

Enterocutaneous and Enteroatmospheric Fistula Assessment and Management

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

This Professional Guide is focused on enterocutaneous and enteroatmospheric fistula assessment and Management in the community setting. It addresses psychosocial and lifestyle issues, recognition of possible complications, discussion of interventions and identification of resources available to 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 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 Wounds Canada Wound Prevention and Management Cycle (WPMC)¹ (Figure 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 (in bold *italics*) actions and policies that support best practice.

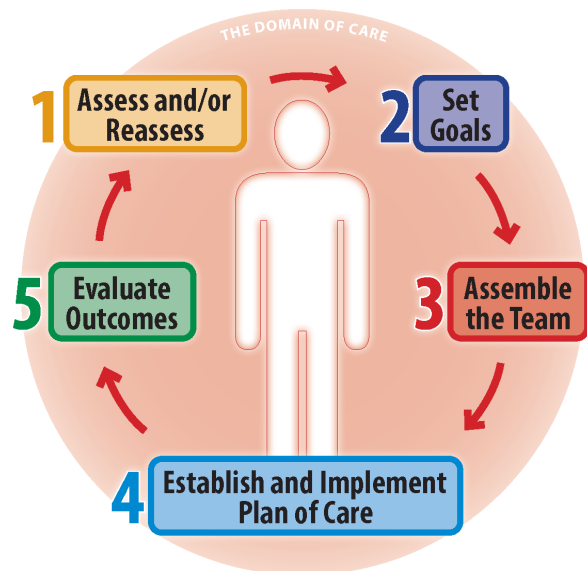
For more information on content or tools related to a particular recommendation, click on the links provided.

Introduction

Fistula is a “Latin word meaning pipe or flute.”² A fistula is an abnormal connection between two body parts, such as an organ or blood vessel or another structure. Fistulas can develop for many reasons, including inflammatory bowel disease such as Crohn’s or ulcerative colitis, diverticulitis, appendicitis, malignancy, external trauma such as injury or surgery, ulcers and infections.^{2,3}

The diagnosis of a fistula can be challenging for the affected patient and their family. A patient-centred, interprofessional team is needed to partner with the person to ensure completion of a comprehensive assessment and development and implementation of a treatment plan. As a fistula is a potentially life-altering condition, the patients’ mental health and wellness should be a priority throughout care delivery. The risks for the patient developing infection, sepsis, malnutrition and significant fluid and electrolyte

Figure 1: The Wound Prevention and Management Cycle¹



imbalances are significant and lead to an increase in morbidity and mortality and lowered rates of spontaneous fistula closure.^{3,4}

The Nurses Specialized in Wound, Ostomy and Continence Canada published a Nursing Best Practice Recommendations: Enterocutaneous Fistulas (ECF) and Enteroatmospheric Fistulas. The recommendations emphasize the need for health-care professionals caring for a person with a fistula to have appropriate knowledge, skill and experience caring for fistulas as well as advanced wound care experience to optimize the support for the patient and family.⁴

Step 1: Assess and/or Reassess

Assessment must occur to determine the causes and factors that may impact healing and risk for complications. Patient assessment must cover history and current psychosocial and lifestyle issues, health status, fistula and surrounding skin status, environmental factors and system factors. If goals of care have not been fully met after the WPMC has been completed, reassessment must take place, followed by the rest of the recommendations in the WPMC. **Assessment tools need to be available and in use in all care settings, supported by staff education and policy.**

It is important to note that discussing a fistula may be embarrassing, difficult or not culturally appropriate, but that, when trust-filled care and a safe environment are established with the patient and family, the assessment can be successful.

1.1 Select and use validate patient assessment tools.

The Nursing Best Practice Recommendations: Enterocutaneous Fistulas (ECF) and Enteroatmospheric Fistulas (EAF)⁴ outlines the need for a holistic patient assessment. See pages 56–59 for some of the elements required for an assessment of a patient with a fistula.

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

Complete a holistic patient assessment to identify factors that may affect or be affecting the patient's general health, fistula and skin status.

Patients and their fistulas should be assessed and reassessed at regular intervals and during the entire period of care. Include in the assessment information from relevant medical and surgical reports, wound/fistula clinic plans, and appropriate diagnostic test reports (fistulogram, ultrasonography, and plain radiography⁴) as well as any other patient factors that may affect healing.

