

IPAC for Health Care Workers in Hospital Settings In-Person Training Course

Module 1: Introduction to IPAC and Routine Practices

Trainer Speaking Notes

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IPAC for Health Care Workers in Hospital Settings

In-Person Training Course

Module 1: Introduction to IPAC and Routine Practices

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Disclaimer

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Course Overview

This course consists of four modules covering essential Infection Prevention and Control (IPAC) topics, with opportunities for practical application.

- Modules 1–3 include:
 - presentation slides
 - practice activities
- Module 4 includes:
 - practical scenarios with multiple-choice questions
 - final quiz

Trainer speaking notes: This course is designed to introduce health care workers to Infection Prevention and Control (IPAC) core competencies. These are the basic skills and knowledge all Ontario health care workers need to understand and practice. This course will help you expand your knowledge about Infection Prevention and Control principles and learn skills you can apply to your practice.

This course consists of four core modules. The first three cover foundational concepts in infection prevention and control (IPAC) that are applicable in all types of health care settings, and the fourth module covers the application of IPAC principles specifically in a hospital setting. In this module, you will have the opportunity to practice applying principles to realistic, hospital-based scenarios.

Upon completion of the four modules, you can write a final quiz demonstrating your knowledge. It requires 80% to pass this quiz but you can repeat it if needed. A certificate of completion can be issued upon passing the final quiz.

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Module Overview

- **Module 1: Introduction to IPAC and Routine Practices**
 - Chain of Transmission and point-of-care risk assessments
 - Personal protective equipment (PPE)
- **Module 2: Foundational Elements in Routine Practices**
 - Hand hygiene
 - Environmental controls
 - Occupational health and safety programs
- **Module 3: Additional Precautions in IPAC**
- **Module 4: Applying IPAC Principles in Hospital Settings**

Trainer speaking notes: Here is an overview of the four modules. Today, we will focus on Module 1. This module covers an introduction to infection prevention and control or IPAC and Routine Practices which are practices that are used in all situations to protect yourself and patients. We will focus on the Chain of Transmission and point-of-care risk assessments. We will also introduce proper use of personal protective equipment.

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Learning Objectives

By the end of module one, you will be able to:

- Describe the six links in the Chain of Transmission and how to use IPAC strategies to break the links in the chain to prevent infections.
- Perform a risk assessment as a Routine Practice to evaluate the potential risk of infection.
- Use a risk assessment to determine the need for personal protective equipment (PPE).

Trainer speaking notes: By the end of this first module, you will be able to describe all six links in the Chain of Transmission and specifically how to use IPAC strategies to break the links in the chain to prevent infections. You will also be able to perform a risk assessment as a Routine Practice to evaluate the potential risk of infection. Finally, you will be able to use a risk assessment to determine the need for personal protective equipment.

Instructions for Trainers: Refer to Module 1: Introduction to IPAC and Routine Practices in the Trainer's Guide for more information. This section includes instructions for optional practice activities that can be used to enhance the learning of your audience.

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What is IPAC?

- IPAC stands for Infection Prevention and Control.
- The goal of IPAC programs and IPAC practices and procedures is to stop or reduce the transmission (spread) of infectious agents.
- IPAC fulfills an essential function in hospitals.



Trainer speaking notes: What does the term IPAC mean? IPAC is an acronym that stands for Infection Prevention and Control. The goals of IPAC programs and IPAC practices and procedures in general are to stop or reduce the risk of transmission of infectious agents and this includes preventing transmission from individuals with recognized infections in addition to individuals where the infectious agent is not yet recognized. IPAC fulfills an essential function in all health care settings, especially hospitals, where patients may have active infections or be vulnerable to infections transmitted from others. Strong IPAC practices will protect everyone: patients, health care workers, and families and visitors.

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How are IPAC Best Practices Developed?

- Research, literature reviews and consultations with content experts.
- Example: The Provincial Infectious Diseases Advisory Committee on Infection Prevention and Control (PIDAC-IPC)
- Best practices are evidence-based.



Trainer speaking notes: IPAC best practices are developed through research, reviews of literature and consultations with content experts. [The Provincial Infectious Diseases Advisory Committee on Infection Prevention and Control \(PIDAC-IPC\)](#) is one such example of a multidisciplinary group of IPAC content experts involved in the development of evidence-based IPAC best practices resources. IPAC applies evidence-based practices and procedures and when applied consistently in health care settings, they can prevent or reduce the risk of transmission of infectious agents to health care providers, other patients and visitors.

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IPAC Practices Discussion Question

Why is it so important that health care workers understand and follow IPAC practices?



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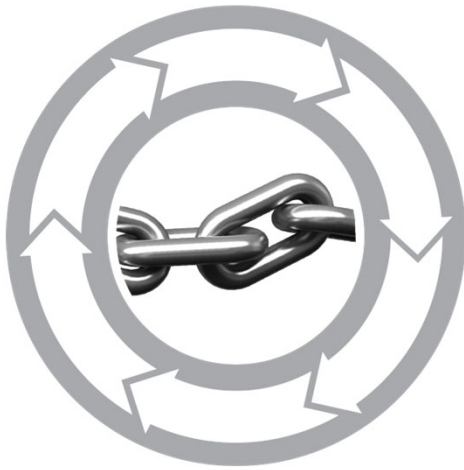
Trainer speaking notes: Consider the following question: Why is it so important that health care workers understand and follow IPAC practices?

Infections that are acquired during the delivery of health care, known as health care-associated infections (or HAIs), can cause significant harm. Many HAIs are resistant to antimicrobial treatment and can result in severe complications, or death. IPAC practices are a key strategy for reducing the spread of infectious agents in health care settings. As health care workers, when we follow IPAC practices correctly and consistently, we are supporting a wider effort to keep patients, staff and visitors safe.

Instructions for Trainers: Discussion can be based on size of group (either large group, small group or paired discussion) with ideas shared back with whole room or within groups. Trainer to decide best approach.

