

# Infection Prevention and Control

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## INTRODUCTION

The College of Licensed Practical Nurses and Health Care Aides of Alberta (CLHA) has the **authority** under the Health Professions Act (HPA) to carry out its activities and **govern** its Health Care Aides (HCAs)<sup>1</sup> in a manner that protects and serves the public interest.

Infection prevention and control (IPC) helps protect clients and HCAs from spreading disease and infections. HCAs are responsible for following the CLHA IPC guidelines and their employer's IPC requirements.

Terms found in the definition section are **bolded** where they appear for the first time in this document.

## PURPOSE

This practice guideline provides HCAs with knowledge and guidance on IPC. The goal is to prevent harm, help prevent the transmission of diseases and infections, and promote client and HCA safety in practice environments.

## DISCUSSION OF EVIDENCE

### Infection Prevention and Control Interventions

IPC **interventions** are specific ways to prevent or minimize the spread of diseases and infections in a practice environment. By maintaining proper IPC interventions, HCAs and other health professionals can help prevent healthcare-related infections. A healthcare-related infection means the client got a new infection, disease, or illness they did not have when they entered the care environment. Healthcare-related infections are commonly seen within 48 hours after admission but can occur up to 30 days after receiving healthcare.

### Chain of Transmission

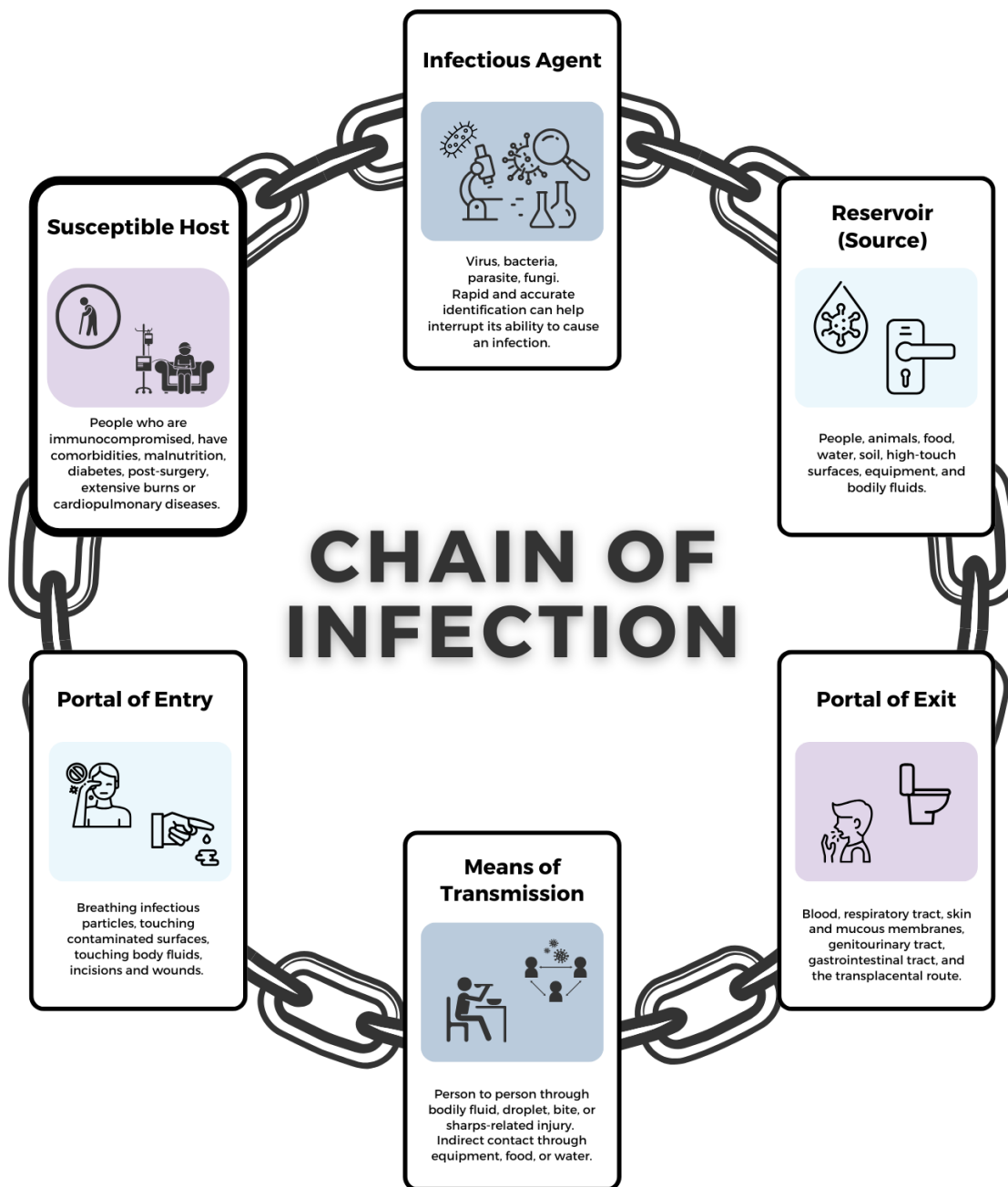
**Communicable diseases** spread through six unique links in the **chain of transmission**. To prevent the transmission of disease and infection, HCAs must understand and follow **evidence-informed** IPC practices. Understanding and applying IPC evidence-informed practices is important to break one or more links in the chain of infection.

