

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

Module 3: Additional Precautions in IPAC

Trainer Speaking Notes

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IPAC for Health Care Workers in Primary Care Settings

In-Person Training Course

Module 3: Additional Precautions in IPAC

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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 speaker 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 primary care setting. In this module, you will have the opportunity to practice applying principles to realistic, primary care-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 Primary Care Settings

Trainer speaker notes: Here is an overview of the four modules. Today, we will focus on Module 3. This module covers the appropriate use of Additional Precautions for patients who are suspected or confirmed to have a transmissible infection.

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Learning Objectives

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

- Explain what Additional Precautions are and why they may need to be used in health care settings.
- Describe various modes of transmission of infectious agents and how these relate to different categories of Additional Precautions.
- Apply Additional Precautions appropriately based on the situation.

Trainer speaker notes: By the end of this third module, you will be able to explain what Additional Precautions are and when and why they may need to be used in health care settings. You will also be able to describe various modes of transmission of infectious agents and how these relate to different categories of Additional Precautions. Finally, you will be able to apply Additional Precautions appropriately based on the situation.

Instructions for Trainers: Refer to Module 3: Additional Precautions in IPAC in the Trainer's Guide for more information. This section includes instructions for optional practice activities that can be used to enhance the learner of your audience.

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Additional Precautions

IPAC measures used to manage those with known or suspected infectious agents in health care settings. They are distinct from Routine Practices.



Trainer speaker notes: Additional Precautions are IPAC measures used to manage individuals with certain known or suspected infectious agents in health care settings. Recall that they are distinct from Routine Practices, which were covered in modules 1 and 2 of this presentation. Examples of elements of Additional Precautions include:

- Use of special signs posted outside the rooms of some patients
- health care workers wear specific PPE before entering certain patient rooms
- there are specific types of PPE and supplies available outside of certain patient rooms
- some patients have a flag or special notice on their medical chart

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Modes of Transmission

How infectious agents move in order for infections to spread.

- Examples:
 - Contact Transmission (Direct or Indirect)
 - Transmission through the Air



Trainer speaker notes: Recall that in Module 1, we learned that one of the six requirements for an infection to spread is that the infectious agent needs a way to move from one place to another. The various ways infectious agents move around is called the Mode of Transmission, which is the fourth link in the Chain of Transmission.

Examples of Modes of Transmission include:

- Contact Transmission
- Transmission through the Air

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Contact Transmission

There are two types of contact transmission:

- Direct transmission occurs through touching.
 - Example: the transfer of an infectious agent between a colonized or infected source directly to a susceptible host.
- Indirect transmission occurs through contact with contaminated equipment and/or surfaces.
 - Example: contaminated hands of a health care worker transferring infectious agents from a colonized patient to a susceptible host.

Trainer speaker notes: There are two types of contact transmission:

- Direct contact transmission occurs through touching contact where transfer of the infectious agent can occur between a colonized or infected source and a susceptible host.
- Indirect contact transmission occurs through contact with contaminated equipment and/or surfaces, including contact with contaminated hands of health care workers providing care to a susceptible host

Examples of infectious agents that can be transmitted by contact are Norovirus which can cause a gastrointestinal infection and antibiotic-resistant organisms (AROs) like, methicillin-resistant *Staphylococcus aureus* (MRSA), *Candida auris* or vancomycin-resistant Enterococci (VRE).

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Transmission Through the Air

- Occurs when infectious respiratory particles enter into a susceptible host by:
 - Landing on mucous membranes (such as eyes, nose, and mouth of another person).
 - Entering into the respiratory tract through inhalation.
- Examples:
 - Influenza virus
 - SARS-CoV-2 (the virus that causes COVID-19)
 - *Neisseria meningitidis* (a bacterium that causes bacterial meningitis)
 - Group A *Streptococcus* (a bacterium that can cause strep throat and pneumonia)

Trainer speaker notes: Transmission through the air occurs when infectious respiratory particles travel through the air and enter the body of a susceptible host by either landing on mucous membranes (such as eyes, nose, and mouth of another person) or by entering into the respiratory tract through inhalation. Examples of infectious agents transmitted this way include:

- Influenza virus
- SARS-CoV-2 (the virus that causes COVID-19)
- *Neisseria meningitidis* (a bacterium that causes bacterial meningitis)
- Group A *Streptococcus* (a bacterium that can cause strep throat and pneumonia)

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Airborne Transmission

Occurs when certain infectious respiratory particles remain suspended in the air for longer periods of time and can travel on air currents for longer distances.