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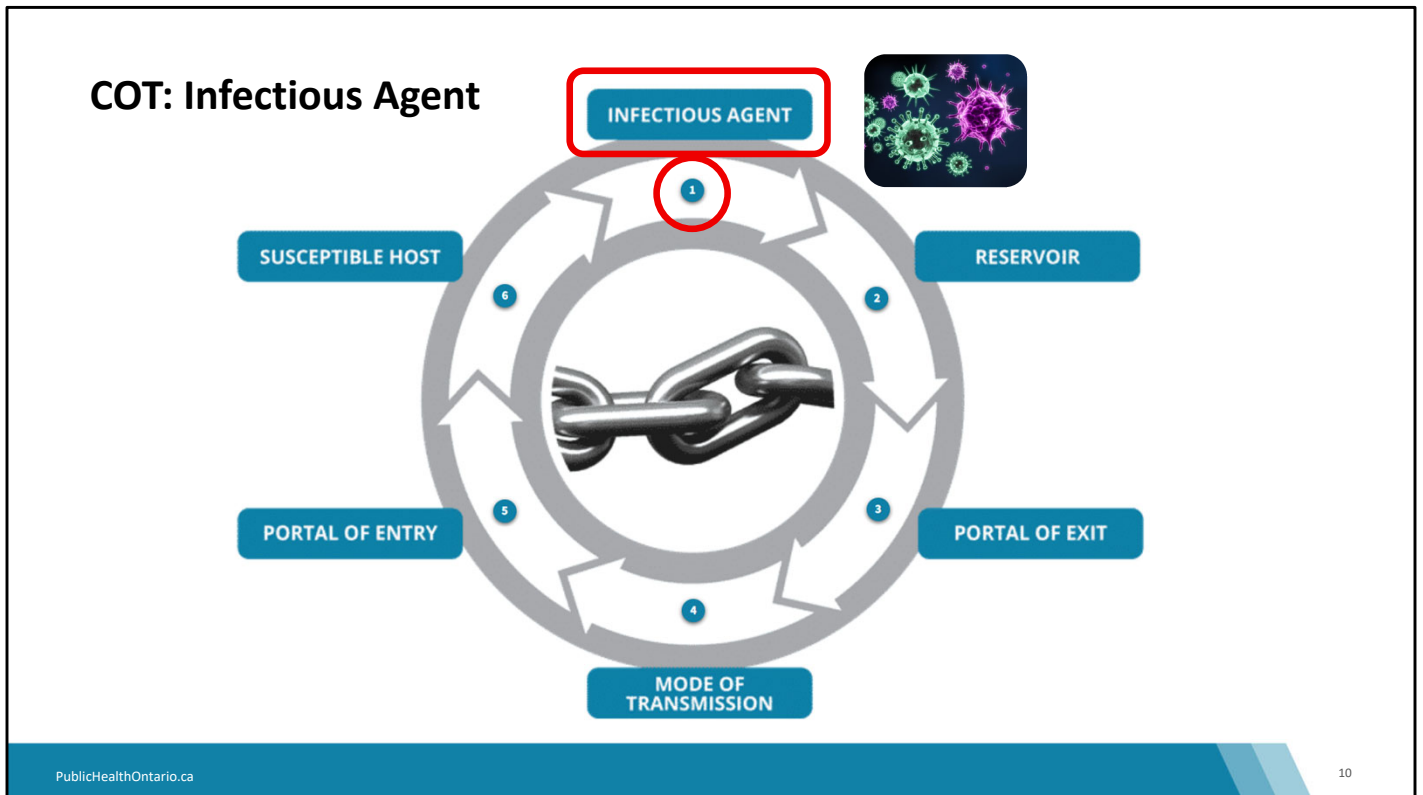
Chain of Transmission (COT)



- Explains how infections spread.
- All six links in the chain are required for an infection to spread.

Trainer speaking notes: In this section, we will discuss various IPAC best practices in detail. Before we explore strategies for preventing and controlling the spread of infections, it is helpful to first understand *how* infections spread. The Chain of Transmission (COT) is a model that helps explain this. We'll take a closer look at this next. IPAC best practices are based on an understanding of how infections spread using a model called the Chain of Transmission (COT). The COT represents a process where each link depicts a factor related to the spread of infectious agents. All six links need to be present in order for an infection to spread. Transmission occurs when the infectious agent exits a reservoir, travels via a mode of transmission and gains entry to a susceptible host.

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Trainer speaking notes: To start the Chain of Transmission, there needs to be an infectious agent that can invade body tissues and multiply.

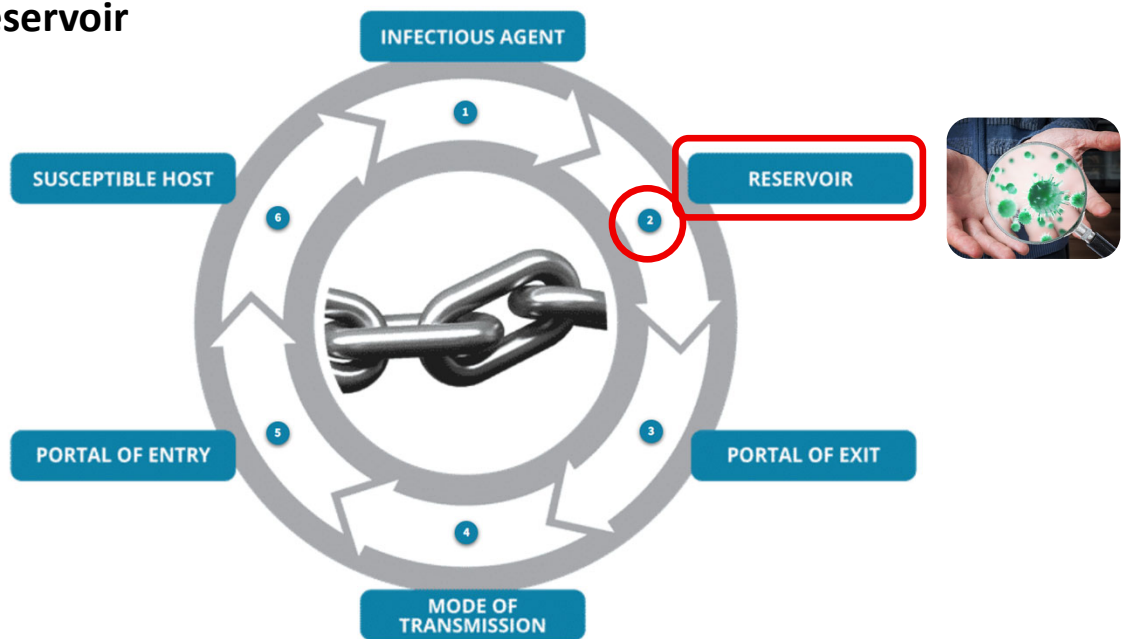
Optional Discussion Question: What are some examples of infectious agents?

Feedback:

- Bacteria (e.g. Methicillin-resistant *Staphylococcus aureus* (MRSA) and *Streptococcus* sp.)
- Viruses (e.g. Influenza, SARS-CoV-2, norovirus)
- Fungi (e.g. *Candida* sp., *Aspergillus* sp.)

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COT: Reservoir



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Trainer speaking notes: Infectious agents need a place to infect cells, live and multiply.

