

DESIGNATED OFFICER PROGRAM GUIDE



PUBLIC HEALTH
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Introduction

Emergency service workers such as paramedics, firefighters and police face potential exposure to infectious diseases through:

- ➡ **Blood & Body Fluids** (e.g., Hepatitis B/C, HIV)
- ➡ **Respiratory Droplets** (e.g., Influenza, Group A Strep, Meningococcal)
- ➡ **Airborne Particles** (e.g., Tuberculosis, Measles)
- ➡ **Direct Contact** (e.g., Rabies, C. difficile, antibiotic-resistant organisms)

Exposure risk can be reduced through health and safety programs, proper use of Personal Protective Equipment (PPE) and training. Paramedics often receive training on disease exposure, but firefighters and police may not, even though they frequently provide first aid in uncontrolled environments.

Purpose

York Region Public Health developed the Designated Officers' Program to educate emergency service workers on occupational exposure risks, promote safe practices and self-protection and establish protocols for managing suspected exposures to infectious diseases.

Program Goals

The program is designed to support Designated Officers by:

- Educating on disease transmission and prevention
- Offering strategies to reduce the risk of exposure during emergency response
- Supporting exposure management to protect the health of emergency service workers

Objectives

1. Understand communicable diseases and transmission
2. Recognize environmental risks during response
3. Learn infection pathways and susceptibility factors
4. Identify vaccines and treatments options
5. Apply PPE and precautions effectively
6. Conduct exposure risk assessments
7. Follow post-exposure procedures
8. Strengthen Designated Officer's role in guiding emergency service workers toward proper care

Guiding Principles for Routine Practices in Emergency Situations

- **Workplace Safety Programs:** All workplaces must maintain standard occupational health and safety programs
- **Employer Responsibilities:** Employers are legally required (Ontario OHSA, Section 25) to assess communicable disease risks and implement controls, equipment, and education to protect workers
- **Routine Practices:** Standard safety measures must be applied in all emergency situations involving potential exposure to bloodborne, droplet, airborne, or contact-transmitted infections
- **Training & Application:** Employers must train workers to assess personal risk and apply routine practices effectively
- **Immunization:** Emergency service workers should be immunized per NACI guidelines ([Canadian Immunization Guide](#))
- **Right to Know vs. Confidentiality:** Workers have the right to be informed of potential exposures—but not to access confidential patient information
- **Exposure Protocols:** Workers must follow established exposure protocols, which align with confidentiality provisions under the Health Protection and Promotion Act (HPPA), Section 39

Confidentiality

Patient health information is protected. York Region Public Health and hospital staff cannot disclose medical details of individuals brought in by emergency service workers.

Notification of a Possible Exposure

York Region Public Health follows Ministry guidelines to notify emergency service workers of potential exposure to communicable disease while protecting patient confidentiality. Each service should appoint trained Designated Officer(s) to assess occupational exposures to infectious diseases and collaborate with York Region Public Health to notify exposed workers.

If exposure to communicable diseases is confirmed, workers must be notified promptly for medical assessment and public health interventions to prevent further transmission. In unclear situations, any lapse in infection control should be treated as a potential exposure. Recommended actions are detailed in this manual.

Please refer to the [Reportable Diseases List](#) for the list of communicable diseases that are reportable as outlined in the Health Protection and Promotion Act in the province of Ontario.

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Roles and Responsibilities

EMERGENCY SERVICE (POLICE, FIRE AND PARAMEDICS SERVICES)

- Assess risk of work procedures for occupational exposure
- Maintain health and safety standards
- Provide PPE and infection control training
- Appoint Designated Officer(s)
- Document exposures and complete WSIB forms

EMERGENCY SERVICE WORKERS

- Stay informed about exposure risks
- Use PPE and follow routine infection control practices to reduce the risk of exposure
- Report exposures promptly and complete WSIB documentation

DESIGNATED OFFICER (DO)

- Review exposure reports and assess if an exposure has occurred
- Notify York Region Public Health of exposures to reportable diseases
- Coordinate with York Region Public Health for notification and follow up with exposed workers
- Inform and guide exposed workers through follow-up steps

PUBLIC HEALTH UNIT

- Maintain updated Designated Officer contact list
- Provide consultative advice on exposure risk when exposure has occurred
- Inform of required Public Health interventions and follow up
- Investigate and follow up with contacts exposed to reportable disease as per Ministry guidance

Note: York Region Public Health does not assess or determine whether an exposure may have occurred in a situation or collect information of the emergency service worker. The Designated Officer is responsible for assessing and determining if an exposure has occurred and gathering information from the emergency service worker.