- Examples:
 - *Mycobacterium tuberculosis*
 - Varicella-zoster virus (i.e., Chickenpox and disseminated herpes zoster (i.e., disseminated shingles))
 - Measles virus



Trainer speaker notes: Airborne transmission is different in that certain infectious respiratory particles can remain suspended in the air for prolonged periods of time and can travel on air currents for longer distances. Examples of infectious agents that spread by airborne transmission include:

- *Mycobacterium tuberculosis*
- Varicella-zoster virus (i.e., Chickenpox and disseminated herpes zoster (i.e., disseminated shingles))
- Measles virus

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Additional Precautions Categories

The category of precautions depends on the modes of transmission of the infectious agents involved.

- The different categories of Additional Precautions include:
 - Contact Precautions
 - Droplet Precautions
 - Additional Precautions for Acute Respiratory Infections (also known as Droplet and Contact Precautions)
 - Airborne Precautions

Trainer speaker notes: There are different categories of Additional Precautions and the choice will depend on the mode or modes of transmission of the infectious agent involved in causing the infection. These categories include Contact Precautions, Droplet Precautions, Additional Precautions for Acute Respiratory Infections (these are also known as Droplet and Contact Precautions) and Airborne Precautions.

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Contact Precautions

Used when an infectious agent is spread by direct or indirect contact transmission.

A health care worker must:

- Wear gloves
- Wear a long-sleeved gown
- Dedicate equipment to the patient or clean and disinfect equipment before use with another patient



Trainer speaker notes: Contact Precautions are used when an infectious agent is spread by direct or indirect contact transmission. When a patient is on Contact Precautions, in addition to performing hand hygiene, a health care worker must wear gloves, wear a long-sleeved gown for all activities where skin or clothing will come in contact with patient or their environment and also dedicate equipment to the patient or clean and disinfect equipment before use with another patient.

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Droplet Precautions

Used when infectious particles exit the respiratory tract and enter into the eyes, nose, or mouth of a susceptible host. A health care worker must:

- Wear medical mask and eye protection within 2 meters of the patient.
- Dedicate equipment to the patient or disinfect before use with another patient.
- Require patient to wear a medical mask if they leave the room.

Droplet Precautions are often combined with Contact Precautions.



Trainer speaker notes: Droplet Precautions are used when infectious particles exit the respiratory tract and enter into the eyes, nose, or mouth of another person. When a patient is on Droplet Precautions, in addition to performing hand hygiene, a health care workers must wear medical mask and eye protection within 2 meters of the patient, dedicate equipment to the patient or disinfect before use with another patient, and require patient to wear a medical mask if they leave the room. Droplet Precautions are often combined with Contact Precautions.

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Additional Precautions for Acute Respiratory Infections

Used when infectious respiratory particles spread through the air over short distances with direct deposition on mucosal membranes. Also known as Droplet and Contact Precautions. A health care worker must:

- Wear a medical mask (or N95 respirator based on point-of-care risk assessment), and eye protection within 2 metres of the patient.
- Wear gloves and a gown.
- Dedicate equipment or clean and disinfect before use with another patient.
- Require the patient to wear a medical mask when they leave their room, if tolerated.

Trainer speaker notes: Additional Precautions for Acute Respiratory Infections are used when infectious respiratory particles are known to spread through the air, most frequently over short distances with direct deposition on mucosal membranes. This type of Precautions is also known as Droplet and Contact Precautions. When a patient is on Additional Precautions for Acute Respiratory Infections, in addition to performing hand hygiene, a health care worker must wear medical mask (or N95 respirator based on a PCRA), and eye protection within 2 metres of the patient. They must also wear gloves and a gown when having contact with the patient and/or their environment, dedicate equipment to the patient or clean and disinfect before use with another patient. Require the patient to wear medical mask if they leave their room, if tolerated.

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Airborne Precautions

Used when an infectious agent is spread by infectious respiratory particles through airborne transmission. A health care worker must:

- Accommodate the patient in an Airborne Infection Isolation Room (AIIR) if available and if not, keep the door to the treatment/exam room closed.
 - Consider using a portable high efficiency particulate filtration device.
- Wear a fit-tested, seal-checked N95 respirator.
- Limit patient movement and have patient wear a medical mask, if tolerated.



Trainer speaker notes: Airborne Precautions are used when an infectious agent is spread by infectious respiratory particles through airborne transmission. When a patient is on Airborne Precautions, health care workers must, in addition to performing hand hygiene, accommodate the patient in an Airborne Infection Isolation Room (AIIR) and if not available, they should immediately be placed in a single room with the door closed, wear an N95 respirator that has been seal-checked and fit-tested ensuring proper fit, limit patient movement within the clinic and have patient wear a medical mask for transport if they are able to tolerate it.

