Hepatitis C is spread by direct blood-to-blood contact. Before 1992, many cases of Hepatitis C were spread through the use of blood or blood products. Improvements in blood product treatments and screening of blood have reduced the risk of getting Hepatitis C from blood transfusions. Now the main way the virus is spread is through IV drug use and use of unclean tattooing and body piercing equipment. Hepatitis C is not spread by casual contact such as hugging, kissing or shaking hands. The virus is not found in food or water.

Other possible ways that Hepatitis C may be spread:
- Accidental needlestick
- Unprotected sex that involves contact with infected blood
- Mother to baby

How can I prevent the spread of Hepatitis C?
- There is no vaccine for Hepatitis C
- Do not donate blood, body organs, tissues or semen
- Tell your dentist, doctor, health care workers, sexual contacts, and household members
- Do not share toothbrushes, nail clippers/files, razors, or needles/drug paraphernalia
- Always use a clean needle or syringe
- Use a latex condom during sexual intercourse
- Cover open wounds, cuts and sores

How long is a person infectious?
Those individuals who do not get rid of the Hepatitis C virus are infectious for their lifetime.

How is it diagnosed?
The main test for Hepatitis C is an anti-HCV test. It detects the Hepatitis C virus (HCV) antibodies in the blood which are produced in response to infection by the Hepatitis C virus. To determine if the virus has been cleared, a follow-up blood test called HCV RNA can be ordered.
What is the treatment?
There are effective treatments for Hepatitis C. Drug therapy can clear the virus in more than half of those treated. The two primary drugs are Pegylated Interferon and Ribavirin. Treatment usually takes 24 to 48 weeks. The Trillium Drug Plan (application at local pharmacy) is available to defer cost ([http://www.health.gov.on.ca/english/public/pub/drugs/trillium.html](http://www.health.gov.on.ca/english/public/pub/drugs/trillium.html)).

How can I live well with Hepatitis C?
- Seek ongoing medical care with blood work every 6-12 months to assess liver function
- Avoid alcohol, use of illegal drugs and smoking as it can damage your liver more quickly
- Eat healthy and exercise regularly
- Before taking over the counter medication speak to your physician or pharmacist as some may be harmful to your liver
- Talk to your doctor about being tested for Hepatitis A and B
- Hepatitis A, Hepatitis B, Pneumococcal and Influenza vaccines are recommended

Where can I go for help?
- Hepatitis C Society of Canada: 1-800-652-4372
- Canadian Liver Foundation: 1-800-563-5483

This information is intended to provide general health-related information about Hepatitis C. It is not intended to replace medical consultation by your physician and/or other health care professionals.

Sources: Public Health Agency of Canada (April 2008) Hepatitis C Fact Sheet CMAJ. 2006. Hepatitis C: A Review for Primary Care Physicians. Vol 174 No 5. pages 649-59 CATIE 2008, [www.hepcinfo.ca/are_you_at_risk_e.html](http://www.hepcinfo.ca/are_you_at_risk_e.html)
Tuberculosis (TB)

What is it?
Tuberculosis (TB) is a disease caused by a bacteria. The bacteria usually causes an infection in the lungs, but can infect other parts of the body, such as the brain, kidneys or bones. People can have active TB disease or inactive Latent Tuberculosis Infection (LTBI).

How is it spread?
TB bacteria are spread through the air from person to person. These bacteria get into the air when someone with active infectious TB coughs, sneezes, sings, or to a lesser degree talks. TB is not highly contagious. Close and regular contact, such as living in the same house with someone who has active TB disease is needed for someone to get infection. It is not spread by:

- Shaking hands
- Sharing food or drink
- Touching bed linens or toilet seats
- Sharing toothbrushes
- Kissing

Latent TB Infection and TB Disease
Not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist: latent TB infection and active TB disease.

Latent TB Infection (LTBI) is when the TB bacteria lives in your body but does not make you sick
- For most people (90%) who breathe in TB bacteria and become infected, the body is able to stop the bacteria from growing
- You do not have any symptoms and you will not feel sick
- You cannot spread the bacteria to other people
- Many people with LTBI never get sick; for most the only sign of LTBI is a positive reaction to the TB skin test

TB Disease is when the TB bacteria are multiplying in your body. TB disease will make you sick. Symptoms may include:

- Fever
- Night sweats
- Chills
- Fatigue
- Unexplained weight loss or poor weight gain
- Cough that persists for greater than 3 weeks or longer
- Coughing up blood
- Loss of appetite

How soon do symptoms appear?
Symptoms may appear many years after infection or never. Disease development also depends on the body’s immune system.