Knowledge and Skills of the Designated Officer

KNOWLEDGE REQUIREMENTS

Designated Officers must possess foundational knowledge of communicable disease transmission and prevention, including:

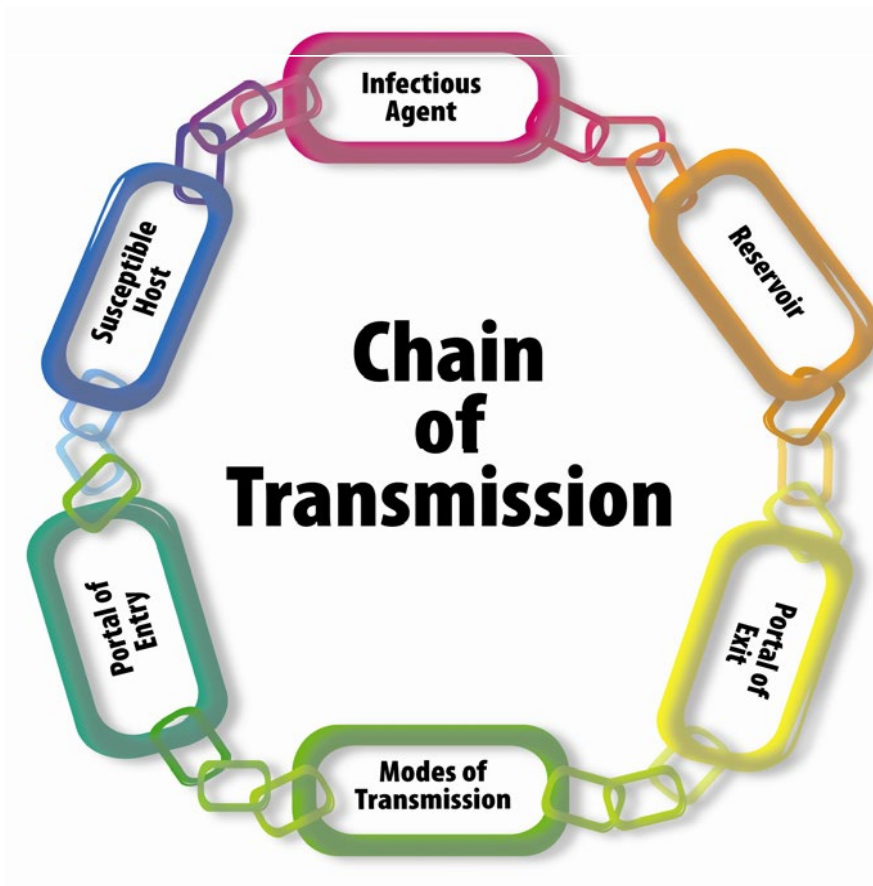
- **Disease Fundamentals**
 - Causative agents (e.g., viruses, bacteria)
 - Common sources of infectious agents and environmental factors
 - Modes of transmission, incubation, and communicability periods
 - Susceptibility factors
- **Prevention and Control Measures**
 - Vaccination and treatment options
 - Appropriate use of Personal Protective Equipment and barriers
 - Implementation of precautions

ESSENTIAL SKILLS

- **Assessment**
 - Review exposure reports for accuracy and completeness
 - Conduct interviews with workers to verify exposure details and report
- **Analytical and Decision- Making**
 - Interpret written and verbal reports to assess risk of exposure
 - Respond promptly and appropriately based on findings and exposure risk assessment
 - Consult appropriate resources as required
- **Communication and Support**
 - Maintain clear, empathetic dialogue
 - Review and explain assessment outcomes and next steps
 - Ease concerns through compassionate guidance
- **Accountability**
 - Review and uphold workplace policies and procedures
 - Notify the local Public Health Unit as required
 - Communicate findings to worker and leadership

UNDERSTANDING THE CHAIN OF TRANSMISSION

Transmission of infectious diseases depends on several interconnected factors and is often visualized as links in a chain. Disrupting any one of these links can effectively prevent the spread of infection.