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Combining Additional Precautions

- More than one type of Additional Precaution may be needed if:
 - An infectious agent causing an infection has more than one mode of transmission.
 - A patient is colonized or infected with more than one infectious agent that has different modes of transmission.
- When combining Additional Precautions, use all elements of each type.
- Invasive Group A *Streptococcus* is an example that requires both Droplet Precautions and Contact Precautions.
- Droplet Precautions and Contact Precautions require a medical mask, eye protection, gloves and a long-sleeved gown.

Trainer speaker notes: There may be circumstances where more than one type of Additional Precautions are needed. Sometimes more than one Mode of Transmission exists for a particular infectious agent so more than one type of Additional Precautions is needed. Sometimes, a patient may have two simultaneous infections or may be colonized with an infectious agent and infected with another at the same time. This would require appropriate Additional Precautions for each infectious agent. When combinations of precautions are used, all elements of each type of precaution need to be applied. Invasive Group A *Streptococcus* is an example of an infectious agent that requires both Droplet and Contact Precautions. For a patient in Droplet and Contact Precautions, health care workers are to wear a medical mask, eye protection, gloves and a long-sleeved gown when providing care. No matter what category of Additional Precautions are in place, visitors should always check with staff prior to interacting with a patient who is on Additional Precautions or their environment. Staff are responsible to instruct visitors on the importance of hand hygiene and how to use PPE. When Additional Precautions are in place, regardless of the type, Routine Practices should always be used as well.

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Measles

- The measles virus is an example of an infectious agent that requires Airborne, Droplet and Contact Precautions.
- Only staff with presumptive immunity to measles are to provide care to patients with suspected or confirmed measles.
- Fit-tested and seal-checked N95 respirators, eye protection, gloves and gowns are to be worn when entering the room and/or providing care to suspected or confirmed cases.
- Refer to up-to-date guidance.

Trainer speaker notes: The measles virus is another example of an infectious agent that requires multiple types of Additional Precautions. It requires Airborne, Droplet and Contact Precautions. For measles, only staff with presumptive immunity measles are to provide care to patients with suspected or confirmed measles. In addition, fit-tested and seal-checked N95 respirators, plus eye protection, gloves and gowns are to be worn when entering the room and/or providing care to suspected or confirmed cases. **Please refer to up-to-date guidance.**

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Elements of Additional Precautions

- Elements of Additional Precautions include:
 - Accommodation
 - Signage
 - PPE
 - Cleaning
 - Equipment
 - Communication
 - Transport
- The need for Additional Precautions must be communicated to anyone who may be interacting with or providing care to the patient.
- Necessary equipment and supplies need to be made available.

Trainer speaker notes: We have already discussed PPE use related to Additional Precautions but what about the other elements? Here are some of the other elements involved in implementing Additional Precautions for patient: Accommodation, use of medical devices and equipment, specific signage, communication, PPE use, transport of patients, and cleaning and disinfection. The need for Additional Precautions must be communicated to anyone who may be interacting with or providing care to the patient. Necessary equipment and supplies need to be made available. Let's look at some of these more closely.

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Accommodation

- Patients in Additional Precautions should be prioritized for placement in a treatment/exam room to minimize time in a waiting room.
- If a room is not available, separate symptomatic patients from other patients.
- For Airborne infections, like Chickenpox or Tuberculosis, accommodate patient in an AIIR or in a room with the door closed.

Trainer speaker notes: Patients in Additional Precautions should be prioritized for placement in a treatment/examination room. This should be done as soon as symptoms are identified. Do not wait for confirmation of the infection with a diagnostic test. If a room is not available, separate symptomatic patients from other patients. For infections spread by the airborne route, like Chickenpox or Tuberculosis, special airborne infection isolation rooms (AIIR) are required but if not available, ensure prompt placement in a treatment/exam room and close the door.

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Signage

- Signs and flags are two ways of alerting health care workers that a patient requires Additional Precautions.
- Post signs at entrances to exam rooms or patient rooms and put flags on medical charts to ensure proper communication.



Trainer speaker notes: Signs and flags are two ways of alerting HCWs that a patient requires Additional Precautions. Post signs at entrances to exam rooms or patient rooms and put flags on medical charts to ensure proper communication.

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Personal Protective Equipment (PPE)

- Depending on the mode of transmission of the infectious agent involved, specific types of PPE may be required.
- The type of PPE needed is based on the category of Additional Precautions.
- Regardless of the type of Additional Precautions Routine Practices should always be applied.