This information is intended to provide general health-related information about Tuberculosis. It is not intended to replace medical consultation by your physician and/or other health care professionals.

Influenza (flu)

What is it?
Influenza, commonly called “the flu,” is a respiratory disease caused by a virus. Influenza season in Canada extends from November to April.

There are three types of flu virus: A, B, and C. Influenza A and B are the most common. Each type has many different strains, which tend to change each year. New strains are named by both type and place where they are found.

For most healthy children and adults, flu is typically a moderately severe illness. Most people recover within a week. Flu is most serious for the elderly, people with chronic underlying illnesses such as cancer, emphysema or diabetes, or those with weak immune systems.

What are the symptoms?
- Sudden onset of fever (over 38°C)
- Headache, cough, body aches, chills, extreme fatigue, and congestion in the nose, throat, and lungs
- Vomiting and/or diarrhea can occur in children and the elderly

How soon do symptoms appear?
Symptoms usually appear one to four days after exposure.

How is it spread?
- The flu spreads very easily
- Spread through droplets from the nose and throat of an infected person who coughs or sneezes
- It is also spread by touching an object or surface like toys, clothing, and door knob after an infected person has touched it with unclean hands

How long is it contagious?
- The contagious period varies, but normally begins the day before symptoms appear and lasts 3-5 days in adults; up to 10 days in young children.

Can it be prevented?
- Get your flu shot annually
- Cover your nose and mouth when sneezing or coughing with a tissue or into your sleeve
- Clean your hands often
- Stay home if you are sick

How is it treated?
- Bed rest and drink plenty of liquids
- Acetaminophen/Tylenol can lessen fever and body aches
- Prescription drugs called Relenza and Tamiflu may prevent or reduce the severity of influenza type A if started within 48 hours of getting sick. However, these treatments are not a substitute for annual flu shots which are available through your physician or public health
- Aspirin should not be given to children with the flu

This information is intended to provide general health-related information about Influenza. It is not intended to replace medical consultation by your physician and/or other health care professionals.

H1N1 Flu Virus

What is it?
H1N1 flu virus is a respiratory illness that causes symptoms similar to the seasonal flu.

Why are people concerned about this particular flu virus?
This strain of H1N1 flu virus is a new influenza virus. Since this is a new strain, people will likely have no or little natural immunity to fight against the virus.

What are the symptoms?
• Fever
• Cough
• Sore throat
• Body aches
• Runny, stuffy nose
• Headache
• Fatigue
• Chills
• Some can have diarrhea and vomiting

How is it spread?
• Human to human spread occurs in the same way as seasonal flu. Droplets containing the virus come into contact with another person’s eyes, nose, or mouth through sneezing or coughing
• Studies have shown that influenza virus can survive on environmental surfaces (such as door knobs, taps, toys, etc.) and can infect a person for up to 48 hours after the virus is on the surface

How long is a person contagious?
People with the H1N1 flu virus are infectious for 24 hours before and up to 7 days after the onset of symptoms, and possibly up to 10 days for children and people who are very ill.

What should I do if I get sick?
• Stay home if you are sick. Stay home until the fever is gone for 24 hours, without the use of fever-reducing medication.
• Avoid contact with other people as much as possible to keep from spreading your illness to others
• Cover your mouth and nose when coughing and sneezing
• Clean your hands regularly

If someone in my home is sick, but I am not, do I need to stay home?
You do not need to stay home if you are not sick. However if you start feeling sick, you should stay at home and minimize contact with others as much as possible.

Are there medications to treat it?
Most healthy people who get influenza, including the H1N1 flu virus, get better on their own and do not need medication. However, a healthcare provider may recommend antiviral medications if you are very ill or have a high risk of complications with influenza (e.g. if you are over 65, chronically ill or pregnant).
Is there a vaccine for H1N1 flu virus?
An H1N1 vaccine is available. Vaccination clinics through Public Health started November 2, 2009 for everyone over 6 months of age. Family physicians may also have the vaccine.

Healthy children over six months and under 10 years of age
- Will need one dose

All children over six months and under 10 years of age with immune compromising conditions
- Should receive a second dose. Parents/guardians should consult with their physician
- If their physician does not have vaccine, but has decided that the child needs a second vaccination, parents/guardians are directed to bring their child to any Niagara Region Public Health Immunization clinics for a second dose at least 21 days after their first dose.