Identify:

- The fistula type and if the fistula is matured or non-matured:
 - Matured – has “visible intestinal mucosa and may protrude”⁴
 - Non-matured – is “below the skin level”⁴
- Number of fistulas
- Specific fistula descriptions (e.g., shape, location of the fistula opening [lumen]) (see Table 1: Fistula Terminology). It is important to document the location of the fistula opening “including location within existing incisions and proximity to incisions, bony prominences, drains, muscle tone or ostomy.”⁴
- Classification of each one (see Table 2: Classification of Fistulas by Complexity).

Fistula Terminology

Fistula terminology is important in understanding and communicating where the fistula originated and to where it drains. This is the terminology you may see on medical reports and care plans.

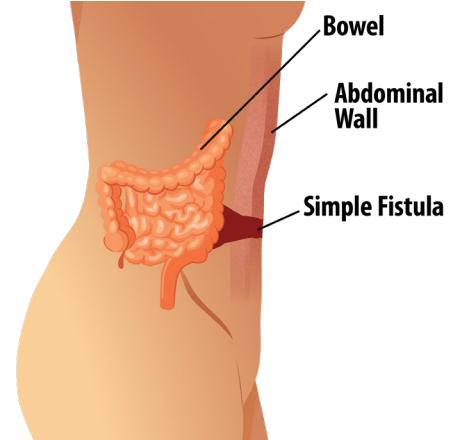
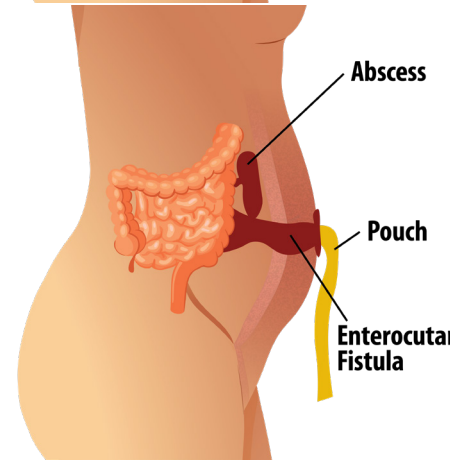
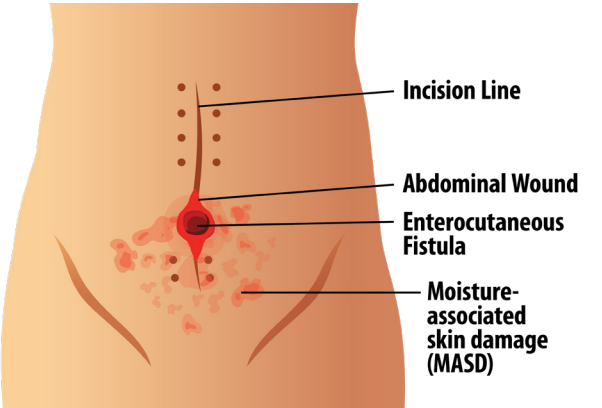
Table 1: Fistula Terminology³

Fistula drains from the:	To	Name of fistula	Internal/External
Pancreas	Colon	Pancreatico-colonic	Internal
Jejunum	Rectum	Jejunorectal	External
Intestine	Skin	Enterocutaneous	External
	Colon	Enterocolonic	Internal
	Bladder	Enterovesical	Internal
	Vagina	Enterovaginal	External
	Wound bed or surface of skin	Enteroatmospheric	External
Colon	Skin	Colocutaneous	External
	Colon	Colocolonic	Internal
	Bladder	Colovesical	Internal
Rectum	Vagina	Rectovaginal	External
Bladder	Skin	Vesicocutaneous	External
	Vagina	Vesicovaginal	External

Classification of Fistulas

- **Simple** fistulas are short, with a direct tract and have no associated abscess or organ involvement.
- **Complex** fistulas are classed as type 1 and type 2. Complex type 1 fistulas are associated with abscesses; multiple organs may be involved. Complex type 2 fistulas, also known as enteroatmospheric fistulas (EAF), drain (open) into the base of a non-healing wound.^{3,4}

