



COLLEGE OF  
**LICENSED PRACTICAL NURSES**  
OF ALBERTA

# Practice Guideline

## Infection Prevention and Control

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Approved: May 23, 2020



**This document is linked to legislation:**

[Health Professions Act](#)  
[Public Health Act](#)  
[Communicable Diseases Regulation](#)  
[Immunization Regulation](#)

**This document is linked to other documents that direct expectations of professional behaviour or requirements for practice:**

[Standards of Practice](#)  
[Standards of Practice on Restricted Activities and Advanced Practice](#)  
[Reusable and Single-Use Medical Devices Standards](#)  
[Code of Ethics](#)  
[Professional Responsibility and Accountability](#)

**This document is linked to related supportive documents:**

[Confidentiality](#)  
[Immunization Regulation Duties](#)

*Practice Guideline: The legislative mandate of the College of Licensed Practical Nurses of Alberta (CLPNA) is to serve and protect the public by ensuring its members deliver safe, competent and ethical nursing care. A Practice Guideline is an evidence informed document designed to assist membership with making decisions about appropriate practices. These documents support professional judgment and permit flexibility in practice.*

Approval Date    May 23, 2020  
Approver        Executive



**INTRODUCTION** Infection prevention and control (IPC) is an integral part of nursing practice to protect both patients and nurses from the spread of disease. Nurses are responsible for adhering to IPC recommendations from their employers and regulatory college. In aligning the IPC expectations for all nursing professions in Alberta, the College of Licensed Practice Nurses (CLPNA) and the College of Registered Psychiatric Nurses of Alberta (CRPNA) have adapted the College and Association of Registered Nurses of Alberta's (CARNA) *Infection Prevention and Control Standards* with permission.<sup>1</sup>

For the purposes of this document nurse or nurses refers to Licensed Practical Nurses and regulatory college refers to the CLPNA.

**PURPOSE** The purpose of this practice guideline is to provide nurses with knowledge and guidance for IPC in their practice. The goal is to prevent harm, help prevent the transmission of infections, and promote patient safety in places where nurses provide care.

## DISCUSSION OF EVIDENCE

### *Infection Prevention and Control Interventions*

IPC interventions are targeted efforts and activities implemented in a practice environment to prevent and minimize the potential spread of disease. It is possible that a patient's health condition could be further compromised in a place where care is provided. When an infection develops due to another disease, injury, or illness in a healthcare setting, it is called a healthcare associated (or acquired) infection.<sup>2</sup>

### *Chain of Transmission*

The infection process of communicable diseases can be understood via chains of transmission. There are six unique chains and each represents a condition or interrelationship that must be present for the transmission of a microorganism or disease. Understanding these six chains is important to apply IPC best practices to break one or more links in the chain of disease transmission.

*Types of Chain of Transmission or Chain of Infection (see image in Appendix)*

1. **Infectious Agent:** the microorganism (e.g. bacteria, virus, or fungi).
  - Rapid and accurate identification of the microorganism can identify steps to interrupt its ability to cause an infection.
2. **Reservoir (source):** a host that allows the microorganism to live, and possibly grow and multiply (e.g. people, animals, environment, and equipment).
  - Using single use devices, or cleaning, disinfecting, or sterilizing reusable medical devices and the care environment are some ways to break this chain of transmission.
3. **Portal of Exit:** the way in which the microorganism moves or escapes from the reservoir (e.g. blood, respiratory tract, skin and mucous membranes, genitourinary tract, gastrointestinal tract, and the transplacental route from mother to fetus).
  - Wearing personal protective equipment (PPE) and practicing hand hygiene, respiratory etiquette, and safe waste disposal are some ways to break this chain of transmission.
4. **Means of Transmission:** some microorganisms cannot travel on their own and require a vehicle 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).
    - *Indirect contact:* the fluids from a cough or sneeze that can land on surfaces that are then touched by other people.