The seasonal flu vaccine will not protect you against the H1N1 flu virus.

How can H1N1 flu virus be prevented?
- Regular hand cleaning with either soap and water for at least 15 seconds, or use an alcohol based hand rub and rub until hands are dry
- Avoid close contact with sick people
- Avoid touching your eyes, nose or mouth, as germs spread this way
- Cover your mouth and nose with a tissue when you cough or sneeze or cough or sneeze into your upper sleeve, not your hands
- Stay home if you are sick and do not return until you are without fever for 24 hours, without the use of fever-reducing medication, and you are feeling well enough to resume your regular activities. If you are a health care worker, please contact Occupational Health at your workplace
- Clean surfaces often. This includes counters, fridge handles, faucet taps, bathrooms, railings, computer keyboards, and telephones.

Where can I find additional information about H1N1 flu virus?
Niagara Region Public Health www.niagararegion.ca
Ministry of Health and Long-Term Care http://www.health.gov.on.ca
Centers for Disease Control and Prevention http://www.cdc.gov

This information is intended to provide general health-related information about the H1N1 flu virus. It is not intended to replace medical consultation by your physician and/or other health care professionals.
Bacterial Meningitis

What is it?
Bacterial meningitis is an infection in the fluid of the spinal cord, and in the lining around the brain. It is more common in winter and spring. Infants are a highest risk for this illness, followed by teenagers.

What are the symptoms?
Bacterial meningitis can cause a high fever, headaches and a stiff neck. A person might also have nausea, vomiting, confusion, irritability and sleepiness. A person with meningitis may have difficulty looking into bright lights. A rash consisting of red spots that do not disappear when pressed on may also be visible. These symptoms can develop over several hours up to 2 days. It leads to death in 8-15% of people with the illness. Hearing loss, brain damage and loss of limbs occurs in 10-20% of those who survive.

How soon do symptoms appear?
Symptoms of bacterial meningitis can appear 2-10 days after exposure to the bacteria. The most common time frame is 3-4 days.

How is it spread?
Not all types of bacterial meningitis are contagious. Certain types of these bacteria can spread from person to person by direct contact with the person’s saliva by sharing drinks, eating utensils, cigarettes and through kissing. It is not as contagious as the common cold or the flu.

How long is it contagious?
For the types of bacterial meningitis that are contagious, the person is contagious until 24 hours after the appropriate antibiotic therapy.

How is it diagnosed?
The diagnosis is usually made by a blood test or by taking a sample of spinal fluid. Treatment varies depending on the type of bacteria identified.

What bacteria cause Bacterial Meningitis?
It is important to know which type of bacteria is causing the meningitis because antibiotics can prevent some types from spreading and infecting other people. Bacterial meningitis is most common in young children but does occur in adults. Any bacteria can cause meningitis, but the three most common causes of illness are;

- *Haemophilus influenzae type b* (Hib) – leading cause of meningitis before the 1990’s
- *Streptococcus pneumonia* (pneumococcal meningitis)
- *Neisseria meningitidis* (meningococcal meningitis)

What is the treatment?
Bacterial meningitis can be treated with a number of antibiotics based on the type of bacteria found. Treatment should be started early in the illness to improve the outcome.

What is Public Health’s role when someone has bacterial meningitis in the community?
Public Health is notified when someone has been diagnosed with bacterial meningitis. Close contacts will be identified and contacted by a public health nurse to identify the type of meningitis and if it is contagious. Close contacts would include people in the same household, daycare center and those who had direct contact with that person’s saliva (for example a
romantic partner). The public health nurse will provide close contacts with specific recommendations. Classmates (unless close friends) and co-workers who have had casual contact with the infected person do not require antibiotics.

**Who should receive preventative treatment?**
When a case of meningitis is reported to Public Health, public health nurses must wait for the type of meningitis to be identified in order to determine if it is contagious. Close contacts who may have been exposed to the disease will be contacted and given specific recommendations and advice about antibiotics to prevent them from contracting the disease. Close contacts are people in the same household or day-care centre, or anyone with direct contact with the persons saliva or oral secretions (such as a boyfriend or girlfriend) would be considered a risk of becoming infected. People (such as classmates or co-workers) who have had casual contact with an infected person do not need antibiotics to prevent meningitis. Vaccination to prevent meningitis may also be recommended for those exposed to *Neisseria meningitis*.

