

Infection Prevention and Control (IPAC): Focus on Wound Care

A guide for home care in Alberta with a focus on Indigenous health.

This Professional Guide is focused on infection prevention and control, specifically as they relate to wound care issues, with an emphasis on prevention. The intention is to keep all parties safe in any home visit, including the patient, family members, care partners and health providers. It also identifies relevant resources available for health-care providers and patients and their families.

This guide is based on a commitment to provide support to patients through their entire community to help them adapt to and self-manage their condition in the face of social, physical and emotional challenges. It is a model based on the premise that cultural sensitivity in personalized care delivery and self-management is an essential element of high-quality health-care, as the beliefs, values, traditions and biases on the part of health systems, care providers, patients, families and communities can all influence care.

This document uses the Wound Prevention and Management Cycle (WPMC) (see Figure 1 on page 2)¹ as the basis for clinical decision making. For clinicians, this document is meant as a cue for treatment; it provides non-inclusive examples listed below each recommendation. For policy makers, it highlights actions and policies that support best practice.

For more information on content or tools related to a particular recommendation, click on the links provided.

Introduction

Infection prevention and control (IPAC) is a term commonly used to describe a process of preventing infections.^{2,3} Approximately 80% of common infections are spread by hands. Therefore, an overarching theme of IPAC is that it is essential for all health-care providers to clean their hands before wound care, during if there has been a break in technique, and after the care. Patients and family/care partners should be actively involved in IPAC activities as well and may need information, training and reinforcement on sound IPAC practices. As a general rule, alcohol-based products and hand washing using soap and water are both effective at removing germs from hands.⁴

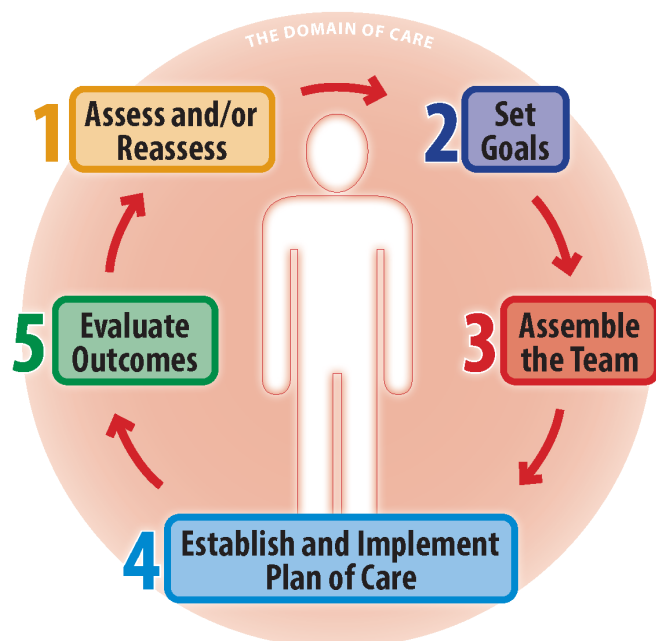
Prevention of wound infection should be a priority and a major consideration when planning and delivering care. Guiding principles include:^{5,6}

- Prevention is better than management.
- Use a logical and systematic approach, regardless of the specifics, to prevent and manage infection.
- Constant, accurate and multidirectional flow of meaningful information with the team and across care settings is essential.
- The patient is the core of all decision making.

Step 1: Assess and/or Reassess

Assessment of the individual's home setting is a priority when planning wound care. Assessment occurs

Figure 1: The Wound Prevention and Management Cycle¹



to determine the extrinsic and intrinsic factors that may contribute to infection. Targeted IPAC starts with the principle that pathogens are introduced continually into the home by people (who may have an infection or may be asymptomatic), by contaminated food and domestic animals and sometimes in water or via the air.⁷

Tools to assess all aspects of the home environment need to be available for use and be supported by education and policy.

1.1 Select and use validated patient assessment tools.

Complete an environmental risk assessment as a means of communication to document safety risks and the associated plan to mitigate any issues. The [Home Support Guidelines Resource Tool²](#) from Alberta Health Services outlines required documentation.