- In addition to the cleaning, disinfection, or sterilization of medical devices and the care environment precautions such as having appropriate hand hygiene, 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 (e.g. gastrointestinal tract, respiratory tract, mucous membrane, and broken skin).
- Using aseptic techniques (e.g. when providing wound and catheter care) are some ways to break this chain of transmission.
6. **Susceptible Host:** a person susceptible to a microorganism (e.g. patients who are immunocompromised, diabetic, post-operative, have extensive burns or cardiopulmonary diseases etc.).
- Recognizing high risk patients followed by the prevention (e.g. vaccination) and treatment of underlying diseases to maintain a healthy lifestyle (e.g. nutrition and exercise) can help break this chain of transmission.

**INFORMED PRACTICE** Nurses registered with the CLPNA should incorporate the following IPC expectations into their practice.

### **Professional Responsibility and Accountability**

Nurses must adhere to all standards of practice and practice within current legislation and regulation, including the *Public Health Act*. Nurses follow legislative and employer requirements for reporting both infectious diseases and breaches in IPC protocols. Nurses should complete any necessary reporting forms and contribute to IPC data collection as required by law and their employer.

Nurses are responsible and accountable for following employer requirements and best practices for IPC.

Critical thinking is necessary and nurses are encouraged to inform their supervisors when IPC best practices are not being used.

Competent performance of IPC interventions is integral. This performance includes maintaining aseptic and sterile techniques when applicable. Additionally, medical devices should be reprocessed or disposed of according to standards, employer requirements, and manufacturer's instructions. Nurses should only use devices which have been reprocessed properly.

Below are some strategies you could use as a nurse to ensure you maintain professional responsibility and accountability.

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

- Ensure you read and understand the relevant pieces of legislation and regulation (e.g. the *Public Health Act*, *Immunization Regulation*, and *Communicable Diseases Regulation*), your regulatory colleges' standards of practice and policy documents, and any employer requirements
- Consult with your employer or your regulatory college if you have questions about practice or reporting requirements for IPC
- If you have concerns about IPC protocols not being followed in your employment setting, this should be reported to your supervisor or employer in a timely manner

### **Evidence-Informed IPC Practice**

Nurses should understand how diseases are transmitted and how IPC principles can break the chain of transmission. Use of the following routine practices is consistent with IPC standards:

- Performing risk assessments for point of care nursing
- Practicing proper hand hygiene<sup>3</sup>



- Using PPE appropriately and as directed (e.g. gloves, gown, mask/shield/glasses/goggles)
- Reducing transmission of microorganisms by implementing environmental IPC strategies including, but not limited to, proper sharps disposal, adhering to cleaning protocols, and proper ventilation
- Following employer requirements for IPC training and immunizations
- Following standards, administrative controls, and manufacturers' guidelines related to safe use, cleaning, disinfection, and sterilization of medical devices
- Following standards, administrative controls, and manufacturers' guidelines related to safe use and disposal of single use devices
- Following best practices and advice related to the sensible use of antimicrobials to limit the development of antimicrobial resistant organisms

In addition to the strategies that nurses can apply above, nurses should inquire about the patient's immunization status as well as the patient's knowledge of immunization and then provide education and make referrals as needed.

For more information about the management of immunizations and reporting requirements, please refer to the CLPNA's document on Immunization Regulation Duties.

Further, nurses can help educate families and patients about IPC best practices. Care and education should be documented in the patient's record accordingly.

Below are some strategies you could use as a nurse to ensure you maintain evidence-informed practice.

#### Strategies for Maintaining Evidence-Informed Practice

- Check with Infection Prevention and Control Canada (<https://ipac-canada.org/>), your employer, and other credible sources for best practices regarding IPC

- Establish or follow routine practices consistent with IPC best practices in your work setting
- Evaluate information about IPC for credibility particularly when educating patients, their families, or the public

#### Ethical Practice

Nurses can provide safe, competent, and *ethical* nursing care by following IPC best practices to reduce the risk of infection; it is ethical to only share evidence-informed information.

Ethical practice includes providing care that maintains patient dignity and a therapeutic nurse-patient relationship. Maintaining respectful interactions is especially important when working with patients who may need extra IPC precautions due to their condition.

Nurses should obtain informed consent for IPC interventions. In certain circumstances, it may not be possible to obtain informed consent if the IPC intervention is required by legislation or an emergency.