Trainer speaker notes: Depending on the mode of transmission of the infectious agent involved, specific types of PPE may be required. The type of PPE needed is based on the category of Additional Precautions and details are covered in Module 1 of this course. Regardless of the Additional Precautions needed, Routine Practices, including the correct use of PPE should always be applied.

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Environmental Cleaning

- Some types of Additional Precautions require additional or enhanced environmental cleaning and disinfection.
- *Clostridioides difficile* (*C. difficile*) requires Contact Precautions and a special environmental cleaning procedure using specific cleaners and disinfecting agents.



Trainer speaker notes: There may be a need for additional or enhanced cleaning for certain types of Additional Precautions. *Clostridioides difficile* (*C. difficile*) requires Contact Precautions but also a special environmental cleaning procedure using specific cleaners and disinfecting agents. *C. difficile* is a spore-former and requires a sporicidal disinfectant in order to kill/inactivate the spores.

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Equipment

- Any equipment that is shared between patients needs to be cleaned and disinfected.
- For patients on Additional Precautions, equipment should be dedicated rather than shared wherever possible.
- For Additional Precautions that require special cleaning and disinfection practices, dedicating equipment is especially important.



Trainer speaker notes: Recall that with Routine Practices, any equipment that is shared between patients needs to be cleaned and disinfected. For those on Additional Precautions, equipment should be dedicated rather than shared wherever possible. For Additional Precautions that require special cleaning and disinfection practices, dedicating equipment is especially important.

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Communication

- Notify your patients as to why Additional Precautions are being initiated.
- Visitors (i.e., those accompanying patients) must be informed that a patient is on Additional Precautions and instructed on how to reduce the risk of exposure and the safe use of PPE.
- Ensure other departments, facilities and transport service providers (i.e., porters) are aware of the need for Additional Precautions.
- Compliance with Additional Precautions does not require disclosure of personal health information as the type of Additional Precautions required to prevent infection is the only information that needs to be communicated.

Trainer speaker notes: It is important to notify your patients why Additional Precautions are being initiated. Visitors (i.e., those accompanying patients) must be informed that a patient is on Additional Precautions and instructed about reducing the risk of exposure and the safe use of PPE. Ensure other departments, facilities and transport service providers (i.e. porters) are aware of the need for Additional Precautions. Please note that compliance with Additional Precautions does not require disclosure of personal health information. The type of Additional Precautions required to prevent infection is the only information that needs to be communicated.

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Communicating Additional Precautions Discussion Questions

1. Can you think of a time when there was miscommunication between departments/staff and Additional Precautions were missed?
2. Does your workplace have a strategy to help with this situation?



Instructions for Trainers: This question can be used for a large or small group discussion or for discussion in pairs.

Trainer feedback: Discussion can focus on strategies to communicate the need for Additional Precautions (e.g. door signs, flags on medical charts etc.). Strategies to improve communication can also be discussed if examples of miscommunication can be shared.

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Transport

- Avoid transportation of a patient in Additional Precautions around the clinical office unless necessary.
- If necessary, transportation staff may need to wear PPE.
 - Gowns and gloves are only used during direct contact (e.g., helping a patient into a wheelchair or onto a stretcher), but not during transport.
- Gloves should not be worn to avoid contaminating high touch surfaces (e.g., door handles, elevator buttons).
- If a medical mask is required, the transport staff needs to wear one for the duration of the interaction.

Trainer speaker notes: If the patient needs to be transported to another part of the clinical office, transportation staff may need to wear PPE. Typically, a gown and gloves are only used during direct contact (e.g., helping a patient into a wheelchair or onto a stretcher), but not during transport. Gloves should not be worn while pushing a wheelchair to avoid contaminating high touch surfaces (e.g., door handles, elevator buttons) during transport. If a medical mask is required, the transport staff would wear one for the duration of the interaction.

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Initiating Additional Precautions

- Any regulated health care professional (e.g., a registered nurse, registered practical nurse) or an IPAC professional can initiate Additional Precautions.
- Initiate Additional Precautions as soon as signs/symptoms appear.
- Do not wait for an infection to be diagnosed.
- Consider your clinical office's specific policies.



Trainer speaker notes: Any regulated health care professional such as a registered nurse, registered practical nurse or an IPAC professional or designate can initiate Additional Precautions. Whenever Additional Precautions are started, the designate responsible for IPAC at your setting must be notified. They will make sure the precautions are appropriate and will continue to evaluate the situation and make recommendations. Additional Precautions are to be initiated as soon as signs/symptoms appear. Do not wait for an infection to be diagnosed. You can always adjust the Additional Precautions, and discontinue if necessary, when more information becomes available. Waiting for laboratory confirmation of an infectious diagnosis before starting Additional Precautions can result in exposures and outbreaks. Additionally, follow your clinical office's specific policies related to initiating Additional Precautions.