Chain of Transmission	Description	How to Break the Link
Infectious Agent	Microorganisms such as bacteria, viruses or fungi that cause disease.	<ul style="list-style-type: none"> • Antimicrobial therapy (e.g., antibiotics, antivirals) • Disinfection • Sterilization
Reservoir	Where the infectious agent lives and multiplies such as contaminated surfaces, hands, equipment, humans, animals and insects.	<ul style="list-style-type: none"> • Engineering controls (e.g., negative pressure rooms) • Routine cleaning and disinfection • Safe food storage • Water treatment
Portal of Exit	Pathway for the agent to leave the host—e.g., coughing, sneezing, urination, vomiting.	<ul style="list-style-type: none"> • Hand hygiene • Safe waste and linen disposal • Controlling secretions (e.g., covering wounds)

Modes of Transmission	How the agent moves from reservoir to host—e.g., droplets, contact, contaminated surfaces.	<ul style="list-style-type: none"> • Physical distancing, privacy curtains • Engineering controls (e.g., motion-activated sinks) • Environmental sanitation • Equipment disinfection/sterilization • Use of PPE
Portal of Entry	How the agent enters the host—e.g., eyes, nose, mouth, broken skin.	<ul style="list-style-type: none"> • Hand hygiene • Aseptic technique • Proper wound/catheter care • PPE use
Susceptible Host	Individuals with reduced immunity due to age, health conditions, lifestyle, or lack of immunization.	<ul style="list-style-type: none"> • Up-to-date immunizations • Good nutrition • Identifying high-risk individuals • Supportive care and protection

DISEASES SPREAD THROUGH BLOOD AND BODY FLUIDS

Infection	Hepatitis B (HBV)	Hepatitis C (HCV)	Human Immunodeficiency Virus (HIV)
General Health Teaching	<ul style="list-style-type: none"> Hepatitis B is a virus that affects the liver There is no cure for chronic hepatitis B, but there are effective treatments HBV Fact Sheet 	<ul style="list-style-type: none"> Hepatitis C is a virus that affects the liver Treatments are available that successfully cure about 95% of cases HCV Fact Sheet 	<ul style="list-style-type: none"> HIV is a virus that affects the immune system There is no cure for HIV but there are effective treatments HIV Fact Sheet
Transmission	<ul style="list-style-type: none"> Blood Borne Infection is a classification term for infections primarily transmitted through direct exposure to blood or blood in bodily fluids or through sexual activity Body fluids that are NOT considered potentially infectious for a blood borne pathogen include: feces, nasal secretions, saliva, sputum, sweat, tears, urine and vomitus, unless they are visibly bloody There are many variables that impact transmission including type or fluid, extent of injury, amount and infectivity capability of virus, immunization and health status of the exposed person Ex. Needlestick Injury from a known source: <ul style="list-style-type: none"> HBV 6-30% HCV 3-10% HIV 0.2-0.5% To minimize secondary transmission during the 6-12 week window period (time between initial infection and when a diagnostic test can reliably detect that infection): <ul style="list-style-type: none"> do not donate blood, semen, tissues, or organs prevent sexual transmission (e.g. barrier protection) avoid sharing needles, razors or toothbrushes 		
Symptoms and Incubation Period	<ul style="list-style-type: none"> Signs and symptoms of hepatitis may occur within 6 weeks to 6 months after exposure E.g. fatigue, loss of appetite, abdominal discomfort, jaundice, change in colour of urine and stool, rash, sore joints 	<ul style="list-style-type: none"> Signs and symptoms of HIV infection may occur within 2-4 weeks after exposure E.g. "flu-like" symptoms, weight loss, skin rash, fever, swollen lymph nodes, fatigue 	
Post Exposure Prophylaxis (PEP)	<ul style="list-style-type: none"> Following a significant risk exposure, emergency service workers should have immediate first aid treatment for any wound and proceed to the emergency department for assessment and baseline testing PEP is a medication regimen that can be started after an exposure to help prevent acquisition of some infections A medical assessment needs to be completed to evaluate exposure risk and provide PEP recommendations PEP is not advised for all exposures, regardless of MBTA process 		