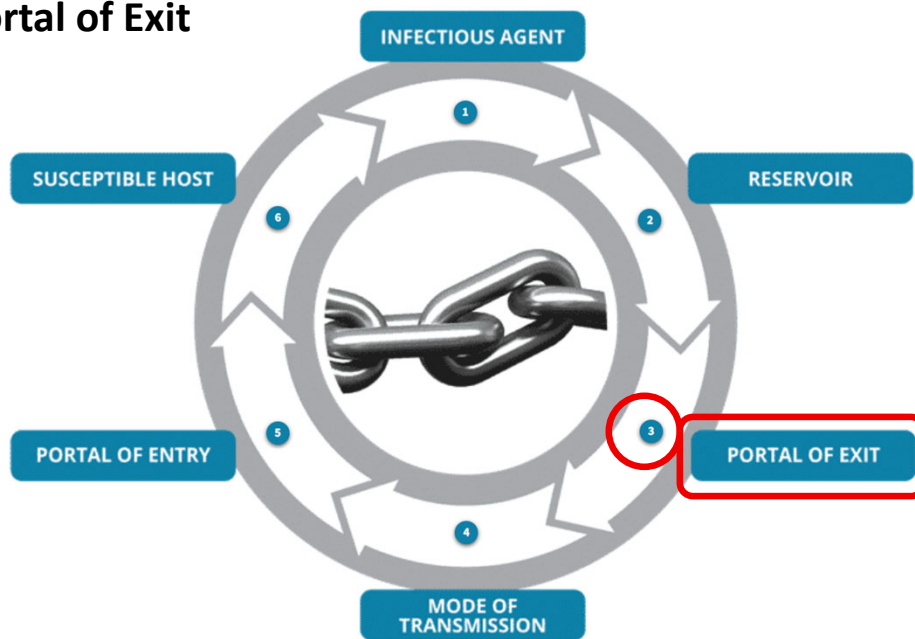
Optional Discussion Question: What are some examples of places where infectious agents can infect cells, live and multiply?

Feedback: Such places may include:

- People
- Water
- Food

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COT: Portal of Exit



Trainer speaking notes: In order to spread, infectious agents need a way to leave the reservoir through portals of exit.

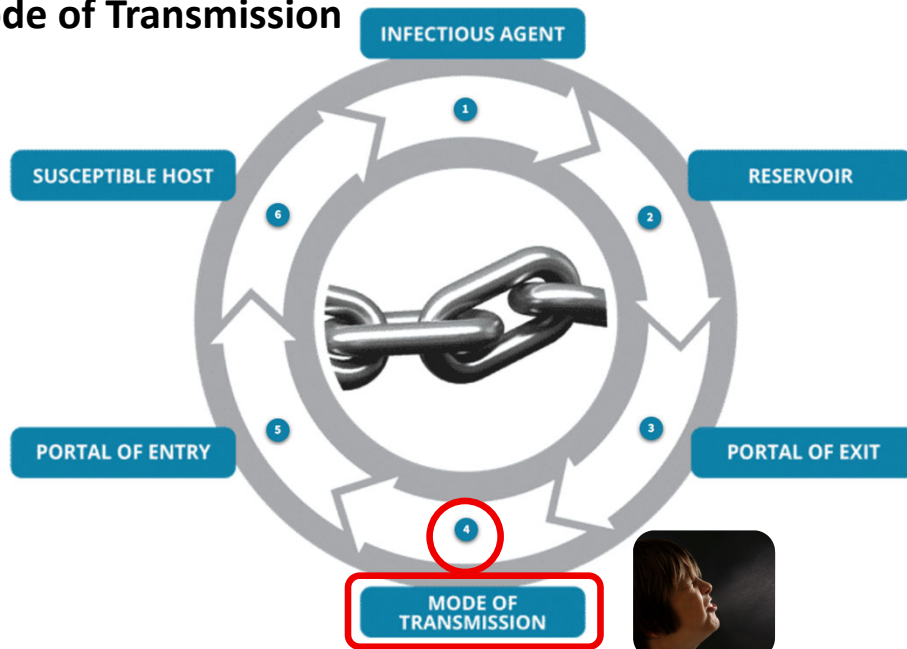
Optional Discussion Question: What are some examples of portals of exit?

Feedback: Examples of portals of exit include:

- In blood, secretions and excretions of body fluids
- Through the skin, eyes, nose, or mouth

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COT: Mode of Transmission



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Trainer speaking notes: Most infectious agents need a way to move from one place to another. The various ways infectious agents move around are called, "Modes of transmission" Examples include: Contact, both direct and indirect and through the air (in the form of infectious respiratory particles). Please note that Modes of Transmission will be discussed further in Module 3: Additional Precautions in IPAC.

Optional Discussion Question: Can you connect some modes of transmission to portals of entry and exit?

Examples include:

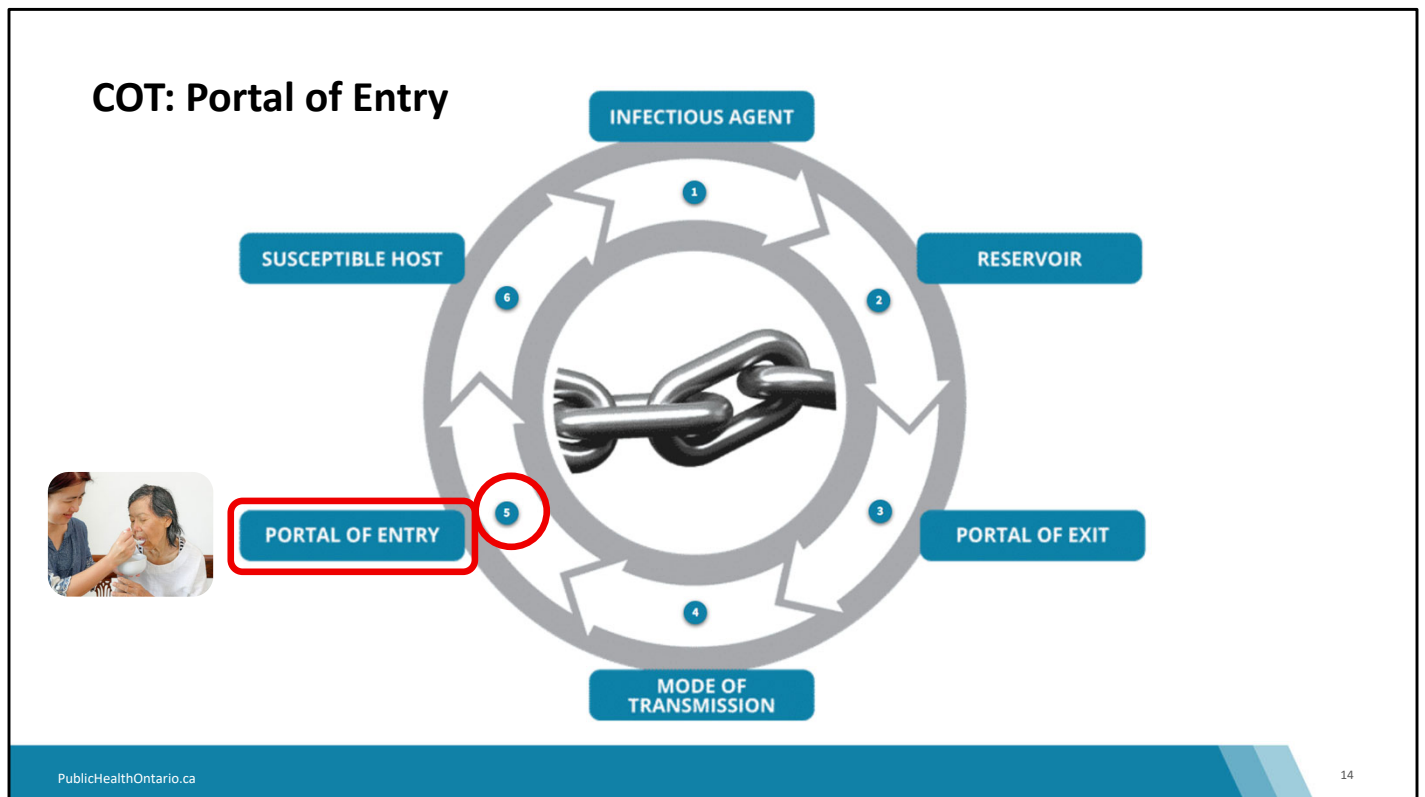
Contact transmission:

- Portal of exit: skin, blood, vomit
- Portal of entry: non-intact skin, mucous membranes through touch

Through the air:

- Portal of exit: respiratory tract
- Portal of entry: inhalation, mucous membranes

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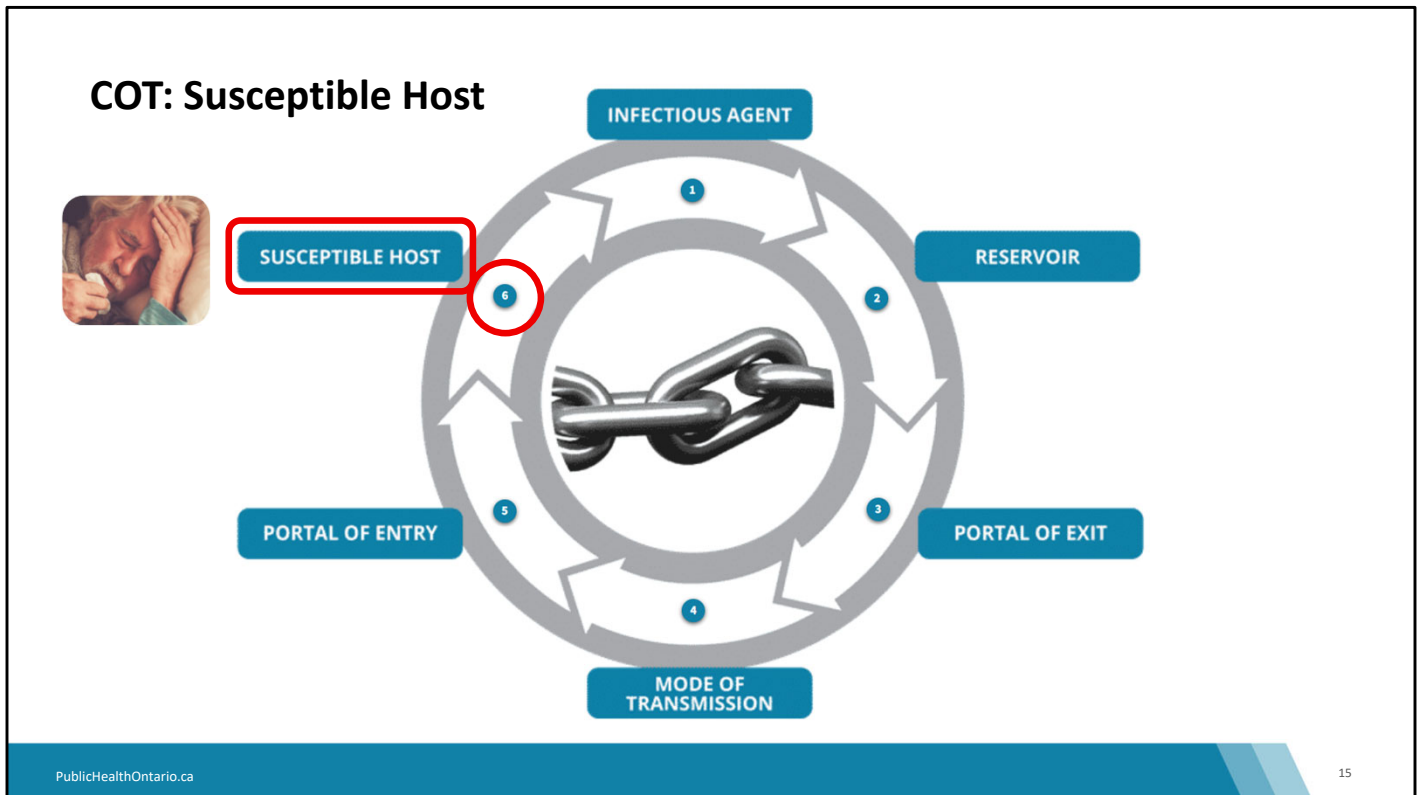
Trainer speaking notes: Infectious agents need a way to enter a new host in order to cause an infection.

Optional Discussion Question: Based on what you know about portals of exit, name some portals of entry.

Feedback:

- Mucous membranes (e.g., eyes, nose, mouth)
- Respiratory tract
- Gastrointestinal (GI) tract
- Non-intact (i.e., broken) skin

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Trainer speaking notes: To spread, infectious agents need to be transmitted to another host who is at risk of becoming infected. Some individuals will be more vulnerable or susceptible to infections than others.

Optional Discussion Question: What are some examples of conditions or situations that contribute to an individual's susceptibility?

Feedback:

- Age, (are very young or very old)
- Have a poorly functioning immune system
- Have other illnesses (e.g., Diabetes)
- Have burns/wounds
- Have surgical wounds

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Chain of Transmission Discussion Questions

Think of the last time you or someone you know had an infection.

- What type of infectious agent was it?
- Where did it live and grow and how did it exit?
- What mode or modes of transmission did it use to move around?
- How might it have entered another susceptible person?
- Who are the people who seem to get infections easily?



Trainer speaking notes: Remember: all 6 links in the Chain of Transmission need to be present in order for an infection to spread. Think of the last time you or someone you know had an infection and consider these questions on the slide.

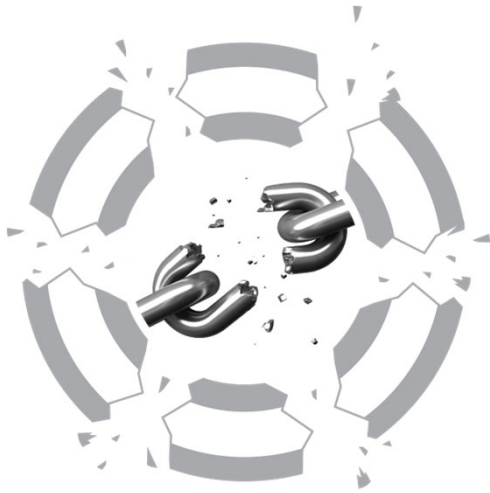
Examples (specific to a hospital setting):

- Infectious agent: common cold virus (e.g. rhinovirus)
- Reservoir: people, patients in the hospital, family/visitors
- Portal of exit: the respiratory tract (e.g. coughing, sneezing)
- Mode of transmission: Through the air, direct or indirect contact
- Portal of entry: respiratory tract, mucous membranes
- Susceptible host: patients, health care workers

Instructions for Trainers: Trainer can decide the best approach for the discussion question (e.g. large groups, small groups, partners).