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<sup>1</sup> In this document, "HCA(s)" has the same meaning as "regulated member(s)" in the *Health Professions Act*.

### ***Chain of Transmission or Chain of Infection***

1. Infectious agent: the **microorganism** or **pathogen** (e.g. bacteria, virus, parasite, or fungi) risk factors include **virulence**, **pathogenicity**, and ability to enter the **host**.
  - Fast and accurate identification of the microorganism can identify steps to stop its ability to cause an infection.
2. Reservoir (source): a host that allows the microorganism to live, grow, and multiply (e.g. environmental surfaces/equipment, body fluids like blood or saliva, urine/fecal material, food/water, soil, skin, people, or animals).
  - Using **single-use devices** or cleaning, disinfecting, or sterilizing reusable medical devices in the care environment are ways to break this chain of transmission.
3. Portal of exit: how the microorganism moves or escapes from the source (e.g. blood, respiratory tract, skin and mucous membranes, genitourinary tract, gastrointestinal tract, and from the mother's placenta to the fetus).
  - Following the client care plan by wearing personal protective equipment (PPE) and practicing proper hand hygiene, respiratory etiquette (e.g. sneezing or coughing into a sleeve or tissue instead of hands, washing hands, etc.), and safe waste disposal are ways to break this chain of transmission.
4. Means of transmission: how microorganisms move from one place to another. Some microorganisms cannot travel by themselves and require something or someone to carry them to other people and places.
  - Transmissions can occur through direct and indirect contact.
    - Direct contact: direct physical contact with a body fluid (e.g. saliva, an infected wound, or blood), droplet, bite, or injuries caused by a sharp object.
    - Indirect contact: airborne, contaminated equipment, medication, **vectors**, food, or water.
  - In addition to cleaning, disinfecting, or sterilizing medical devices and the care environment, precautions such as using proper hand hygiene, safe food handling, and airflow control can help break this chain of transmission.
5. Portal of entry: the path for the microorganism to enter a new host. This could include body openings (e.g. mouth, eyes, urinary tract, respiratory tract), incisions, or wounds.
  - Using **aseptic techniques** (such as notifying a nurse about an open or draining wound or ensuring a catheter bag is not lying on the unclean floor) are some ways to break this chain of transmission.
6. Susceptible host: a person (client or HCA) **vulnerable** to a microorganism (e.g., age, being **immunocompromised**, **co-morbidities**, poor nutrition, medication use, diabetes, pressure ulcers, open wounds, or cardiopulmonary diseases).
  - Recognize and protect high-risk clients through the following actions:
    - following the care plan,
    - taking preventative actions such as hand washing and wearing appropriate PPE, and
    - treating underlying diseases.



**BREAKING THE CHAIN OF INFECTION**



Limit contact with others



Hand hygiene



Wear appropriate PPE



Use aseptic techniques



Safe sharps disposal



Safe food handling



Increase defenses

## INFORMED PRACTICE

HCA's incorporate the following IPC expectations into their practice.

### Professional Responsibility and Accountability

HCA's must adhere to all **legislation**, regulations, standards of practice, and employer requirements for reporting infectious diseases and IPC protocol **breaches**. HCA's should complete any necessary reporting and contribute to IPC data collection as the law and their employer require. Please see the CLHA's *Duty to Report* interpretive document for more information.

Understanding and following employer requirements is necessary when initiating, applying, or removing IPC interventions. All healthcare team members have a joint responsibility to maintain evidence-informed IPC practices. Therefore, if IPC protocols are not followed, the appropriate authority should be informed.