Risk assessment must be completed before each home visit to determine which interventions are required to prevent transmission during the interaction because the home environment can change. Engage the patient and family members in each IPAC assessment. Completion of this assessment early in the visiting schedule supports individuals and families to make any necessary changes to support safe delivery of care.

Assessment also includes identifying any issues related to setting up a safe workspace. A valuable resource to assist with this is at the Point of Care Risk Assessment (PCRA), which is available with an account at [this link](#).

1.2 Identify risk and causative factors that may impact skin integrity and wound healing.

1.2.1 Patient: Physical, emotional and lifestyle

Assessment includes identifying any issues related to potential sources of contamination to, on or within the patient, such as continence status (bowel and bladder), mobility, neurological issues, medical conditions, cognitive changes, psychological status, personal habits and any other factors may affect their abilities or willingness to address basic personal hygiene.

1.2.2 Environmental: Socio-economic, care setting, and potential for self-management

Assess the home for access to clean (potable) water, availability and use of soaps and other cleansers, status and use of adequate ventilation and presence of equipment and/or wound care products/supplies necessary to provide care that aligns with IPAC principles. Assess for socio-economic determinants that may influence the patient's ability to manage risks at home, work, school or in the community.

1.2.3 Systems: Health-care support and communication

Assess access to funding, availability of services, supplies and equipment, diagnostic services (wound care), service delivery personnel and co-ordination of care.

1.3 Complete a wound assessment, if applicable.

The **International Wound Infection Institute** lists a number of tools available to assess the risk of wound infection (see Table 2 on page 7) and tools to assess the presence of a wound infection (see Table 3 on page 11).

The **Bioburden Assessment Tool**⁸ was developed by Keast and Lindholm to determine the level of bioburden and assist in selecting the correct intervention.

Step 2: Set Goals

Goals of care related to infection prevention and control and wound care need to revolve around the patient. Achieving goals will depend on the interplay of the patients' health status and lifestyle, the availability of resources and the knowledge and ability of the patient and care partners to provide optimal interventions. If these factors are not taken into consideration the goals of care may be unrealistic and unrealizable.

A key element of the goal setting is to remind the individual and family that preventing infection is a priority for the care provider and patients. Based on risk factors identified during the assessments, goals related to infection need to be set in collaboration with the patient, family and/or care partners.

2.1 Set goals for prevention of infection.

In a home visit, IPAC refers to infection related to hand hygiene, airborne and waterborne contaminants, equipment and supplies, and the wound itself. Effective goal setting will address each of these elements, as indicated by the risks identified during the assessment step.

2.1.1 Identify goals based on prevention of wound infection or reinfection.

Goals need to be set with the patient in relation to any underlying medical conditions or other factors that may affect wound healing. Potential goals for prevention might include:

- Referral to a qualified specialist for debridement to remove biofilm from an infected wound.
- Modified wound dressing selection to address risk factors and/or presence of infection.
- Training of patients and/or care partners on how to conduct safe dressing changes.
- Continence issues addressed.

2.1.2 Identify quality-of-life and symptom-control goals.

Establishing effective IPAC in the home environment is essential for addressing risks to both general health and the wound. Goals might include:

- Establish and maintain hand hygiene practices for all individuals in the home.
- Establish a schedule for the delivery of potable water.
- Establish and maintain a schedule and process for proper cleaning of equipment.

Step 3: Assemble the Team

An integrated team is necessary for case management, to implement, adjust and sustain a plan to meet the patient-specific goals. The team should include the relevant health-care professionals and other service

providers as required, as well as the patient, family and their support system.

3.1 Identify appropriate health-care professionals and service providers.

Implementation of IPAC strategies requires a collaborative and integrated team with appropriate knowledge. The team may include patients, families, personal care workers, nurses, family physicians, wound care professionals, physiotherapists and procurement/supply personnel, among others.

3.2 Enlist the patient and their family and care partners as part of the team.

When possible, patients can work with health-care providers to promote infection prevention and manage wound infection, if present. Engage the patient in hand hygiene routine practice. Engage family members/care partners to support the care plan. Provide IPAC education, training and informational resources as necessary.