Patients still have the right to refuse care at any time, even after receiving education from healthcare providers. Ethical practice refrains from pressuring patients to make particular care decisions and maintains respectful communication.

Additionally, nurses maintain confidentiality of their patients' health records, including immunity and infection status.

Below are some strategies you could use as a nurse to ensure you maintain ethical practice.

#### Strategies for Maintaining Ethical Practice

- Maintain a therapeutic nurse-patient relationship when providing education about IPC and any reporting requirements
- Remind yourself that patients have a right to refuse treatment, even if you disagree with their choice



- Read and understand the relevant pieces of legislation and regulation, standards of practice, policy documents from your regulatory college, and employer requirements for maintaining patient confidentiality

### **Collaborative Practice**

Nurses have the duty to provide safe, competent, and ethical nursing care in the assessment, prevention, treatment, and control of the spread of infection.

Nurses can help identify hazards and risk of transmissions to patients, colleagues, and the public. Additionally, nurses should collaborate with the patient, the family, and the healthcare team in developing care plans and IPC related quality improvement initiatives. This allows for patients, staff, and the public to help inform decision making. Additionally, collaboration between nurses, patients, and the public can increase shared understanding and knowledge about microorganisms and IPC protocols to minimize the spread of infection and facilitate safer care.

Below are some strategies you could use as a nurse to help you engage in collaborative practice to support IPC.

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

- Respect the expertise and follow directions or orders of IPC practitioners
- Notify colleagues if risk assessments for infection transmissions change to better inform IPC initiatives
- Apply communication strategies (e.g. simple language or diagrams) to help explain IPC protocols in the healthcare facility to patients and families

### **Reflective Practice**

As members of self-regulated professions, nurses promote the implementation of IPC best practices and maintain IPC competence through ongoing education.

Evidence has shown that personal immunization can reduce the risks in transmitting infections;<sup>4</sup> nurses should be aware of their own personal immunization status and take precautions accordingly.

If a nurse is unwell, it is their professional and ethical responsibility to take actions to reduce transmission of infection to others.

Below are some strategies you could employ as a nurse in your own practice.

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

- If you notice that your employment setting is not using IPC best practices have a conversation with your supervisor about adopting evidence-informed IPC protocols
- If you are not feeling well, you can take precautions to prevent the transmission of infection to others including taking a sick day if necessary, using PPE, or consulting with another healthcare professional
- Seek out educational opportunities to maintain competence in IPC best practices

**CONCLUSION** Nurses are required to adhere to IPC legislation, regulation, and their regulatory college's standards of practice. IPC best practices are evidence-informed and a collaborative effort of all healthcare providers, underpinned by their professional responsibility and accountability and ethical obligations.

Through this practice guideline you should have a better understanding of your professional expectations to uphold and promote implementation of IPC best practices. You should also feel equipped with strategies to incorporate evidence-informed IPC actions into your practice.

If after reading this document you have questions about IPC best practices or the guidance provided, please contact the CLPNA's Professional Practice Team via email at [practice@clpna.com](mailto:practice@clpna.com), or by phone at 780-484-8886 or 1-800-661-5877 (toll free in Alberta).