It is important to perform IPC interventions correctly. This includes maintaining aseptic and **sterile** techniques when applicable. Additionally, medical devices should be **reprocessed**, cleaned, or disposed of according to standards, employer requirements, and manufacturers' instructions. HCA's should only use devices that have been appropriately cleaned.

#### **Strategies for Maintaining IPC Professional Responsibility and Accountability**

- Read and understand the relevant legislation and regulation (e.g. the *Public Health Act* and *Communicable Diseases Regulation*), standards of practice, policy documents, and employer requirements.
- Direct any questions about practice or reporting requirements for IPC to an HCA's employer or the CLHA.
- Promptly report concerns about a breach of IPC protocols to an HCA's supervisor or employer.
- Provide **real-time** mentoring to colleagues, families, visitors, students, or others who might be unfamiliar with or who are not properly following IPC protocols.
- Report clients experiencing new symptoms and identify the potential need to initiate IPC protocols.

### Evidence-Informed IPC Practice

HCA's should understand how diseases are transmitted and how the application of IPC interventions can break the chain of transmission. The following is consistent with the Government of Canada IPC guidance.

- Be aware of the risks while providing care (e.g. know the client's diagnosis).
- Practice proper hand hygiene.

- Follow the four moments of hand hygiene, which include cleaning hands:
  - before the HCA interacts with the client or the client's environment,
  - before the HCA puts on gloves and performs any procedure (e.g. inserting an in and out catheter),
  - after the HCA encounters any body fluids (e.g. blood or urine), and
  - after the HCA interacts with the client or the client's environment.
- Use PPE as required in the client's care plan (e.g. gloves, gown, mask/shield, glasses/goggles).
- Reduce transmission of microorganisms by following environmental IPC strategies including, but not limited to, proper sharps disposal and following cleaning protocols.
- Follow employer requirements for IPC training and immunizations.
- Follow standards, **administrative controls**, and manufacturers' guidelines for safe use, cleaning, disinfection, and sterilization of reusable medical devices.
- Follow standards, administrative controls, and manufacturers' guidelines for the safe use and disposal of single-use devices.
- Follow evidence-informed practice when using **antimicrobials**.

HCAs can help educate clients and families about IPC evidence-informed practices. Care and education should be documented in the client's record.

If an HCA works in a practice setting where medical device reprocessing is part of their employer's job description, then the HCA would need additional education and training related to cleaning, disinfection, reprocessing or sterilization of reusable medical devices.

## **Ethical Practice**

HCAs can provide safe, **competent**, and **ethical care** by following IPC evidence-informed practices to reduce the risk of disease and infections. Ethical practice includes providing care that maintains client **dignity** and a **therapeutic HCA-client relationship**. Maintaining respectful interactions is important when working with clients who may need extra IPC precautions due to their condition. Please see the *Standards of Practice for Health Care Aides in Alberta* and the *Code of Ethics for Health Care Aides in Alberta* on the CLHA's website.

HCAs should obtain **consent** for IPC interventions. In certain circumstances, obtaining consent may not be possible if the IPC intervention is required by legislation or an emergency.

Clients still have the right to refuse care, even after receiving education from health professionals.

Additionally, HCAs must maintain the **confidentiality** of their clients' diagnoses, infections, immunity status, and health records. For more information about confidentiality, please see the CLHA's *Confidentiality* practice guideline.

### ***Strategies for Maintaining Ethical Practice***

- Maintain a therapeutic HCA-client relationship when providing education about IPC and any reporting requirements.
- Follow employer IPC requirements.
- Be aware that clients can refuse treatment, even if their choice is not aligned with the HCA's choice.
- Read and understand the relevant legislation, regulation, standards of practice, policy documents, and employer requirements for maintaining client confidentiality.

## **Collaborative Practice**

HCAs can help identify ways to reduce the risk of transmission of disease and infections to clients, colleagues, and the public. HCAs should collaborate with the client, family, and healthcare team to contribute to care plans and IPC-related **quality improvement initiatives**. Collaboration between HCAs, clients, and the public can increase shared understanding and knowledge about microorganisms and IPC protocols to minimize the spread of infection and provide safer care.

### ***Strategies for Maintaining a Collaborative Practice Approach to IPC***

- Respect the expertise and follow directions or orders of IPC professionals.
- Notify the healthcare team if the risk for infection transmission changes.
- Apply communication strategies (e.g. simple language or diagrams) to help explain IPC protocols in the healthcare facility to clients and families.

## **Reflective Practice**

HCAs promote the implementation of IPC evidence-informed practices and maintain IPC competencies through ongoing education.