	<ul style="list-style-type: none"> Initiate HBV immunization <ul style="list-style-type: none"> 3 dose series recommended HBIG ASAP, preferably within 24 hours <ul style="list-style-type: none"> Efficacy decreases substantially when given > 48 hours post exposure Efficacy after 7 days is unknown <p>Note: Not recommended if already acquired natural immunity / immunized</p>	<ul style="list-style-type: none"> Currently no prophylactic treatment available for persons exposed to HCV 	<ul style="list-style-type: none"> Should be initiated within 72 hours of exposure and taken for 28 days Medication regime consists of 2-3 antiretroviral medications Side effects include nausea, headache, diarrhea, fatigue, renal concerns, insomnia Importance of adherence to prevent PEP failure HIV PEP Fact Sheet
Follow-up Testing	<ul style="list-style-type: none"> To determine chronic infection: HBsAg at 6 months for possible seroconversion in non-immune client To determine if immune: HBsAb – 1 to 2 months after completion of vaccination series and at least 6 months after HBIG (if given) 	<ul style="list-style-type: none"> HCV antibody at 3 and 6 months post exposure <ul style="list-style-type: none"> RNA testing will be done automatically if antibody is positive for the first time Perform RNA testing at 4 to 6 weeks if an earlier diagnosis of HCV infection is desired 	<ul style="list-style-type: none"> HIV Ab at 6 weeks - 4th generation combo screen
MBTA	<ul style="list-style-type: none"> The Mandatory Blood Testing Act (MBTA) allows an eligible individual (“Applicant”) to apply to have the blood of another person (“Respondent”) tested for HIV/AIDS, hepatitis B and hepatitis C if they have come into contact with their body fluids For further information about the MBTA, eligibility and associated application forms/process, please visit the Government of Ontario website: Mandatory Blood Testing Applications are submitted to the Health Unit in which the Respondent resides. Applications submitted to York Region Public Health can be faxed to 905-940-4541. 		
Resources and References	<ul style="list-style-type: none"> Ottawa Public Health: Management of Exposures to Blood Borne Pathogens CDC: Blood Borne Infectious Disease Risk Factors for Health Care Workers <p>For any questions or for further support, contact the Sexual and Blood Borne Infections Team On Duty PHN at: 1-877-464-9675 x 74214 between the hours of Monday to Friday 8:30 am to 4:30 pm</p>		

DISEASES SPREAD THROUGH RESPIRATORY SECRETIONS

Many infectious diseases spread through respiratory droplets released when an infected person coughs, sneezes or speaks. These droplets can be inhaled by others or enter the body through the eyes, nose or mouth. In certain environments, droplets may land on surfaces or objects, creating another mode of transmission.

This section covers:

1. Influenza
2. Group A Streptococcus
3. Meningococcal Disease
4. Measles (Airborne Transmission)
5. Tuberculosis (Airborne Transmission)

1. Influenza

Influenza (flu) is a contagious respiratory illness caused by Influenza A and B viruses. While most recover in 7–10 days, older adults, pregnant individuals, and those with chronic conditions face higher risks of complications like pneumonia which may require hospital care.

HOW INFLUENZA SPREADS

- Through droplets from coughing, sneezing or talking
- Via contaminated surfaces and objects
- **Incubation period:** 1 – 4 days
- **Infectious period:** One day before symptoms and up to five days after; longer for children and immunocompromised individuals

SYMPTOMS

- Fever, chills, cough, sore throat, headache, muscle aches, fatigue
- Gastrointestinal symptoms may occur in children
- Recovery: 3–5 days, but fatigue and cough may linger

WHAT TO DO IF YOU SUSPECT INFLUENZA

If you are symptomatic, stay home and avoid contact with others and seek medical attention as needed. Antivirals may shorten illness if taken within 48 hours.