Table 2: Classification of Fistulas by Complexity³

Type	Description	
Simple fistula	<ul style="list-style-type: none"> • Short, direct tract • No associated abscess • No other organ involvement 	 <p>Labels: Bowel, Abdominal Wall, Simple Fistula</p>
Complex fistula	<p>Type 1:</p> <ul style="list-style-type: none"> • Associated with abscess • Multiple organ involvement 	 <p>Labels: Abscess, Pouch, Enterocutaneous Fistula</p>
	<p>Type 2:</p> <ul style="list-style-type: none"> • Also known as enteroatmospheric fistula or EAF • Opens into base of a disrupted wound 	 <p>Labels: Incision Line, Abdominal Wound, Enterocutaneous Fistula, Moisture-associated skin damage (MASD)</p>

Fistula Anatomical Site of Origin

Fistulas may exist anywhere along the gastrointestinal tract. The anatomical location is described as proximal and distal.⁴

Proximal: Small intestine (duodenum, jejunum, ileum)

Distal: Large intestine and/or rectum

Output of the Fistula

Fistulas may be further classified by the volume of output measured every 24 hours. As output will change over time, ensure a strategy is in place to consistently measure discharge amounts. Output parameters are shown in Table 3: Assessment of Output.

Table 3: Assessment of Output^{3,4}

Descriptor	Amount and Prognosis
Low output	Produces less than 200 ml per 24 hours Distal and low output are associated with spontaneous closure
Moderate output	Produces 200 to 500 ml per 24 hours
High output	Produces more than 500 ml per 24 hours Associated with small bowel (proximal small bowel drains at least 1000 ml to 1500 ml per 24 hours) Lower spontaneous closure rate Associated with higher morbidity and mortality rates

1.2.1 Patient: Physical, emotional and lifestyle

Physical

A physical assessment should include a focused skin assessment surrounding the fistula(s). Assess skin turgor/hydration, redness, peri-fistular areas of denudement, size and shape of skin damage, odour and pain. Identify the products being used to provide care. See pages 16–18 of *Foundations of Best Practice for Skin and Wound Management: Best Practice Recommendations for the Prevention and Management of Moisture-associated Skin Damage* to determine the type of skin damage.

Peri-fistular skin: Identify any skin complications around the fistula opening or around the wound (if present). See pages 16–18 of *Foundations of Best Practice for Skin and Wound Management: Best Practice Recommendations for the Prevention and Management of Moisture-associated Skin Damage*.

Abdominal assessment (around the stoma): Identify any folds, creases and the overall shape of the abdomen (e.g., flat, rotund, obese) when the patient is lying, sitting or standing.

Fistula dressing or pouching system: Assess the current dressing and/or pouching system *in situ*. Assess the present dressing/pouching change schedule. Assess the role of the patient and family in assisting with care. Identify the wound/ostomy clinic from which the patient receives care.

Pain: Assess pain as part of the comprehensive assessment. Include location, duration, aggravating and alleviating factors and pain management plan (medications, over-the-counter, other). The experience of pain for children⁵ is influenced by culture and life experiences. For adults,⁶ trauma and interactions with the health-care system all influence the experience of pain.

- Examples **validated pain assessment tools for Alberta**
- If there is an underlying cancer diagnosis, the **Edmonton Classification System for Cancer Pain (ECS-CP)** may be considered

Nutritional Assessment:

Assessment of a patient's **nutritional status and supports** includes:

- Type of intake diet (oral, tube feed or intravenous fluids)
- Fistula output (ml per 24 hours), including consistency, colour, odour
- Vomiting output
- Nutritional support, including oral supplements, minerals, vitamins
- Registered dietitian role and contact information
- Ability of patient, family and/or other care partners to provide adequate nutrition

Please see **Professional Guide . . . at a Glance: Nutrition for Wound Prevention and Healing** for more information.

Intake and Output: Establish a logbook (or preferred system) to document oral intake of food and fluids (tube feed) and the fistula output every 24 hours. Determine with the patient how they prefer to track this important element of their care. Management of the fistula output requires multiple containers (toilet hats, commodes, measuring containers) to measure the discharge. If fistula output is being contained in a brief (pad) document this. Provide support to ensure these containers are clean and available for the patient and family. Reduce odour as possible and dispose of output as appropriate. Provide dignified care, as measuring fistula content can affect the patient's sense of wellbeing. For an example of such a log, see Appendix 1: Sample Daily Log: Intake and Output over 24 Hours on page 15.