Evidence has shown that personal immunization can reduce the risks of transmitting infections. HCAs are encouraged to follow the Alberta Health immunization schedule to protect their health. Depending on an HCA's current immunization status, employers may have additional requirements.

### ***Strategies for Maintaining Reflective Practice***

- If HCAs notice that their employment setting is not using IPC evidence-informed practices, they should speak with their employer.
- If HCAs are not feeling well, they should take precautions to prevent the transmission of infection to others, including staying home if necessary, using PPE, or consulting with another health professional.
- To maintain competence in IPC evidence-informed practices, HCAs should seek education and training opportunities.

## **CONCLUSION**

HCAAs must adhere to IPC legislation, regulation, and the CLHA's standards of practice. HCAAs should better understand their professional expectations when performing evidence-informed IPC practices. Evidence-informed IPC practices are a collaborative effort of all health professionals, established by their professional responsibility, accountability, and ethical obligations.

Documents are updated frequently. For the most current version and access to related documents and resources, please visit the Knowledge Hub on [clha.com](https://clha.com).

If after reading this document you have questions, please contact the CLHA's Professional Practice Team via [practice@clha.com](mailto:practice@clha.com) or 780-484-8886 or 1-800-661-5877 (toll free in Alberta).

## DEFINITIONS

**Administrative controls:** controls put in place by the organization to reduce the exposure or likelihood of exposure by changing the way a task is performed.

**Antimicrobial:** a substance that kills or stops the spread of microorganisms like bacteria or mold.

**Aseptic techniques:** strict procedures to prevent the spread of infection.

**Authority:** refers to the power or right to give orders, make decisions, and enforce obedience. It can also mean the appropriate person to give orders or make decisions. This could include supervisors, managers, employers, charge nurses, or educators.

**Breach:** failing to follow established practices that create a risk of transmitting infectious diseases.

**Chain of transmission:** how an infection or illness spreads.

**Communicable diseases:** is defined as “an illness in humans that is caused by an organism or micro-organism or its toxic products and is transmitted directly or indirectly from an infected person or animal or the environment”.<sup>1</sup>

**Co-morbidities:** when a client has two or more medical conditions at the same time.

**Competent:** having the ability, knowledge, or skill to do a task.

**Confidentiality:** the ethical duty to protect personal and health information about a client.

**Consent:** agreement to what is being done by another person such as, the client approves of the proposed actions of the HCA and the healthcare team. Consent also means an agreement to do something.

**Dignity:** the right of a person to be valued and respected.

**Ethical Care:** providing care to clients while upholding moral beliefs and values.

**Evidence-informed:** an action, decision, or process based on the most up-to-date research and knowledge rather than traditional methods, advice from colleagues, or personal beliefs.

**Govern:** to lead, control, or manage an organization or group, often by creating rules and making decisions that guide their actions.

**Host:** an organism where a germ gets its nourishment and/or shelter.

**Immunocompromised:** when someone’s immune system doesn’t work the way that it should, which affects its ability to fight off infections and disease.



**Interventions:** any action taken to improve human health, whether by preventing disease, curing or reducing the severity or duration of an existing disease, or restoring function lost through disease or injury.

**Legislation:** any legally binding rule that governs the HCA profession. This includes the *Health Professions Act* or other laws regulations, bylaws, standards of practice, and Code of Ethics.

**Microorganism:** a living thing that can only be seen through a microscope, such as bacteria.

**Pathogen:** an organism that can cause disease in a human.

**Pathogenicity:** the ability of a germ to cause disease.

**Quality improvement initiatives:** trying to improve the quality and safety of healthcare delivery through the use of data.

**Real-time:** at the time during which a task or action takes place.

**Reprocessed:** the cleaning, disinfection, and sterilization of reusable medical equipment/devices in health care and person service settings.

**Single-use devices:** a medical device that is to be used for a single purpose before it must be thrown away.

**Sterile:** free from germs, bacteria, or other microorganisms.

**Therapeutic HCA-client relationship:** a trusting relationship between a client and an HCA that respects and maintains professional boundaries and contributes to health-related treatment goals. A therapeutic relationship exists for a defined period of time.<sup>ii</sup>

**Vectors:** an organism that acts as a carrier of a germ from one thing to another.

**Virulence:** the ability of an organism to infect someone and cause disease.

**Vulnerable:** when a person or group of people need special care or support because of age, disability, risk of abuse, or neglect.

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<sup>i</sup> PHA, s 1(f).

<sup>ii</sup> CLPNA, *Practice Guideline on Professional Boundaries* (2019), Knowledge Hub - College of Licensed Practical Nurses of Alberta (clpna.com).