PREVENTION & TREATMENT

- Annual flu vaccine is key, especially for first responders
 - The vaccine reduces severity even if infection occurs
 - It takes two weeks after receiving vaccine to take effect and protection lasts up to a year
- Most cases don't require medical treatment
 - In some situations, antiviral medications might be prescribed by your health care provider to reduce the duration and severity of illness

KEY POINTS FOR RESPONDERS

- First responders are at increased risk due to frequent exposure
- Annual vaccination is essential for personal protection and public safety
- Use well-fitted mask and face shield or eye protection if respiratory symptoms are present
- Maintain hand hygiene and respiratory etiquette
- Notify Designated Officer of illness or exposures, as appropriate

2. Group A Streptococcus

Group A Streptococcus (GAS) is a bacterial infection caused by *Streptococcus pyogenes*. It commonly presents as strep throat or impetigo. Invasive GAS (iGAS) occurs when the bacteria enter sterile parts of the body like blood, deep tissue, or the brain lining. This can lead to serious conditions such as pneumonia, necrotizing fasciitis (NF), also known as flesh-eating disease, and streptococcal toxic shock syndrome (STSS).

Note: Invasive GAS is a reportable disease and must be reported to York Region Public Health.

HOW GAS SPREADS

- Droplets from coughing or sneezing
- Direct and/or indirect contact with respiratory secretions or infected skin
- Contact with nasal mucus membranes
- Sharing contaminated needles
- Asymptomatic carriers are less contagious; sick people spread the infection most
- **Incubation:** Symptoms may develop 1–3 days after exposure but can vary depending on the site and type of GAS infection
- **Infectious period:** 7 days before symptoms until 24 hours after starting appropriate antibiotics

SYMPTOMS

- Fever, cough, headache, confusion
- **NF:** Severe pain at wound site
- **STSS:** Fever, dizziness, confusion, rash, abdominal pain
- Symptoms may resemble other illnesses, making diagnosis challenging

WHAT TO DO IF YOU SUSPECT GAS

- If you are symptomatic, seek medical assessment immediately
- Antibiotics may be prescribed for close contacts of invasive cases
- Monitor for symptoms for 30 days after exposure
- York Region Public Health conducts case investigations and contact tracing

PREVENTION & TREATMENT

- No vaccine available
- **Treatment:** Antibiotics are effective for both adults and children
- **Prevention tips:**
 - Practice good hand hygiene
 - Use tissues/sleeves when coughing or sneezing
 - Clean and disinfect shared surfaces
 - Avoid preparing food when ill
 - Keep wounds clean and covered
 - Stay home when sick and complete prescribed antibiotics

KEY POINTS FOR RESPONDERS

- iGAS can lead to life-threatening conditions—early recognition and timely medical assessment and treatment is critical
- Prompt reporting to Designated Officer of illness or exposure
- Practice good hand hygiene
- Cover any open wound
- Perform a Point-of-Care Risk Assessment and use the appropriate Personal Protective Equipment (PPE) based on the level of risk and anticipated exposure
- Monitor for symptoms if exposed and consult with physician as needed

3. Invasive Meningococcal Disease

Invasive Meningococcal Disease (IMD) is a serious infection caused by *Neisseria meningitidis* bacteria. It can lead to life-threatening conditions such as:

- **Meningococcal meningitis** – Bacteria infects the surrounding brain and spinal cord membranes causing inflammation
- **Meningococemia** – Bacteria enters the bloodstream

Though the bacteria can reside harmlessly in the nose or throat, it rarely causes illness. IMD is an uncommon but serious disease that has a fatality rate of 8–15%, and 10–20% of survivors may experience long-term complications.

Note: IMD is a reportable disease and must be reported to York Region Public Health.