Emotional and Lifestyle Assessment

Living with a fistula will affect the person's quality of life (QoL) and ability to participate in activities. It is therefore important to screen for risk of anxiety and depression and assess the availability of culturally relevant services, social worker support, Elder prayers and other spiritual care as appropriate to support the individual.³ Take time to understand any work, home and recreational/social concerns, particularly those related to managing nutrition and fluid intake, meal planning, snacks and physical limitations.

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

- Access to complex health care is essential for managing fistulas in the home setting and must be assessed so it can be addressed during goal setting and plan of care development.
- Assess available funding for preventative skin care and pouching systems. Cost of ostomy supplies and reimbursement may be an issue if not covered by insurance.
- Engage in culturally sensitive communication that creates an environment of trust for a more successful and complete assessment.
- Conduct a self-management assessment to identify a patient's strengths.
- Determine what elements of fistula care the patient chooses to engage in and manage, as well monitor for fatigue over the long term, especially if the fistula does not spontaneously close.
- Engage family to assess their strengths and ability to support the patient.

1.2.3 Systems: Health-care support and communication

Support from all levels of the health-care system is imperative for management of fistulas. It is important to assess access to funding, availability of services and products, levels of service delivery personnel and co-ordination of care.

Communication among health-care providers within the system becomes essential when assessment reveals the fistula has become unmanageable. There may be times when the patient needs to be re-admitted to the hospital for care. This may be due to:

- Fluid and electrolyte depletion (dehydration)
- Signs and symptoms of primary or secondary infection (skin infection, sepsis related to fistula and underlying disease)
- Inability to control fistula output and manage skin protection/damage
- Malnourishment
- Inadequate pain management

Most important, listening to the patient's preferences and needs is essential for providing holistic care.

1.3 Complete a wound assessment, if applicable.

Complete a wound assessment to identify factors that may affect skin and wound healing. If the patient has undergone surgery or a surgical event is being planned, identify factors that may affect surgical wound healing in the pre-operative, intra-operative and post-operative phases. See Foundations of Best Practice for Skin and Wound Management: [Best Practice Recommendations for the Prevention and Management of Surgical Wound Complications](#).

Step 2: Set Goals

Goals of care are established with the patient. Achieving goals will depend on the interplay of the patient's underlying condition, prognosis, overall health status and ability to fight infection. The availability of trained health-care professionals to care for the fistula and wound (if present) will impact decision making during the goal-setting process.

2.1 Set goals for prevention, healing, non-healing and non-healable wounds.

As patients with any type of fistula will face intrinsic and extrinsic barriers to healing, clinicians should always recognize the opportunity to promote healing. Skin issues and wounds associated with fistula care should be considered healable. Psychosocial, emotional and lifestyle considerations, nutritional support, fluid and electrolyte intake and prevention of infection are keys to supporting success in closing the fistula and/or preparing the patient for future surgical intervention. Prevention of skin and wound complications is essential to promote healing.

2.1.1 Identify goals based on prevention or healability of wounds.

Infection prevention and control should be priority goals for the patient, family and their home environment. Practising hand hygiene and promoting cleaning of the patient's surroundings (e.g., during toileting, bathing and for fistula-measuring equipment) are critical for prevention of infection. Examples of prevention goals relating to infection prevention and control might include:

- Practices are in place to prevent local wound and skin infection.
- For systemic infection, assessments of the patient's health status and vital signs, with regular reports to the team that include any signs and symptoms of infection, take place regularly.
- As sepsis is the "major cause of death in patients with enteric fistulas"³ only trained staff and knowledgeable and skilled family members provide interventions and support to the patient.
- A procedure for timely referrals for additional lab tests (blood, abscess, fistula contents), radiographic interventions, and medical and surgical interventions is in place.