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Do These Scenarios Require Additional Precautions?



A patient falls and injures their back



A patient has a high fever, cough and sore throat



A patient feels faint and cannot walk without assistance

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Instructions for Trainers:

- A patient falls and injures their back: In the absence of any signs/symptoms of an infection, the patient who fell and injured their back would not require Additional Precautions. Routine Practices are sufficient.
- A patient has a high fever, cough and sore throat: A patient with a high fever, cough and a sore throat has signs of an acute respiratory infection (ARI) and would therefore require Additional Precautions. Because of the possibility that this patient has an ARI, Droplet and Contact Precautions would be required.
- A patient feels faint and cannot walk without assistance: If there are not additional signs/symptoms, then Additional Precautions would not be required and Routine Practices are sufficient.

(Optional) Patient is admitted for dehydration after two days of nausea, vomiting and diarrhea: Nausea, vomiting and diarrhea are consistent with a possibility of a gastrointestinal infection therefore Contact Precautions are required.

(Optional) A patient self-reports a history of colonization with an antimicrobial-resistant organism (ARO) such as methicillin-resistant *Staphylococcus aureus*: Patients who are colonized with MRSA require Contact Precautions. Steps should be taken to confirm the MRSA status of this patient.

(Optional): A patient is diagnosed with a urinary tract infection (UTI): Unless the UTI is caused by an ARO, no Additional Precautions are required for a UTI. Routine Practices are sufficient.

Initiating Additional Precautions Discussion Questions

1. Think of a time, when you were unsure of what Additional Precautions to use. How did you resolve it?
2. Have you encountered any challenges with implementing Additional Precautions? If so, how did you handle the situation?



Instructions for Trainers: This question can be used for a large or small group discussion or for discussion in pairs.

Trainer feedback: Discussion can focus on situations where initiating Additional Precautions or determining which Additional Precautions were needed was challenging (e.g. the signs/symptoms of infection weren't obvious). Additional challenges such as communication of Additional Precautions or non-compliance by staff or family/visitors could also be discussed.

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Maintaining Additional Precautions

- Maintain Additional Precautions for as long as necessary.
- Ensure that all supplies and equipment needed for each element of Additional Precautions are readily available.
- Additional Precautions are maintained until reviewed by a physician, IPAC professional or designate with the decision to discontinue.
- Regular reviews by an IPAC professional ensures Additional Precautions are in place only as long as needed.

Trainer speaker notes: Now let's discuss some considerations for maintaining Additional Precautions. Additional Precautions must be maintained for as long as necessary to prevent transmission of infectious agents. All supplies and equipment needed for each element of Additional Precautions must be readily available. This includes PPE, appropriate rooms to accommodate patients depending on the type of Additional Precautions needed and any special environmental cleaning and disinfection products needed. Additional Precautions are maintained until reviewed by a physician, IPAC professional or designate with the decision to discontinue but regular reviews by the IPAC professional ensure Additional Precautions are in place only as long as necessary to limit their negative impact on patients.

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Discontinuing Additional Precautions

- The decision to discontinue Additional Precautions is based on:
 - Your organization's policies
 - Laboratory results
 - The diagnosis
- Discontinuation of Additional Precautions:
 - Can be done as soon as the risk of transmission is no longer present.
 - Must follow your organization's policies.
 - Is done by the person responsible for IPAC or a designate.
 - May require discussion with the attending physician.

Trainer speaker notes: There are few considerations when discontinuing Additional Precautions. First, consider organizational policies related to discontinuing Additional Precautions to ensure that the proper process is followed. Laboratory results may influence the decision and what the final diagnosis is. Additional Precautions can be discontinued as soon as the risk of transmission is no longer present. Going back to the policies, ensure they are followed and the IPAC professional or designate confirms and communicates the need to discontinue the Additional Precautions. Sometimes, discussion with a physician may need to occur to ensure criteria to discontinue Precautions are met.

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Summary

In this module, we discussed:

- There are different categories of Additional Precautions needed in different situations.
- Additional Precautions consist of various elements that are used in combination with Routine Practices to prevent and control the transmission of infectious agents.
- Additional Precautions are initiated and discontinued based on established criteria and consultation with IPAC professionals.



Trainer speaker notes: This brings us to the end of this Module for the course. In summary, there are different categories of Additional Precautions needed in different situations. Additional Precautions consist of various elements that are used in combination with Routine Practices to prevent and control the transmission of infectious agents. Additional Precautions are initiated and discontinued based on established criteria and consultation with IPAC professionals. Follow your organization's policies.

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