**This information is intended to provide general health-related information about bacterial meningitis. It is not intended to replace medical consultation by your physician and/or other health care professionals.**

Viral Meningitis

What is it?
Meningitis is an infection of the fluid in the spinal cord and the fluid that surrounds the brain. Meningitis is usually caused by an infection of a virus or bacteria. Knowing whether meningitis is caused by a virus or a bacteria is important because of differences in the seriousness of the illness and the treatment needed. Bacterial meningitis can be contagious, and illness can be severe. Viral meningitis is not contagious and is usually a mild illness. It is fairly common and is found worldwide.

What causes it?
Viral meningitis is caused by any of a number of different viruses, many of which are related to other diseases. About half of the cases are caused by common intestinal viruses. Occasionally, children with mumps or herpes virus infection develop viral meningitis. In many cases, a specific virus cannot be identified.

What are the symptoms?
- Fever
- Headache
- Stiff neck
- Tiredness
- Rash
- Sore throat
- Vomiting can also occur

How soon do symptoms appear?
Usually within one week of exposure. Illness lasts less than 10 days, and people usually recover completely without complications.

How is it spread?
The way people get infected with viral meningitis depends on the virus involved. Some viruses are shed in the stool of people while others are spread through respiratory droplets from the nose and throat. Most people are exposed to these viruses at some time in their lives, but very few people ever develop meningitis. Children and young adults are at higher risk of contracting viral meningitis.

How is it diagnosed?
The diagnosis is usually made by a blood test or by taking a sample of spinal fluid in which a needle is inserted into an area in the lower back. Results may identify the type virus.

Is there treatment?
No specific treatment is available. Antibiotics do not work against viruses. Viral meningitis clears up in a week or two.

How can it be prevented?
Cleaning your hands is the most effective way to prevent the spread of germs. Regular hand cleaning with either soap and water, or an alcohol based hand sanitizer will reduce the risk of getting sick for both children and adults.

This information is intended to provide general health-related information about viral meningitis. It is not intended to replace medical consultation by your physician and/or other health care professionals.

Meningococcal Disease

What is it?
Meningococcal infection is caused by a bacteria known as meningococcus. Many people (approximately 10% of the population) carry meningococci bacteria at the back of the throat or nose without any ill effects. In rare instances, meningococci overcome the body's natural defences and cause serious diseases, including meningitis (infection of the lining of the brain) and meningococcemia, a widespread infection involving the blood and multiple organs.

Meningococcal disease is serious and sometimes causes death. Approximately one in ten persons who develop the disease may die. In addition, about one in ten persons who recover will experience some long-term effects such as brain damage, hearing loss or learning disability.

Who can get it?
Meningococcal disease occurs worldwide. Most people exposed to the bacteria do not easily become infected, and even if infected, most people do not develop any disease or symptoms. However, in a small number of cases the bacteria invade the body and produce meningitis, meningococcemia and other serious complications.

The disease can occur at any age, but the highest risk for meningococcal disease is among children under one year of age with the next highest risk among teenagers 15 to 19 years of age. The incidence in adults older than 20 years is less than one person for every 100 000 in Ontario.

What are the symptoms?
- high fever
- headache
- stiff neck
- nausea
- vomiting
- dislike of bright lights (photophobia)
- confusion
- drowsiness
- a small purplish skin rash
- irritability or excessive crying (in young children)

Symptoms can develop over several hours or they may take 1 to 2 days.

How is it spread?
The infection is spread from one person to another through a transfer of secretions from the throat or nose during close contact. Kissing, sharing eating utensils, drinking glasses, water bottles, cigarettes or sharing of lipstick can spread the disease. The infection is not acquired by simply being in the same room as an infected person or breathing air where an infected person has been.

How can it be prevented?
- Do not share drinks
- Do not share eating utensils
- Do not share lipsticks or cigarettes
- Wash your hand often
Once someone is diagnosed with meningococcal disease, antibiotics are recommended for close contacts of the person, such as family members and close friends, to prevent the development of disease and further spread of the infection.

**Is there a vaccine?**
Two different types of meningococcal vaccines are available in Canada. Monovalent conjugate vaccines also called Menjugate, NeisVac-C and Meningitec and Polysaccharide vaccines also called Menomune.

**Who should get the vaccine?**
Monovalent conjugate vaccine is recommended for routine immunization of infants, children aged 1-4 years and adolescents to prevent the increased risk of serogroup C disease in these age groups.