Examples of healing goals include:

- **Fistula:** Some fistulas close spontaneously when infection is controlled, nutrition is maximized, fistula output is low and the fistula occurs postoperatively.³ Some fistulas will require surgical intervention to aid in closure.³ In this case the goal will be to maximize nutrition and hydration prior to the surgical intervention. For more on surgical wounds, see [Foundations of Best Practice for Skin and Wound Management: Best Practice Recommendations for the Prevention and Management of Surgical Wound Complications](#).
- **Skin protection:** Setting a goal to prioritize healthy skin around the fistula through the use of barriers to protect the skin and keep it intact is worthwhile for preventing new problems and supporting good quality of life for the patient. (If moisture-associated skin damage does occur refer to [Foundations of Best Practice for Skin and Wound Management: Best Practice Recommendations for the Prevention and Management of Moisture-associated Skin Damage](#) for information on how to treat the skin and prevent further skin breakdown.)
- **Wound healing:** For a healing wound, goals should be related to making choices consistent with continuing to support optimal wound healing. For a non-healing wound goals should be set that address overcoming the barriers to healing. For a non-healable wound supportive care goals should be developed. Refer to [Foundations of Best Practice for Skin and Wound Management: Best Practice Recommendations for the Prevention and Management of Wounds](#) for more.

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

Education, interactive learning and health-care provider support need to be part of goal setting and care planning following the assessment of potential for self-management.

Goals might include:

- A process for ongoing monitoring of psychosocial and mental health issues is implemented. Because fistulas take time to close, patients may become tired, depressed and require additional supports from social workers, psychologists, Elders and community members.
- Education and training specific to being able to implement self-management wound-related activities such as dressing changes is provided.
- A nutrition and hydration plan is implemented and monitored weekly.
- An effective medication use plan is implemented and monitored weekly.
- Pain is controlled.
- Communication of needs with team members occurs weekly or more often if needed.
- Patient receives training on and has a list of whom and when to contact in case of complications.

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.

Building respectful and trust-filled partnerships between patients and health-care professionals is crucial in obtaining patient engagement in self-care strategies. It is essential for clinicians to know their community supports and the resources available within their catchment area to better facilitate seamless transition across sectors (e.g., from hospital to home or home to respite) and build teams.

Care of fistulas requires a collaborative team to ensure the patient receives care that:

- promotes effective management of fluid and electrolytes
- controls infection (local and systemic)
- manages fistula output and peri-fistular skin protection
- manages pain
- addresses wound healing
- supports beneficial nutritional intake
- supports psychological wellbeing and ability to self-manage

Potential team members include First Nations liaison nurse (acute care), registered dietitian knowledgeable about preferred food choices, diabetes educator, wound care professional with advanced education, spiritual care advisor, Elder or trusted leader, physician or nurse practitioner, personal support worker, physical therapist, occupational therapist, pharmacist, social worker, psychologist.

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

Develop a therapeutic relationship with the patient and care partners to build trust. Ensure they have the knowledge they need to be able to contribute to team decision making and self-management activities, particularly the ability to self-manage personal hygiene, which is often a significant concern for patients living with a fistula. All patients, care partners and health professionals should be equipped with information regarding the prevention and management of infection and promotion of nutrition and hydration. A collaborative, trust-filled team with the patient at the centre increases the likelihood of successful achievement of goals.

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 secure successful outcomes:

- *Decision makers must establish, train and support an integrated team composed of interested, skilled and knowledgeable persons to address and monitor all elements related to the prevention and management of fistulas.*
- *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

Ensure the team and care plan address the goals or revised goals and incorporate the patient's specific needs, factors relating to the fistula management, skin protection, wound care (if present) and nutritional optimization, as well as the home environment and the system in which the care is being delivered.

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

Because the mortality rate is high for patients with high-output fistulas, with sepsis, malnourishment and significant fluid and electrolyte imbalances,^{3,4} the patient's care plan must be comprehensive and personalized. It must include a specific focus on the goals that have been set, the patient's preferences and cultural considerations.