HOW IMD SPREADS

- Direct contact with respiratory droplets, saliva or mucus
- Activities like coughing, sneezing, kissing, or sharing food, drinks, utensils or cigarettes
- Close contacts at risk: household members, daycare/school contacts, emergency personnel exposed to secretions, intimate partners
- **Incubation:** 2–10 days after exposure
- **Infectious period:** up to 7 days before symptoms and 24 hours after starting antibiotics

SYMPTOMS

- Fever, severe headache, nausea/vomiting, stiff neck, rash, sensitivity to light, confusion, irritability
- Coma in severe cases

WHAT TO DO IF YOU SUSPECT IMD

- If symptomatic, seek medical attention immediately
- Public Health may recommend vaccination or prophylactic antibiotics for close contacts of IMD cases
- Monitor for symptoms for 10 days after exposure

PREVENTION & TREATMENT

- Vaccines are available in Canada for certain strains—ensure immunizations are up-to-date
- Antibiotics are used for treatment and post-exposure prophylaxis
- Early recognition and prompt medical care significantly improve outcomes

KEY POINTS FOR RESPONDERS

- IMD is rare but serious—early action is critical
- Risk to emergency service workers is low but possible with direct exposure
- Prompt reporting to Designated Officer of illness or exposure
- Stay up-to-date with meningococcal vaccinations

4. Measles

Measles is a highly contagious viral illness, sometimes called “hard” or “red” measles due to its characteristic rash. While most people recover fully, it can cause serious complications such as pneumonia, ear infections, encephalitis (brain inflammation) and even death. Pregnant individuals face increased risks of miscarriage or premature delivery.

Note: Measles is a reportable disease and must be reported to York Region Public Health.

HOW MEASLES SPREADS

- Airborne droplets from coughing, sneezing or talking
- Contact with contaminated items (e.g., tissues)
- **Incubation:** Symptoms appear 7–21 days after exposure
- **Infectious period:** 4 days before to 4 days after rash onset

SYMPTOMS

- Cough, runny nose (coryza), fever, red, watery eyes (conjunctivitis), sensitivity to light, white spots in the mouth (Koplik spots)
- Red blotchy rash appears 3–7 days after symptoms begin, spreads head to toe, lasts 4–7 days
- Illness typically lasts around 10 days
- More severe in infants, pregnant individuals and immunocompromised individuals

WHAT TO DO IF YOU SUSPECT MEASLES

- Call your health care provider **before** medical assessment to avoid exposing others
- Diagnosis is based on symptoms and lab tests
- No specific treatment—most recover at home; hospital care may be needed for severe cases
- Stay home until 5 days after rash onset
- If symptoms worsen or become severe and medical attention is required, notify the Emergency Department **prior** to arrival to ensure appropriate precautions can be implemented
- Public Health may recommend vaccination or post-exposure prophylaxis (vaccination or immunoglobulin) for contacts of measles cases

PREVENTION & TREATMENT

- Vaccination is the best protection against measles
- The Ontario Immunization schedule indicates two doses of measles containing vaccine after the first birthday for protective response. The second dose should be separated by at least 28 days
- Adults born in 1970 or later should have 2 doses
- Adults born before 1970 are generally considered immune
- Health care workers and military recruits should have 2 doses of MMR

Note: Pregnant individuals and those with weakened immune systems should not receive the vaccine

KEY POINTS FOR RESPONDERS

- Measles is extremely contagious—early isolation is critical to prevent further transmission
- Use fit-tested and seal-checked N95 respirator when caring for a suspect/confirmed case
- Confirm immunization status if exposed
- Receiving MMR vaccine within 72 hours of exposure may prevent illness
- Immunoglobulin may be offered to infants, pregnant individuals or immunocompromised people within 6 days of exposure
- Monitor for symptoms for 21 days after exposure
- Prompt reporting to Designated Officer of illness or exposure

5. Tuberculosis

WHAT IS TB?

TB is a curable and preventable disease caused by *Mycobacterium tuberculosis*. It mainly affects the lungs (pulmonary TB), which is the only infectious form. TB outside the lungs (e.g., spine, brain) is not infectious.

Note: Tuberculosis is a reportable disease and must be reported to York Region Public Health.