Polysaccharide vaccine is recommended for outbreak control, persons travelling to locations with epidemic disease and for persons who may be at increased risk of meningococcal disease (i.e. close contacts of cases).

**How well does the vaccine protect against disease?**
Polysaccharide meningococcal vaccines (i.e. Menomune) are 75% to 90% effective in adolescents and adults and about 50% effective in children 2 to 10 years of age, but provide no protection for children under the age of 2 years. The protection from the vaccine is short, lasting 2 to 5 years.

**Is the vaccine safe?**
Yes, the vaccine is safe. The most common side effects are soreness and redness where the needle was given and mild fever. More severe side effects, such as high fever, trouble breathing, convulsions and hives, have occurred but are extremely rare (less than one episode for every 10,000 vaccinations). If serious side effects occur, see your doctor or go to the Emergency Room right away. The benefits to getting the vaccine against this disease far outweigh the risks.

**Who should not have the vaccine?**
You should not receive the vaccine if you:
- Have an allergy to any component of the vaccine. The nurse will ask you about any allergies.
- Have had a previous anaphylactic reaction after receiving a vaccination (i.e. hives, difficulty breathing)
- Are acutely ill and/or have a fever
- Have recently received a dose of monovalent conjugate vaccine (i.e. Menjugate or NeisVac-C). Delay receiving meningococcal polysaccharide vaccine (i.e. Menomune) for 2 weeks.
- Are pregnant or breastfeeding. Discuss need for vaccination with your doctor.

This information is intended to provide general health-related information about Meningococcal Disease. It is not intended to replace medical consultation by your physician and/or other health care professionals.

Source: Public Health Agency of Canada – Meningococcal Disease Fact Sheet, 2009; CCDR – Guidelines for the Prevention and Control of Meningococcal Disease, 2005
Group A Streptococcus

What is it?
Group A Streptococcus (GAS) is a bacteria that is naturally found in many people's throats and rarely cause serious invasive disease. Group A Streptococcus can cause a variety of common diseases such as sore throats ("strep throat"), tonsillitis, scarlet fever, and skin infections such as impetigo. Occasionally, the bacteria cause more serious infections such as necrotizing fasciitis ("flesh-eating disease"), inflammation of muscle tissue and streptococcal toxic shock syndrome (STSS). These more serious infections are referred to as "invasive GAS".

How is it spread?
Approximately 10 - 15 % of people carry GAS in their throat without any symptoms. These people are called "carriers". The bacteria may be spread when the nose or throat secretions of either a "carrier" or an ill person come in contact with the nose or mouth of another person. This occurs during activities such as: kissing or sharing of food, cutlery, drinks, water bottles, lipstick, toothbrushes, musical instrument mouthpieces, mouth guards, or cigarettes. This type of sharing should be avoided at all times. The bacteria may also be spread when a person comes into direct contact with infected lesions on the skin, such as impetigo. The bacteria do not spread through the air. Infected persons are generally not contagious after 24 hours of treatment with the appropriate antibiotics.

What are the symptoms?
The early symptoms of toxic shock syndrome include fever, tiredness and a general feeling of unwellness. Early symptoms of necrotizing fasciitis may include fever, and abnormal pain, swelling and redness at the infected area.

Who is considered a close contact?
Close contacts of a person with invasive streptococcal disease are those who are likely to have been exposed to the nose or throat secretions of the sick person. This exposure can result in the spread of disease only if it occurred 7 days or less before the individual became ill and up to 1 day after treatment begins in the ill person. Close contacts include the following:

- those living in the same household as the ill person;
- those who share sleeping arrangements with the ill person; those who have kissed the ill person or shared items with the ill person such as: food, cigarettes, drinks, cutlery, water bottles, lipstick, cigarettes, mouth guards, toothbrushes, or musical instrument mouthpieces;
- those who have performed mouth-to-mouth resuscitation on the ill person
- those with direct skin to skin contact with secretions from infected sores on the ill person
- Classroom, daycare, workplace and social contacts generally are not considered close contacts

Can it be prevented in close contacts?
Yes, invasive GAS may be prevented by giving antibiotics to close contacts of a person who is sick with the disease. Close contacts of a person with severe infection have rates of disease slightly higher than the general public, but the risk remains very low.
**NOTE**: If the case is a resident of a Long Term Care facility, refer to the most current version of the Ontario Nursing Home Association Guidelines for the Management of Residents with Group A Streptococcus Infection in Long-Term Care Facilities.