Closing the fistula is usually the ultimate goal. It may occur spontaneously or over a longer period of time. To promote healing:

- Ensure the patient has supports in place to attend mental health, wellness and medical/surgical appointments, including e-platform health appointments, especially on occasions when it is necessary to have a family member and/or clinician present to maximize communication and to discuss goals of care.
- Address extrinsic factors that may impact healing (e.g., access to computers for e-appointments; safe housing; potable water; funds for wound, skin and fistula pouching supplies; and presence of social and emotional distress,).
- Maximize supports for all team members to achieve and maintain skin, wound and fistula education to manage patient issues in the community setting.
- Address internal factors such as nutrition and hydration (including replacement of fluids and electrolytes) as per the care plan, reduction of infection risk and management of the fistula and surrounding skin.
- Consider the use of prescribed medication(s) that aim to slow bowel movements, if appropriate. Home care providers, the pharmacist and primary care provider should work together to optimize the result of any anti-motility medication prescribed.^{3,4}

4.2 Optimize the local wound environment.

Optimizing the local wound environment involves addressing fistulas, peri-fistular skin and wounds and is based on information obtained during the assessment and goal-setting steps. Table 4 outlines selected prevention and treatment strategies appropriate for care within the community.

Table 4: Prevention and Treatment Strategies

Care Areas	Prevention and Treatment Strategies
Planning for Patient to Return Home	<p>Community home care leaders review cases, communicate with the team and organize the reception of patients to community settings.</p> <p>Home care nurses and leaders:</p> <ul style="list-style-type: none"> • Evaluate reports from wound care professional and/or primary care provider for plan of care and to organize and procure supplies. • Determine most appropriate community-based health care providers (home care team) to ensure: <ul style="list-style-type: none"> • Supports to manage psychosocial and lifestyle issues are in place • Appropriate skin and wound care personnel are assigned to the patient • Education to manage skin, wound, ostomy (fistula) care with a focus on infection prevention and control principles is available and delivered to all relevant team members
Rehabilitation	<ul style="list-style-type: none"> • Physical therapist (PT) maximizes mobility and activity at home. • Occupational therapist (OT) assesses equipment needs at home, with a focus on safe movement and activity. • Home care team selects and procures recommended equipment for PT/OT.
Fistula Management^{3,4}	<ul style="list-style-type: none"> • Wound care professional selects and procures recommended containment/pouching system and related odour-control products: <ul style="list-style-type: none"> • Low output: may be managed with absorbent dressings, though patient may prefer the fistula to be pouched • Moderate and high output: pouching recommended • Team communicates with wound care clinician as needed
Peri-fistular Skin Care^{3,4}	<ul style="list-style-type: none"> • Wound care professional selects and procures recommended peri-fistular skin protectants, barriers to maximize skin health • If drainage is in the perineal area (vaginal/bladder) wound care professional may select and procure the most appropriate pad and panties, brief and skin protectant. • Home care team communicates with the wound care professional as needed.

Care Areas	Prevention and Treatment Strategies
Wound Care ²⁻⁴	<ul style="list-style-type: none"> Wound care professional selects and procures recommended wound dressing supplies for maximum absorbency, odour control, and comfort based on the needs of the wound and patient preferences. Team communicates with the wound care professional as needed.
Nutritional Care ^{3,4}	<ul style="list-style-type: none"> Home care team selects and procures nutritional supplements recommended by the dietitian. If tube feeds are used, the team obtains recommended products. Home care team supports the patient by obtaining culturally preferred and necessary foods/fluids for oral intake. Home care team communicates with the registered dietitian and pharmacist on the team with any questions or concerns about medications, intake or supplements.
Mental Health, Spiritual Care ⁴	<ul style="list-style-type: none"> Home care team provides appropriate supports for mental health and well-being and spiritual wellness (e.g., community and faith-based activities in which the patient could engage safely).
General Care	<ul style="list-style-type: none"> Home care nurses assess and reassess patient's health status and plan regular re-assessments of plan of care and team meetings (electronically or face-to-face). Home care nurses immediately send any change in health status, vital signs, pain or signs and symptoms of infection to primary care providers, physicians or surgeons as appropriate.

4.2.1 Cleansing, Debriding, and Managing Bacterial and Moisture Balance

For more on this topic, see Table 10: Skin and Wound Management for MASD in [Foundations of Best Practice for Skin and Wound Management: Best Practice Recommendations for the Prevention and Management of Moisture-associated Skin Damage](#).

4.3 Select the appropriate dressing and/or advanced therapy.

It is important that the community care team receive education and training to manage fistula and peristomal skin and wounds in the community setting for this complex population.