TB INFECTION VS. TB DISEASE

Latent TB Infection (LTBI)	Active TB Disease:
TB bacteria are present but inactive (not multiplying)	TB bacteria are active and multiplying
No symptoms and not contagious	Symptoms are present
Can develop into active disease later if untreated	

HOW TB SPREADS

- Through coughing, speaking or singing
- Close, prolonged contact with someone who has active pulmonary TB
- Does not spread via surfaces or physical contact

SYMPTOMS OF ACTIVE TB

- Cough lasting more than 3 weeks
- Fatigue
- Night sweats
- Weight loss
- Low-grade fever
- Coughing up blood (rare)

WHAT TO DO IF YOU SUSPECT TB

- Wear an N-95 mask when interacting with someone showing TB-like symptoms or known to have infectious TB
- If you think you've had significant exposure, get a TB skin test and follow up with a doctor
- TB exposure or cases should be reported to York Region Public Health (YRPH) — reporting can wait until the next business day

TESTING & PREVENTION

- A baseline TB skin test (2-step) is recommended and should be recorded
- If exposed, repeat testing may be needed to check for infection
- Both latent TB infection and active TB disease are treatable — medication is free and must be taken as prescribed

KEY POINTS FOR RESPONDERS

- TB is not easily caught — risk is low unless exposure is prolonged
- Use respiratory protection (N-95) when needed
- Report exposures to YRPH
- Seek testing if exposed

DISEASES SPREAD THROUGH OTHER CONTACT

Communicable diseases can spread through direct contact with individuals or indirectly via contaminated surfaces and objects. This section covers key infections including:

1. Tetanus
2. Rabies
3. Viral hemorrhagic fevers
4. Clostridium difficile (*C. diff*) and Antibiotic-resistant organisms (Vancomycin Resistant Enterococci (*VRE*), Methicillin Resistant Staphylococcus Aureus (*MRSA*), Extended Spectrum Beta Lactamase Producing Bacteria (*ESBL*))

1. Tetanus

Tetanus, or “lockjaw,” is a serious illness caused by *Clostridium tetani* bacteria, which release a toxin that attacks the nervous system, leading to severe muscle spasms.

Note: Tetanus is a reportable disease and must be reported to York Region Public Health.

HOW TETANUS SPREADS

- Tetanus is contracted from the environment and not through person-to-person contact
- Clostridium tetani bacteria are commonly found in soil and sometimes in the intestines of animals and humans
- Infection occurs when the bacteria enter the body through puncture wounds, cuts, burns or animal bites
- Rusty nails are often blamed, but it's the bacteria on the nail (not the rust) that cause tetanus
- **Incubation period:** Three – 21 days

SYMPTOMS

Early signs include headache, fever, and jaw stiffness, followed by painful muscle contractions in the neck, limbs and abdomen.

PREVENTION & TREATMENT

- **Vaccination:** Routine childhood immunization and booster doses every 10 years for teens and adults
- **Treatment:**
 - Human tetanus immunoglobulin (HTIG) to neutralize the toxin
 - Antibiotics to eliminate the bacteria
 - Supportive care for muscle spasms and breathing

KEY POINTS FOR RESPONDERS

- Tetanus is environmental—not contagious
- Maintain up-to-date immunization, especially for high-risk roles
- Prompt wound care and vaccination history review are critical
- Seek medical attention promptly if Tetanus vaccination status is unknown
- Notify Designated Officer of illness or exposures

2. Rabies

Rabies is a preventable viral disease most often transmitted through the bite of a rabid animal. The rabies virus lives in saliva and nerve tissue. Exposure can occur unknowingly, especially with bats. If left untreated, the virus infects the central nervous system and ultimately leads to death.

Note: Rabies is a reportable disease and must be reported to York Region Public Health.

HOW RABIES SPREADS

- Bites or scratches from infected animals
- Open wounds or mucous membranes (mouth, nose, eyes)

SYMPTOMS

- **Early:** numbness at bite site, headache, fever, general malaise
- **Later:** muscle spasms, hydrophobia (fear of water)
- Once symptoms appear, rabies is almost always fatal

WHAT TO DO IF YOU SUSPECT EXPOSURE TO RABIES

- Immediately wash the wound with soap and warm water
- Seek medical attention immediately
- Report the incident to the York Region Public Health

PREVENTION & TREATMENT

- Avoid contact with stray or wild animals
- Keep pet vaccinations up to date
- Seal potential bat entry points in your home
- All bites/scratches must be reported to the Public Health Unit
- If needed, Post-Exposure Prophylaxis (PEP) includes:
 - 1 dose of Human Rabies Immune Globulin (HRIG)
 - 5 doses of rabies vaccine over 28 days (Days 0, 3, 7, 14, 28)
- There is no treatment for rabies after symptoms appear