## APPENDIX

### The College and Association of Registered Nurses of Alberta

#### Infection Prevention and Control Standards

#### Alberta Health IP&C standards

Infection Prevention and Control – Accountability and Reporting

Reusable and Single-Use Medical Devices Standards

#### Foot care

AHS Best Practice Guideline for Foot Care Devices

IPAC Reprocessing of Critical Foot Care Devices - Position Statement

#### Routine practices

Alberta Health Services: Routine Practices

Public Health Ontario: Routine Practices and Additional Precautions

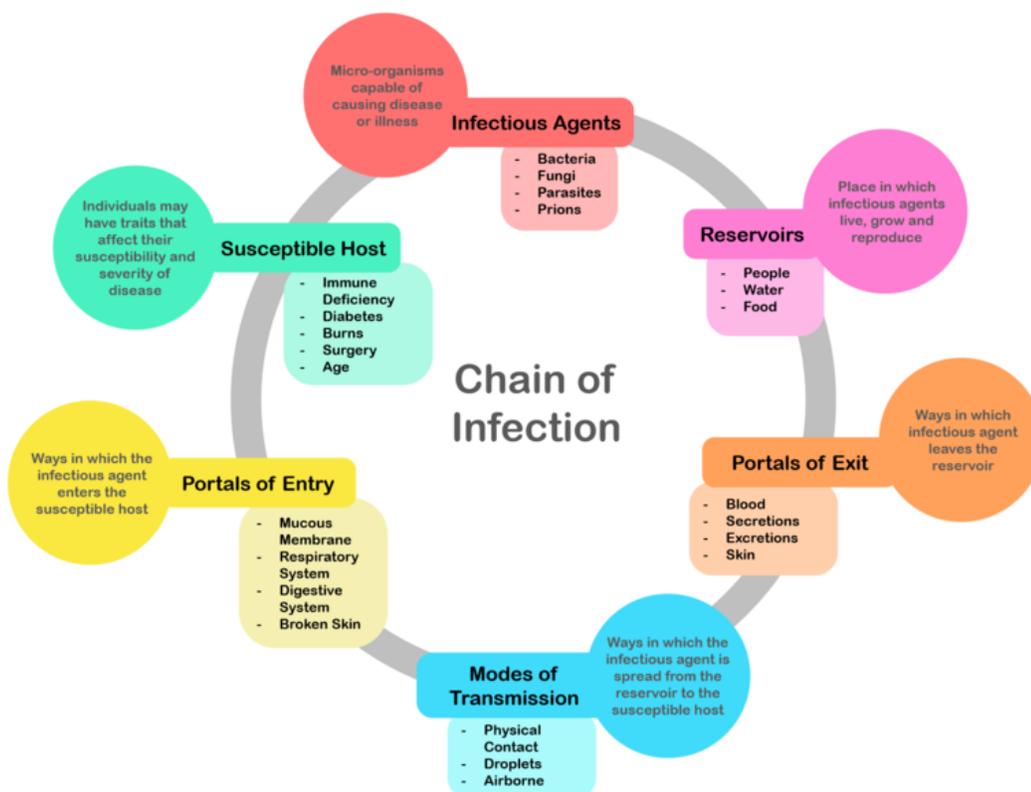
#### Other resources

WHO guidelines on hand hygiene in health care

CPSI hand hygiene education

Alberta Health Services best practice recommendations

Infection Prevention Control Canada





## REFERENCES

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<sup>1</sup> College and Association of Registered Nurses of Alberta (CARNA), *Infection Prevention and Control Standards* (2019), [https://nurses.ab.ca/docs/default-source/document-library/standards/infection-prevention-and-control-standards.pdf?sfvrsn=4510b07e\\_10](https://nurses.ab.ca/docs/default-source/document-library/standards/infection-prevention-and-control-standards.pdf?sfvrsn=4510b07e_10).

<sup>2</sup> Mainul Haque, Massimo Sartelli, Judy McKimm and Muhamad Abu Bakar, "Health care-associated infections - an overview." *Infection and Drug Resistance* 11 (2018): 2321-2333, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6245375/>; Canadian Patient Safety Institute, "Healthcare Associated Infections (HAI)," [https://www.patientsafetyinstitute.ca/en/Topic/Pages/Healthcare-Associated-Infections-\(HAI\).aspx](https://www.patientsafetyinstitute.ca/en/Topic/Pages/Healthcare-Associated-Infections-(HAI).aspx).

<sup>3</sup> "Information about Hand Hygiene," Infection Prevention and Control Canada, n.d., <https://ipac-canada.org/hand-hygiene.php>.

<sup>4</sup> Doherty, Mark, Philippe Buchy, Baudouin Standaert, Carlo Giaquinto, and David Prado-Cohrs. "Vaccine impact: benefits for human health." *Vaccine* 34, no. 52 (2016): 6707-6714.

<sup>5</sup> Genieieiop. *Chain of Infection*, 2017, [https://commons.wikimedia.org/wiki/File:Chain\\_of\\_Infection.png](https://commons.wikimedia.org/wiki/File:Chain_of_Infection.png).