1.2: Infection Prevention and Control Practices

**Infection prevention and control (IPAC) practices** are evidence-based procedures and practices that can prevent and reduce disease transmission, and eliminate sources of potential infections (PIDAC, 2012). When used consistently, IPAC practices will prevent the transfer of **health care associated infections (HAIs)** in all health care settings. HAIs, also known as **nosocomial infections**, are infections that occur in any health care setting as a result of contact with a pathogen that was not present at the time the person infected was admitted (World Health Organization[WHO], 2009a).

Two types of techniques are used to prevent infection in the hospital setting. The first, **medical asepsis**, or **clean technique**, has been used in the past to describe measures for reducing and preventing the spread of organisms (Perry, Potter & Ostendorf, 2014). The second, **sterile technique**, also known as **sterile asepsis**, is a strict technique to eliminate all microorganisms from an area (Perry et al., 2014). When a patient is suspected of having or is confirmed to have certain pathogens or clinical presentations, **additional precautions** are implemented by the health care worker, in addition to routine practices (PIDAC, 2012). These additional precautions are based on how an infection is transmitted, such as by contact, droplet, or air. Additional precautions use personal protective equipment (PPE), such as gowns, eyewear, face shields, and masks, along with environmental controls to prevent transmission of infection.

To reduce, and prevent the spread of, HAIs, **routine practices**, a system of recommended IPAC practices, are to be used consistently with all patients at all times in all health care settings (Public Health Agency of Canada [PHAC], 2012b). The principles of routine practices are based on the premise that all patients are potentially infectious, even when asymptomatic, and IPAC routine practices should be used to prevent exposure to blood, body fluids, secretions, excretions, mucous membranes, non-intact skin, or soiled items (PIDAC, 2012).

To learn the steps for routine practices, see Checklist 1.
Checklist 1: Routine Practices

Disclaimer: Always review and follow your hospital policy regarding this specific skill.

Safety considerations:

- Routine practices must be used by all health care professionals, at all times, with all patients/residents/clients in all health care settings. Routine practices will prevent transmission of microorganisms from patient to patient, patient to staff, staff to patient, and staff to staff.
- The presence of a pathogen does not predict the onset of an infection. The chain of infection must be present. If the chain of infection is broken, an infection will not occur. Routine practices are used to break or minimize the chain of infection.
- Be aware of factors that increase a patient’s risk of becoming colonized or infected in the hospital. Increased acuity, advanced age, use of invasive procedures, immunocompromised state of the patient, greater exposure to microorganisms, and an increased use of antimicrobial agents and complex treatments are common risk factors.
- Reduce patient susceptibility to infection by encouraging immunizations, providing adequate rest and nutrition, and protecting the body’s defences from infection (cover open wounds, keep drainage systems closed and intact, maintain skin integrity).
- HAIs can cause symptoms ranging from asymptomatic colonization to septic shock and death, resulting in increased suffering for patients and increased health care costs for Canadians. Ensure additional precautions guidelines are followed for all suspected and confirmed cases of infections and communicable diseases.
- The most common sites for HAIs are the urinary and respiratory systems, and central line-associated bloodstream infections. Consider practices that will reduce infections related to these systems.
- The most common types of HAIs in Canada are methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococci* (VRE), and *Clostridium difficile* (CDI). Ensure all health care providers and visitors follow the additional precautions policies.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Additional Information</th>
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<tr>
<td>1. Complete a risk assessment to determine your need for PPE (gown, clean gloves, mask, face shield, or eyewear).</td>
<td>Consider: Will your face, hands, skin, mucous membranes, or clothing be exposed to blood, excretions, or secretions, either by spray, coughing, or sneezing? Will you have contact with the patient’s environment/surfaces? Is an infection or communicable disease suspected or confirmed?</td>
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| 2. Perform hand hygiene (hand washing) following hospital policy. | Hand hygiene is considered the most important and effective measure to prevent HAIs.  
HAIs are most commonly spread by the hands of health care workers, patients, and visitors.  
Health care workers, patients, and visitors spread about 80% of all HAIs.  
Always perform hand hygiene after using the washroom, coughing, or sneezing, and before and after eating.  
Using an alcohol-based hand rub (ABHR) is the recommended method for hand hygiene if hands are not visibly soiled. |
|---|---|
| 3. Follow proper cleaning or disinfecting procedures of patients and the environment (room etiquette). These environmental controls will control the site or source of microorganism growth. | Dispose of soiled linens and dressings in appropriate receptacle bin.  
Avoid contact of soiled item with uniform.  
Clean contaminated objects and sterilize or disinfect equipment and patient rooms according to agency policy.  
Discard any item that touches the floor.  
Control sources of wound drainage and body fluids; change soiled dressings.  
Avoid shaking bed linen or clothes; dust with a damp cloth as required. Microorganisms can be expelled through the air and inhaled by patients and health care workers.  
Provide all persons with their own linen and personal items.  
Place syringes in designated puncture-proof containers.  
Keep table surfaces dry and clean.  
Empty and dispose of drainage containers as per agency policy. |
| 4. Follow respiratory etiquette. | Wear a mask if coughing or sneezing. |
Wear a mask if suffering from a respiratory condition, and consider staying home.

Avoid talking, sneezing, or coughing over open wounds and sterile dressings.

Practise coughing or sneezing into your upper arm, not your hands.

Follow hospital policies related to creating healthy workplaces.

Do not come to work ill or with symptoms of a communicable disease (flu or cold) that puts co-workers or patients at risk.

5. Wear clean gloves for appropriate activities based on a risk assessment. Use clean gloves when handling all blood and body fluids.

Follow recommendations for assessing each situation and the need for clean gloves.

Improper glove use has been linked to the transmission of microorganisms. Do not wear gloves for activities that do not pose a risk, such as feeding or taking blood pressure.

Clean gloves are task specific and for single use only.

Handle all blood, body fluids, and laboratory specimens as if infectious.

Always perform hand hygiene after taking off clean gloves to reduce the potential of contamination from pathogens on gloves.

6. Use additional precautions guidelines for suspected or known infections or communicable diseases. Use PPEs based on mode of infection transmission (contact, droplet, or airborne).

Follow agency guidelines essential to prevent and reduce transmission of infections.

Single rooms, cohorting (placing patients with the same infections in the same room if a private room is not available), restricting visitors, and implementing additional environmental controls may be required.

Provide instruction/signage for appropriate use and disposal of PPE for visitors, patients, and all health care workers.
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<tr>
<th>7. Do not eat or drink in the patient/client or resident areas.</th>
<th>Remove PPE immediately after single use and perform hand hygiene.</th>
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<tr>
<td>8. Use avoidance procedures/actions to minimize the risk of infection transmission.</td>
<td>Eating and drinking increases the risk of transmission of infection between health care providers and patients.</td>
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<td>If a patient has uncontrolled diarrhea, wear a gown when changing linen to prevent contamination of clothing and hands.</td>
<td>If a patient is coughing, sit next to, rather than in front of, the patient when talking to that patient.</td>
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### Critical Thinking Exercises

1. Name four environmental procedures that can break the chain of infection.
2. What types of patients are at an increased risk for an HAI?
3. How can health care providers reduce patient susceptibility to infection?