KEY POINTS FOR RESPONDERS

- Prompt wound care, medical attention and reporting are critical
- Ensure timely initiation of PEP when indicated
- Maintain vigilance when working around animals, especially in outdoor or rural settings
- Notify Designated Officer of illness or exposures

3. Viral Hemorrhagic Fevers

Viral hemorrhagic fevers (VHFs) are severe, non-endemic diseases marked by fever, bleeding and often shock. They're caused by geographically restricted viruses such as Lassa, Marburg, Ebola, and others from the bunyavirus, arenavirus, and flavivirus families.

Note: VHFs are reportable diseases and must be reported to York Region Public Health.

HOW VHFS SPREAD

- Transmitted through close contact with infected individuals
- Risk increases during later stages of illness (e.g., vomiting, diarrhea, bleeding)
- Virus can enter through broken skin or mucous membranes
- Not endemic to Canada; typically linked to travel or imported cases

SYMPTOMS

- **Early:** fever, fatigue, dizziness, muscle aches, weakness
- **Severe:** bleeding (internal and external), shock, kidney failure, neurological symptoms (coma, seizures, delirium)
- Hemorrhagic symptoms typically begin 3–5 days after fever onset
- **Incubation:** Varies depending on the virus but is usually 3 – 21 days

WHAT TO DO IF YOU SUSPECT EXPOSURE TO VHFS

- Follow guidance from local Public Health Units
- Monitor symptoms for 21 days post-exposure
- Record temperature twice daily and report fever $\geq 38.3^{\circ}\text{C}$ or any illness symptoms

PREVENTION & TREATMENT

- Routine precautions are usually sufficient in early stages
- Use well-fitted mask and face shield or eye protection if respiratory symptoms are present
- Decontaminate transport vehicles before reuse
- No specific cure; supportive care and strict infection control are essential
- Contacts of confirmed cases require active monitoring

KEY POINTS FOR RESPONDERS

- Use appropriate PPE based on symptoms and exposure risk
- Follow strict decontamination protocols
- Maintain vigilance during patient transport and evaluation
- Collaborate with local Public Health Unit for case management and contact tracing
- Notify Designated Officer of illness or exposures

4. Clostridium Difficile and Antibiotic-Resistant Organisms

Antibiotic-resistant organisms (AROs) are bacteria that have adapted to survive antibiotics designed to eliminate them, making infections difficult and sometimes impossible to treat. Common AROs include MRSA, VRE, ESBL and CPE. While Clostridium difficile (C. difficile) is not antibiotic-resistant, it shares similar transmission and control challenges and is the leading cause of healthcare-associated diarrhea.

HOW AROS SPREAD

- Direct or indirect contact with colonized or infected individuals
- Contaminated hands, surfaces (e.g., doorknobs, counters) and shared environments
- MRSA spreads via skin contact; VRE, ESBL, and C. difficile via ingesting contaminated particles

SYMPTOMS

- **Colonization:** Bacteria present without symptoms
- **Infection:** Illness occurs when bacteria multiply in a susceptible host
 - AROs: May cause urinary tract infections, pneumonia, or skin infections
 - C. difficile: Diarrhea, especially in hospitalized or immunocompromised individuals

WHAT TO DO IF YOUR SUSPECT AROS

- No emergency response typically required
- Healthy individuals are generally at low risk
- Maintain hand hygiene and seek medical assessment as required

PREVENTION & TREATMENT

- **Prevention:**
 - Practice thorough hand hygiene
 - Use gloves and gowns when contact is anticipated
 - Follow contact precaution protocols
- **Treatment:**
 - ARO infections may be difficult or impossible to treat
 - C. difficile treatment depends on severity—may resolve after stopping antibiotics. In more severe cases, medication and/or surgery may be required
 - Colonization without symptoms does not require treatment

KEY POINTS FOR RESPONDERS

- AROs and *C. difficile* spread easily via contact. **Hand hygiene is critical**
- PPE should be used when contact is likely
- Colonization is not the same as infection—monitor for symptoms
- Adherence to infection control protocols help prevent transmission
- Notify Designated Officer of illness or exposures