**What is given to close contacts to prevent invasive GAS disease?**
When a case of Invasive Group A Streptococcus is reported, Public Health will investigate and obtain names of close contacts who meet the criteria as defined above. It is recommended that close contacts be treated with an antibiotic for 10 days to prevent disease. Niagara Region Public Health staff will contact your family physician to review the recommended antibiotic. Close contacts should be watched for the symptoms of invasive GAS disease and seek medical attention immediately if these symptoms develop.

This information is intended to provide general health-related information about Group A Streptococcus. It is not intended to replace medical consultation by your physician and/or other health care professionals.


**Cleaning Up Spills of Blood and Body Substances**
Emergency service workers (ESW) must adhere to Routine Practices when cleaning. The principles of Routine Practices are based on the premise that all clients, their secretions, excretions and body fluids, and their environment might potentially be contaminated with harmful microorganisms.

By following simple preventative practices at all times regardless of whether or not an illness is “known” an ESW will be protecting themselves from an unknown, undiagnosed infectious risk.

Practices related to cleaning and disinfecting include:

a) Hand hygiene  
b) Use of personal protective equipment when indicated; and  
c) Standardized cleaning protocols

Spills of blood and other bodily substances, such as urine, feces and vomit, must be contained, cleaned and the area disinfected. The ESW shall follow written policies and procedures for dealing with biological spills.

Sample Procedure for Cleaning a Biological Spill

- Assemble materials required for dealing with the spill prior to putting on PPE  
- Inspect the area around the spill thoroughly for splatters or splashes  
- Restrict the activity around the spill until the area has been cleaned and disinfected and is completely dry  
- Put on gloves; if there is a possibility of splashing, wear a gown and facial protection (mask and eye protection or face shield)  
- Confine and contain the spill; wipe up any blood or body fluid spills immediately using either disposable towels or a product designed for this purpose. Dispose of materials by placing them into regular waste receptacle, unless the soiled materials are so wet that blood can be squeezed out of them, in which case they must be segregated into the biomedical waste container (i.e., yellow bag)  
- Disinfect the entire spill area with a hospital-grade disinfectant and allow it to stand for the amount of time recommended by the manufacturer  
- Wipe up the area again using disposable towels and discard into regular waste  
- Care must be taken to avoid splashing or generating aerosols during the clean up  
- Remove gloves and perform hand hygiene


Infectious Disease Fact Sheet Listing
Anthrax
Chicken Pox
Common Cold
Conjunctivitis (Pink Eye)
Creutzfeld-Jakob Disease
Croup
Cytomegalovirus
Diphtheria
Ebola Haemorrhagic Fever
Fifth Disease (Slap Face)
Group A Streptococcal Infection
Hand/Food/Mouth Disease
Hantavirus
Head Lice
Hepatitis A
Hepatitis B
Hepatitis C
Herpes Simplex (Cold Sores)
Histoplasmosis
Impetigo
Infectious Mononucleosis (Mono)
Influenza - Seasonal
Influenza – H1N1
Invasive Pneumococcal Disease (Strep. Pneumoniae)
Legionnaires Disease
Lyme Disease
Measles
Meningitis (viral/bacterial)
Meningococcal Disease
MRSA
Mumps
Parainfluenza
Pertussis (Whooping Cough)
Pinworms

Plantar Warts
Poison Ivy
Psittacosis
Ringworm
Roseola
Routine Practices
RSV
Rubella
Scabies
Scarlet Fever
SARS
Shingles
Strep Throat
Tetanus
Tuberculosis
Thrush and Candida Diaper Rash
Toxoplasmosis
Typhoid Fever
VRE
West Nile Virus

**Food Related Illnesses:**
Botulism
Campylobacter
Cryptosporidiosis
Cyclospora
Dientameoba Fragilis
E. Coli 0157:H7
Giardia
Listeriosis
Norwalk Virus
Rotavirus
Salmonella
Shigellosis
Yersinia

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**8. References**


Health Canada – Canada Communicable Disease Report Volume 21-19, Date of Publication October 15, 1995

Ontario Public Health Standards 2008

Routine Practices and Additional Precautions
http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_routine.html

Ministry of Community Safety and Correctional Services
http://www.mcscs.jus.gov.on.ca/english/about_min/MandatoryBloodTesting/blood_testing.html

Mandatory Blood Testing Act 2006
http://www.mcscs.jus.gov.on.ca/english/about_min/MandatoryBloodTesting/Forms/mbt_forms.html

Niagara Region: www.niagararegion.on.ca