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Breaking the Chain of Transmission (COT)

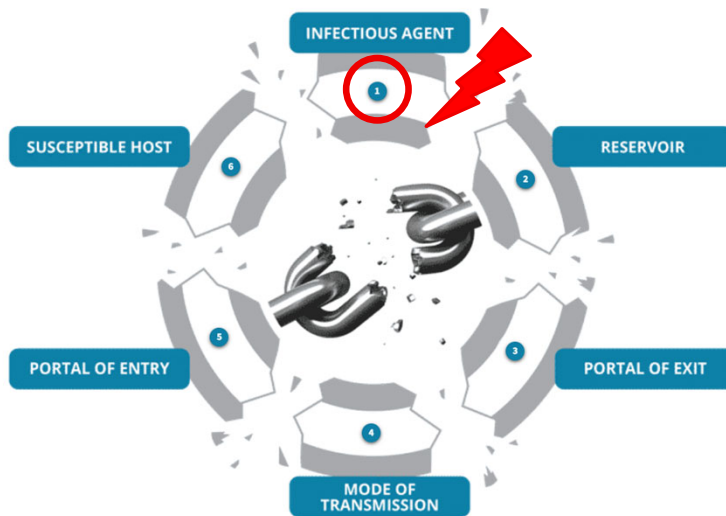


- The goal of IPAC is to break one or more links in the COT to prevent the spread of infectious agents.
- Infectious agents cannot spread, and infection cannot develop if any links in the chain are eliminated or broken.

Trainer speaking notes: Understanding how infections spread helps us to know how to stop them from spreading. That is why the Chain of Transmission is so important for informing IPAC best practices. Next, we'll explore how to stop infections from spreading by learning how to break links in the Chain of Transmission. The goal of IPAC is to break one or more links in the COT to prevent the spread of infectious agents. Infectious agents cannot spread and infection cannot develop if any links in the chain are eliminated or broken. IPAC practices often target multiple links in the Chain to ensure transmission is interrupted.

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Breaking the COT: Infectious Agent



Break this link by killing or removing the infectious agent.

The chain can be broken by:

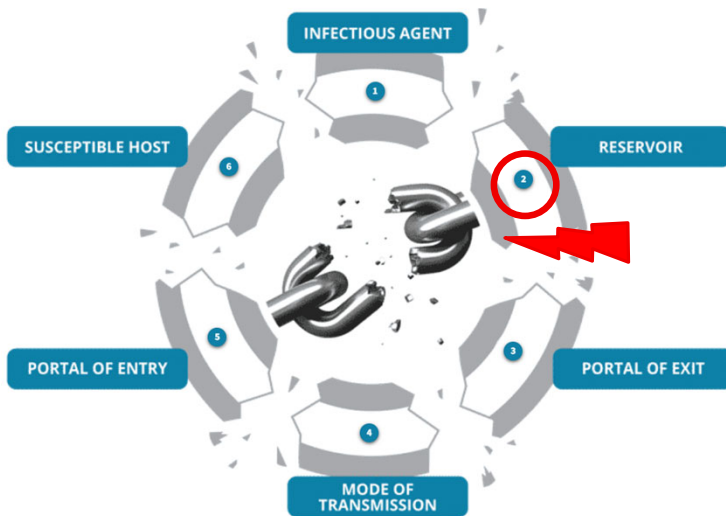
- treating infections
- disinfecting the environment
- sterilizing medical equipment

Trainer speaking notes: To break the first link, the infectious agents need to be killed or removed. A few ways that this link in the chain can be broken include:

- 1) Using antibiotics to treat infections
- 2) Disinfecting the environment
- 3) Sterilizing medical equipment

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Breaking the COT: Reservoir



Eliminating the reservoir can prevent the infectious agent from persisting, multiplying and infecting cells.

The chain can be broken by:

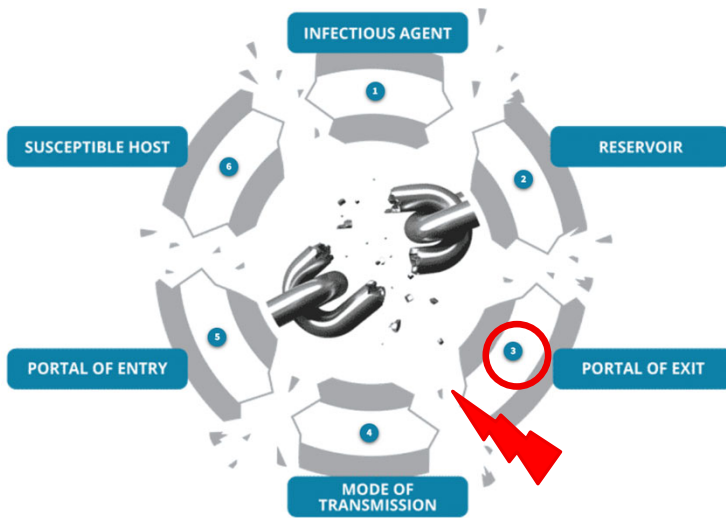
- environmental cleaning and disinfection
- proper food storage
- water treatment

Trainer speaking notes: To break the second link, the reservoir needs to be eliminated so that the infectious agent does not have a place to infect cells and multiply. This link in the chain can be broken by:

- 1) Environmental cleaning and disinfection
- 2) Proper food storage
- 3) Water treatment

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Breaking the COT: Portal of Exit



Manage all bodily fluids to minimize infection risk and break the third link.

The chain can be broken by:

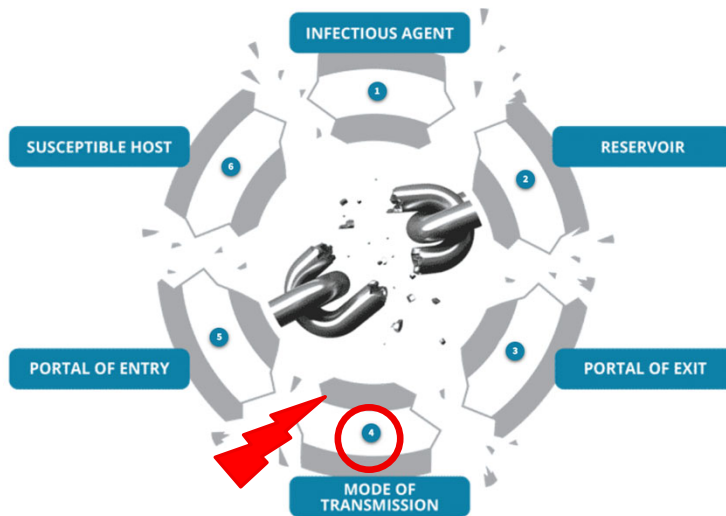
- hand hygiene
- safe disposal of waste
- respiratory etiquette (e.g., covering your coughs and sneezes with a tissue)

Trainer speaking notes: To break the third link in the chain, we need to manage all the blood and body fluids which exit from the body in a way that helps reduce the risk of infection. This link in the chain can be broken by:

- 1) Hand hygiene
- 2) Safe disposal of waste and contaminated linen
- 3) Respiratory etiquette (e.g., covering your coughs and sneezes with a tissue.)