3.3 Ensure organizational and system support.

Supporting an individual successfully requires proactive, risk-based interventions at a variety levels: individual, organizational and cultural. To support this model and secure successful outcomes:

- *Decision makers must establish, train and support an integrated team composed of interested, skilled and knowledgeable persons to address and monitor quality improvements in the prevention and management of infection.*
- *Frontline clinicians must communicate with decision makers through appropriate channels about the needs and concerns of their patients, as well as about workplace issues that may impact their ability to deliver best-practice-based care.*

Step 4: Establish and Implement a Plan of Care

An effective IPAC care plan requires anyone living or visiting the home to be committed to always implementing IPAC principles. Education, training and visual reminders may be necessary to ensure this. It is critical to provide a culturally sensitive environment for all aspects of education and care.

4.1 Identify and implement a personalized, evidence-informed plan to correct the causes or co-factors that affect infection prevention and control, including patient needs (physical, emotional and social), the wound (if applicable) and environmental/system challenges.

The plan of care must be patient-driven, based on assessment and risk, and supported by available resources and policy.

Elements to consider in a plan of care include:

- Prevention strategies:
 - Hand and skin hygiene practices, (see [Professional Guide... at a Glance: Skin Health and Hygiene: Keeping Skin Healthy](#)) with a focus on access to the necessary products. Soap and water and alcohol-based products are effective at prevention of infections and should be available to the patient, family and care providers. Alcohol-based products are available in wall-mounted or portable bottle dispensers.
 - Environmental hygiene, including airborne, waterborne and surface contaminant management through improved ventilation, water filtration and/or purchase and effective cleaning products
- Promotion of overall health, hydration, physical activity, oral hydration-nutrition and physical exercise
- Avoidance strategies, such as not sharing personal hygiene items with others

- A group/community approach that supports IPAC management through immunization and staying home if sick⁹

4.4 Engage the team to ensure consistent implementation of the plan of care.

It is important to ensure all team members engage in hand hygiene routine practice as this role-models care to the patient, family and community members. To optimize outcomes, the patient, family and care team need to be in regular communication, sharing information and updating the infection prevention and control care plan as needed. To ensure patient and family participation in a meaningful way, education and training on the topic are essential. Approaches may include:

- Teaching using credible information, e.g., resources from the [Government of Alberta](#) and [IPAC Canada](#)
- Ensuring procurement of supplies to maintain prevention goals
- Ensuring procurement of wound supplies that support prevention and control of infection

Step 5: Evaluate the Outcomes

Evaluation of the plan of care should be routine and ongoing to identify whether the plan is effective in meeting the goals. If, after the cycle has been completed, goals of care have not been fully met, reassessment (Step 1) must take place, followed by the rest of the Wound Prevention and Management Cycle steps. ***The plan of care needs to be revisited at transfer between care settings and at discharge to ensure that self-management strategies are in place to support the patient to sustain the outcomes achieved after discharge.***

5.1 Determine if the outcomes have met the goals of care.

Outcomes need to reflect goals of care, and sustainability needs to reflect continuity of care; both need to be included in the plan of care and supported by policy. As an individual's health status may have changed, reviewing the goals is an opportunity for the health-care team to intervene and potentially develop a new approach to promote infection control and management, as necessary. When any component of the care plan is not effective, it is necessary to reassess, re-evaluate and establish new goals.

5.2 Reassess patient, wound, environment and system if goals are partially met or unmet.

When goals of care are partially met or unmet, reassessment needs to consider gaps in care or the patient's ability to adapt to their condition and engage in IPAC activities. Inclusion of the team members is important in reassessment and exploration of modifiable factors and the patient's involvement and ability to support the care plan. Timely referrals may be necessary if complications develop.

5.3 Ensure sustainability to support prevention and reduce risk of recurrence.

Sustainability may depend on access to appropriate equipment and services and collaboration among the person with or at risk for infection, their care partners, interprofessional team of health-care professionals and other service providers. By identifying and managing the causes of infection, patient barriers to self-management and the risk and prevalence of infection can be reduced. Establishing infection control practices is essential to the prevention of infection, prevention of recurrence and reduction in the development of complications and must be sustained throughout the management process.

Additional Resources

The following resources provide additional information about IPAC and wound care.

- [Infection Prevention and Control Canada](#)
- [Alberta Health Services Resource Manuals: Infection Prevention & Control](#)

- IPAC for Home Visits Poster
- Infection Prevention and Control Guidelines: Community Health

References

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