For information on wound dressing selection and use, two links may be especially helpful:

- [Wounds Canada Product Picker: Wound Dressing Selection Guide](#)
- [Wounds Canada Product Picker: Wound Dressing Formulary](#)

[Note: These will eventually link to the customized version.]

For fistula pouching strategies, follow the specifics outlined by your local wound care professional. As well, contact the manufacturer for supports, training videos and educational materials for the clinicians, patients and care partners. Some examples of training videos for pouching include:

- Mayo Clinic (2022): *Understanding the basic steps of pouching system changes – for clinicians*: Time: 35:00 minutes
- Johnson, J. (2021): *Applying ostomy pouch to fistula/ileostomy: Patient story*. Time: 3:25 minutes

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

To optimize outcomes, the patient, family and care team members need to be in regular communication, sharing information and updating the care plan as needed.

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.

Reassessment of a patient with a fistula, including consideration of the psychosocial and lifestyle issues, the peri-fistular skin and wound care plan, is necessary to ensure success. When any component of the care plan is not effective, 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, go back to Step 1 of the Wound Prevention and Management Cycle. Reassessment needs to consider gaps in care or the patient's ability to adapt to their condition and engage in self-management. Inclusion of the team members is important in reassessment and exploration of modifiable factors, patient involvement and patient's and family's 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.

Identifying and managing the appropriate cause of fistula development and patient barriers to healing are vital in reducing risk of fistula recurrence. Incorporating prevention strategies into the plan of care can promote preventative behaviour throughout the management process.

- Frequent fistula, peri-fistular and wound assessments are required, and a bundled approach to care should be implemented, including reassessing fluid and electrolyte intake, prevention and control of infection, control of fistula output, peri-fistular skin protection and treatment, and maximizing nutritional intake.
- Implementation of a consistent and structured fistula and peri-fistular skin care regimen is essential. It should include education to patients, families and care partners for sustainability and reduction of complications.
- Ongoing evaluation and education of patients, care partners and families are important so psychosocial and spiritual care concerns can be identified and appropriately addressed.
- Assessment of the patient's environment is crucial in determining whether there is appropriate equipment; access to wound, fistula pouching and peri-fistular supplies; there is capacity to participate in self-care and if the home is conducive to good hygiene practices, including prevention and control of infection. Knowledge of community resources that support the patient remaining at home is critical.
- If risk factors for fistula, peri-fistular skin breakdown and wound complications are not well assessed and

managed, individuals, care partners and health-care systems will experience increased costs. Often, the focus is on the hard cost of products versus the larger picture of cost-effective care.

Additional Resources

The following resources provide additional information about fistula management and clinics. In smaller centres, fistula, ostomy and wound care may be at the same clinic.

Information

- Alberta Health Services: [Skin, Wound Care and Ostomy](#)

Clinics

- Chinook Regional Hospital (Lethbridge)
- Drayton Valley Hospital (Grande Prairie)
- Drumheller Health Centre (Drumheller)
- Foothills Medical Centre (Calgary)
- Grey Nuns Community Hospital – Wound and Ostomy Clinic (Edmonton)
- Northern Alberta Continence Service Clinic (Edmonton)
- Olds Hospital and Care Center (Olds)
- Peter Lougheed Centre (PLC) (Calgary)
- Red Deer Bremner Ave Community Health Centre (Red Deer)
- Rockyview General Hospital (Calgary)
- Royal Alexandra Hospital (Edmonton)
- South Health Campus (Calgary)

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Indigenous Services
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Autochtones Canada

Appendix 1: Sample Daily Log: Intake and Output over 24 Hours

Date:				
Intake time:	Describe: Type of food/fluid intake (e.g., water, coffee, tube feed)	Measure amount of intake (ml) 		Any Nausea-N or Vomiting-V
Fistula Output time:	Describe: Amount (ml), consistency, colour, odour etc (food particles)	Measure fistula output (ml)   (e.g., fecal matter, purulent material, mucous)	Urine output (urine may drain through the vagina depending on location of fistula)	Toilet-T Commode-C Containment Device-CD (pouch, pad, brief)
Sample only , adapt form as needed. Registered dietitians may provide a tracking tool.				