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Breaking the COT: Mode of Transmission



Prevent infectious agents from spreading to susceptible hosts to break the fourth link.

The chain can be broken by:

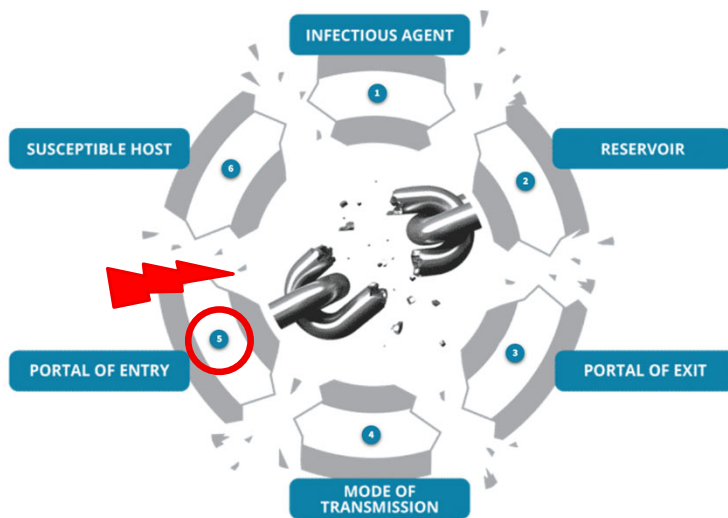
- spatial separation
- environmental cleaning
- equipment disinfection or sterilization
- PPE
- hand hygiene

Trainer speaking notes: To break the fourth link, we need to prevent infectious agents from spreading to susceptible hosts. This is most easily achieved by health care workers. This link in the chain can be broken by:

- 1) Spatial separation (e.g. keeping two metre distance from someone coughing)
- 2) Environmental cleaning
- 3) Equipment disinfection or sterilization
- 4) Personal protective equipment
- 5) Hand Hygiene

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Breaking the COT: Portal of Entry



To break the fifth link, the infectious agent needs to be kept from entering a susceptible host.

The chain can be broken by:

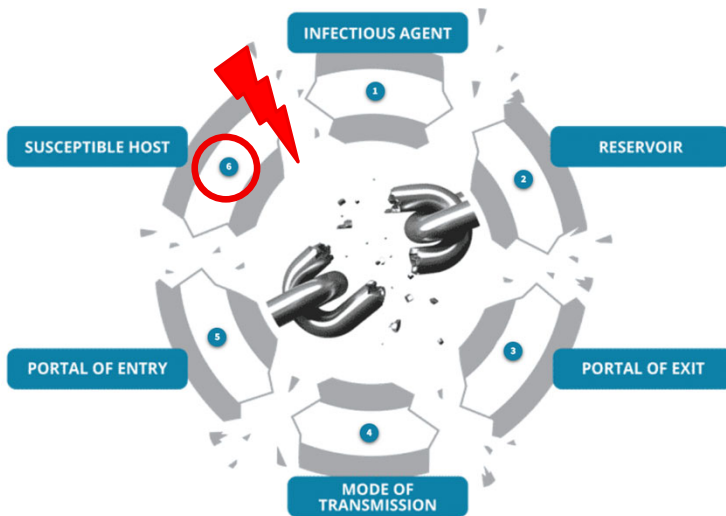
- hand hygiene
- aseptic or sterile technique
- proper wound care, catheter care
- PPE
- removing indwelling devices (e.g., urinary catheters) as soon as they are no longer necessary

Trainer speaking notes: To break the fifth link in the chain, the infectious agent needs to be kept from entering a susceptible host. This link in the chain can be broken by:

- 1) Hand hygiene
- 2) Aseptic or sterile technique
- 3) Proper wound care, catheter care
- 4) Personal protective equipment
- 5) Removing indwelling devices (e.g., urinary catheters) as soon as they are no longer necessary

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Breaking the COT: Susceptible Host



Reduce the susceptibility of potential hosts to getting an infection.

The chain can be broken by:

- immunization
- proper nutrition
- recognition of high-risk patients
- appropriate treatment of underlying conditions

Trainer speaking notes: To break the sixth link, we need to reduce or address the susceptibility of potential hosts to getting an infection.

Optional Discussion Question: How can the susceptibility of the host be changed? Name some examples of how the susceptibility of a host cannot be changed.

Feedback: The susceptibility of a host can be changed by:

- 1) immunization
- 2) addressing underlying illness
- 3) support healing of wounds/non-intact skin
- 4) removing invasive devices when not needed
- 5) improving nutrition
- 6) recognition of high-risk patients

Sometimes the susceptibility of the host cannot be changed and other links in the chain must be broken to prevent infection. Examples of how susceptibility of a host cannot be changed include: 1) age related risk can't be changed, 2) chronic illnesses.

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Routine Practices



Routine Practices are the IPAC practices we perform regularly to prevent and control the spread of infectious agents.

These practices are considered “Routine” because they are applied:

- During all activities
- For all interactions with patients
- In all health care settings

Trainer speaking notes: With the Chain of Transmission, we're equipped with a conceptual model for how infections spread and how we can stop them from spreading. In the next lesson, we'll take a closer look at Routine Practices and discuss two key IPAC practices; risk assessment and personal protective equipment. Let's start our discussion on Routine Practices. Routine Practices are the IPAC practices we perform regularly to prevent and control the spread of infectious agents.

These practices are considered “Routine” because they are applied:

- during all activities
- for all interactions with patients
- in all health care settings

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Routine Practices Categories

Routine Practices can be grouped into five main categories:

1. Risk Assessment
2. PPE
3. Hand Hygiene
4. Environmental Controls
5. Administrative Controls



Trainer speaking notes: Routine Practices can be grouped into five categories. These include a point-of-care risk assessment, the proper use of personal protective equipment, hand hygiene, environmental controls and administrative controls. Let's begin with risk assessment.

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Point-of-Care Risk Assessment (PCRA)

- Is a thought process performed by every health care worker.
- Must be performed before every interaction with a patient or before entering their environment.
- Involves the health care worker asking questions about their own abilities and needs when performing tasks and duties.
- Enables health care workers to choose interventions which help prevent the spread of infectious agents.



Trainer speaking notes: In health care settings, a key step that health care workers can take to help apply the right measures for protecting themselves and others from acquiring infections is performing routine point-of-care risk assessments.

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PCRA Discussion Questions

Consider how you assess risk every day.

1. Think about some of the questions you ask yourself as part of your own mental checklist to stay safe when crossing the street?
2. Can you think of other examples of risk assessments you perform routinely in your day-to-day life to keep yourself and others safe?



Trainer speaking notes: Let's think about risk assessments that we perform every day. How do you assess risk?

Think about the questions that you ask yourself as part of your own mental checklists to stay safe when crossing the street?

These might include: Is there a car coming? Is there a crosswalk? Is there time to get across safely?

Can you think of other examples of risk assessments you perform routinely in your day-to-day life to keep yourself and others safe?

Feedback (example to share): When driving, you put on a seatbelt, ensure your passengers are also wearing a seatbelt, and drive according to the rules of the road and weather conditions.

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Common PCRA Questions (1 of 2)

1. Could you be exposed to bodily fluids through a sneeze, splash, spray, or cough from the patient you will be interacting with?
2. Will there be contact, or risk of contact with:
 - blood
 - mucous membranes
 - non-intact skin
3. Could you come into contact with surfaces or equipment that may be contaminated with infectious agents?



Trainer speaking notes: Now we will review some common questions health care workers should ask themselves as part of a typical PCRA. One question you might ask relates to your risk of exposure to bodily fluids while interacting with someone.

1. Could you be exposed to bodily fluids through a sneeze, a splash, a spray or a cough from a patient you will be interacting with or providing care to?
2. Additionally, will there be contact, or risk of contact with: Blood, Mucous membranes (e.g., mouth, nose or eyes)?, Non-intact skin (e.g., open skin)?
3. Could you come into contact with surfaces or equipment that may be contaminated with infectious agents?

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Common PCRA Questions (2 of 2)

4. Does the person you will be interacting with have a known infection, or signs and symptoms of infection, such as a fever or a cough?
5. Could you be spreading potentially infectious agents in the environment or to others?
6. Are there any factors related to the person you will be interacting with that may increase your risk of exposure to infectious agents?
7. How confident and skilled are you performing the task at hand?



Trainer speaking notes:

4. Does the person you will be interacting with have a known infection, or signs and symptoms of infection, such as a fever or a cough?
5. Could you be spreading potentially infectious agents in the environment or to others?

Optional Discussion Question: Should you stay home from work because of showing signs or symptoms of an infection, such as feeling sick? Have you properly cleaned your hands as necessary?

6. Are there any factors related to the person you will be interacting with that may increase your risk of exposure to infectious agents? For example, there might be a patient who is unable to follow instructions because of cognitive issues, reactive behaviours or a language barrier.

7. How confident and skilled are you at performing the task at hand? Will you require assistance in order to perform the task safely?

Optional Discussion Question: Can anyone think of an example of a situation where you might require assistance in order to perform a task safely? **Feedback:** You might need assistance if performing care for a patient who is confused and non-compliant.

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Personal Protective Equipment (PPE)



The choice of appropriate PPE should be based on:

- Your point-of-care risk assessment.
- The nature of the interaction between you and the patient.
- The likely modes of transmission of infectious agents.

Trainer speaking notes: Risk assessments are an ongoing practice all health care workers perform repeatedly throughout their work day. As you become more comfortable with asking risk assessment questions, they will become an ingrained habit you will apply and re-apply with every interaction. Next we will explore another Routine Practice: Personal Protective Equipment (PPE). Choosing appropriate personal protective equipment (PPE) based on your PCRA is another example of Routine Practices. PPE helps to break a link in the Chain of Transmission and prevent the transmission of infection between individuals by placing a barrier between the infectious agent and one's mucous membranes (e.g., eyes, nose, mouth), respiratory tracts, skin, and clothing. The choice of appropriate PPE should be based on:

- Your PCRA
- The nature of the interaction between you and the patient
- The likely modes of transmission of infectious agents

As a health care worker, you are responsible for choosing the appropriate PPE based on your risk assessment. Now we will go over different types of PPE in more detail.

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Gloves



Wearing gloves protects the hands from:

- Infectious agents that may be present in blood, body fluids, non-intact skin, mucous membranes, secretions or excretions.
- Contaminated equipment or environmental surfaces.

Trainer speaking notes: We will start by talking about a very common type of PPE: gloves. The purpose of wearing gloves is to protect hands from: Infectious agents that may be present in blood, body fluids, non-intact skin, mucous membranes, secretions or excretions, and contaminated equipment or environmental surfaces.

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Glove Selection

- Select the best gloves for the task you are about to do.
- Sterile gloves are used for aseptic procedures.
- Gloves should fit well, especially for tasks that may put stress on the gloves.
- Use glove type that tolerates chemicals in use.
- Avoid gloves that are:
 - ✗ co-polymer ("sandwich gloves")
 - ✗ powdered latex gloves (associated with latex allergy)



Trainer speaking notes: Select the best gloves for the task you are about to do. Use sterile gloves when you will be performing an aseptic procedure. Choose a glove size that fits well, especially for tasks that may put more stress on the gloves. When working with chemicals, be sure to select a glove type that can tolerate the chemical in use.

Some types of gloves should be avoided. These include: Co-polymer ("sandwich gloves"), Powdered latex gloves (associated with latex allergy).

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Glove-to-Glove and Skin-to-Skin Technique for Doffing Gloves



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Trainer speaking notes: Let's discuss the steps for proper glove removal:

Step 1 - Remove the first glove with the other gloved hand. Grasp the outside edge near your wrist and peel away. Avoid touching skin with glove

Step 2 - To remove the second glove, slip ungloved fingers inside the other glove. Avoid touching the outside of the glove with bare skin

Step 3 - Peel the second glove off by rolling the glove inside out. Discard gloves immediately into a waste receptacle. When hands are bare, take care to only touch the inside of the gloves and never the outside. After disposing gloves, clean your hands right away

Optional Activities: Watch videos:

Putting on Gloves <https://www.youtube.com/watch?v=15a7BkBrKdk>

Taking off Gloves <https://www.youtube.com/watch?v=onhBTfage3w>

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When Are Gloves Not Required?

- During social touch (e.g., shaking hands)
- Pushing a wheelchair
- Making a bed or delivering clean linen
- Touching intact skin (e.g., taking blood pressure or a pulse)
- Using a computer
- When not providing direct care (e.g., talking to the patient)



Trainer speaking notes: Gloves are not required for everyone interaction with every patient. When are they not required? You may not be required to wear gloves during social touch (e.g., shaking hands), when pushing a wheelchair, when making a bed or delivering clean linen, when touching intact skin (e.g., taking blood pressure or a pulse), when using a computer and when not providing direct care (e.g., talking to the patient).

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Gowns

- Protect your clothing/uniform and forearms from infectious agents.
- Are to be used when your point-of-care risk assessment determines that an activity is likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.



Trainer speaking notes: Next we will talk about proper use of gowns. Gowns are used to protect your clothing/uniform and forearms from infectious agents. They are also to be used when your point-of-care risk assessment determines that an activity is likely to generate splashes or sprays of blood, body fluids, secretions, or excretions (e.g., emptying commodes or bedpans).

Optional activity: Watch videos on proper donning and doffing of a gown:

Putting on Gown and Gloves Video www.youtube.com/watch?v=k9_EHb6NPWk

Taking off Gown and Gloves Video www.youtube.com/watch?v=sk4A96IW8bQ

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Facial Protection

- May include:
 - medical mask
 - N95 respirator
 - eye protection
- Used to protect the mucous membranes of your eyes, nose, and mouth during activities where you may be exposed to splashes or sprays of blood or body fluids.
- Worn when within close contact (e.g., within two metres) of someone with respiratory symptoms (e.g., coughing).



Trainer speaking notes: Now we will talk about facial protection which includes both respiratory and eye protection.

Facial protection may include: A Medical mask, an N95 respirator and eye protection. These types of PPE are used to protect the mucous membranes of your eyes, nose, and mouth during activities where you may be exposed to splashes or sprays of blood or body fluids. They can also be worn when within close contact (e.g. within two metres) of someone with respiratory symptoms (e.g. coughing)

Optional Activity: Trainer can bring examples of each type of PPE to show learners.

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Medical Masks

- Well-fitting medical masks protect the nose and mouth from:
 - Splashes or sprays of blood, body fluids, secretions or excretions.
 - Potentially infectious respiratory secretions and particles from coughing or sneezing patients.
- Conduct a risk assessment to determine if a medical mask is required.
- Patients with a new acute respiratory illness who are coughing should wear a mask (if tolerated):
 - when they leave their room
 - in ambulatory clinics
 - in ambulances



Trainer speaking notes: Medical masks protect the nose and mouth from splashes or sprays of blood, body fluids, secretions or excretions and potentially infectious respiratory secretions and particles from coughing or sneezing patients. You will want to always conduct a risk assessment to determine if a medical mask is required. Always wear a mask if your nose and mouth might be in contact with blood and other body fluids. Examples of activities that require a medical mask include open suctioning or emptying a bedpan into an open hopper. Patients with a new acute respiratory illness, who have signs and symptoms such as coughing or sneezing should wear a mask as source control. They should wear a mask, if tolerated when they leave their room and additionally in ambulatory or out-patient clinics and in ambulances.

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Respirators

- Filter out small airborne particles.
- Prevent inhalation of airborne infectious agents (e.g., *Mycobacterium tuberculosis*).
- N95 respirators are commonly used in health care settings.
- You must be fit-tested before wearing an N95 respirator and you must perform a seal-check each time you put one on.
- Patients should not wear N95 respirators because they have not undergone proper fit testing.



Trainer speaking notes: What is the difference between a medical mask and a respirator?

Respirators filter out small airborne particles and are used to prevent inhalation of airborne infectious agents such as *Mycobacterium tuberculosis*. N95 respirators are commonly used in health care settings and you must be fit-tested before wearing an N95 respirator and you must perform a seal-check each time you put one on. Patients should not wear N95 respirators because they have not undergone proper fit testing. Doing so may result in breathing difficulties.

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Eye Protection

- Selection should be based on your point-of-care risk assessment.
- Needs to protect both in front of the eyes and at the sides.
- May include:
 - safety glasses
 - safety goggles
 - face shields
 - visors attached to masks
- Can be disposable or reusable.



Trainer speaking notes: Eye protection may include safety glasses, safety goggles, face shields, and visors attached to masks. They should be based on your point-of-care risk assessment and needs to protect both in front of the eyes and at the sides. They might be disposable or reusable.

Optional activity: Watch videos on proper donning and doffing of a medical mask and eye protection:

Putting On Mask and Eye Protection:

<https://www.publichealthontario.ca/en/Videos/I/2021/IPAC-MaskEyes-On>

Taking Off Mask and Eye Protection:

<https://www.publichealthontario.ca/en/Videos/I/2021/IPAC-MaskEyes-Off>

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Putting On PPE

It is important to put on and take off PPE in the correct order to avoid cross-contamination.



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Trainer speaking notes: Part of the proper use of PPE involves following the correct order for putting it on and taking it off. Let's start with putting on PPE.

Step 1: Clean Hands

Step 2: Put on gown

Step 3: Put on mask

Step 4: Put on eye protection

Step 5: Put on gloves

Optional activity: Watch videos on proper donning of all PPE:

Putting on Full Personal Protective Equipment:

<https://www.publichealthontario.ca/en/Videos/I/2021/IPAC-FullPPE-On>

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Taking Off PPE

PPE should be discarded and hand hygiene performed immediately after PPE is removed.



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Trainer speaking notes: Carefully removing PPE in the correct order is essential to avoid self-contamination. Let's look at the steps for removing PPE:

Step 1: Remove gloves. It is important to remove the dirtiest piece of equipment first.

Step 2: Remove gown

Step 3: Clean hands. Hand hygiene is required before putting the hands near the face.

Step 4: Remove eye protection

Step 5: Remove mask

Step 6: Clean hands

Optional activity: Watch videos on proper doffing of all PPE:

Taking off Full Personal Protective Equipment:

<https://www.publichealthontario.ca/en/Videos/I/2021/IPAC-FullPPE-Off>

Slide 42

Summary

In this module, we discussed:

- Understanding the Chain of Transmission and how to use IPAC strategies to break links in the chain to prevent infections.
- Key elements of Routine Practices:
 - Performing a PCRA.
 - Using a PCRA to determine the need for PPE and other precautionary measures.
 - Best practices for using PPE.



Trainer speaking notes: The key takeaways from this module were:

- Understanding how the Chain of Transmission explains the spread of infectious agents and how it can be used to identify IPAC strategies that can break links in the chain to prevent the transmission of infections.
- Key elements of Routine Practices such as perform a point-of-care risk assessment and how to use a PCRA to determine what IPAC interventions are needed such as PPE use.
- We additionally discussed best practices for donning and doffing PPE.

That brings us to the end of Module 1. We will continue our learning in Module 2.

References

- Public Health Ontario [Internet]. Provincial Infectious Diseases Advisory Committee on Infection Prevention and Control (PIDAC-IPC). 2026 [cited 2026 Feb 18]. Available from: <https://www.publichealthontario.ca/en/About/External-Advisory-Committees/PIDAC-IPC>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Putting on Gloves [Video]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2026 Feb 18]. 1 min. Available from: <https://www.youtube.com/watch?v=15a7BkBrKdk>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Taking Off Gloves [Video]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2026 Feb 18]. 1 min. Available from: <https://www.youtube.com/watch?v=onhBTfage3w>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Putting on Gown and Gloves [Video]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2026 Feb 18]. 2 min. Available from: https://www.youtube.com/watch?v=k9_EHb6NPWk
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Taking off Gown and Gloves [Video]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2026 Feb 18]. 1 min. Available from: <https://www.youtube.com/watch?v=sk4A96IW8bQ>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Putting on mask and eye protection [Video]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2026 Feb 18]. 1 min. Available from: <https://youtu.be/1YiLpLXvg4>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Taking off mask and eye protection [Video]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2026 Feb 18]. 1 min. Available from: <https://www.youtube.com/watch?v=RFHPrzdlbgc>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Putting on full PPE [Video]. Toronto, ON: Queen's Printer for Ontario; 2017 [cited 2026 Feb 18]. 2 min. Available from: <https://www.youtube.com/watch?v=s2z1uM1fXN8>
- Ontario Agency for Health Protection and Promotion (Public Health Ontario). Taking off Full PPE [Video]. Toronto, ON: Queen's Printer for Ontario; 2017 [cited 2026 Feb 18]. 1 min. Available from: https://www.youtube.com/watch?v=crGIUX3_4DA

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