

BOWEL CARE

Rationale

This guideline is adapted for inter-professional primary care providers working in various settings in VIHA and any other clinical practice setting in which a user may see the guidelines as applicable.

Scope

This guideline provides recommendations for the assessment and symptom management of adult patients (age 19 years and older) living with advanced life threatening illness and experiencing the symptom of constipation. This guideline does not address disease specific approaches in the management of constipation.

Bowel pattern changes cause distress in up to 18% of palliative care patients and rises to 80% or higher at the end of life.^(1,2) Constipation is most frequent among patients treated with opioids – 40 to 50%.^(3, 4) It significantly impacts quality of life and may be a cause of restlessness.⁽⁵⁾ Constipation is more common in women and the elderly.⁽⁶⁾ Diarrhea is less common occurring in less than 10% of cancer patients.^(7, 8)

Definition of Terms

Constipation can be defined as “unduly infrequent and difficult evacuation of the bowels” that is “reduced frequency of bowel movements than is normal for the individual concerned, which may lead to pain and discomfort”.⁽⁹⁾

Ingestion induced **constipation** results from inadequate intake of fluids and/or fiber or intake of constipating foods (cheese or milk) or by drugs.^(1, 4) Other forms of constipation are:

- hypotonic – caused by a decreased rate of water absorption and muscular tone
- dyschezia (or habit) - caused by ignoring the urge to defecate
- chronic hypertonic – caused by excess colonic muscular activity secondary to hypersegmentation and prominent creasing of feces (rather than propulsion) and fecal impaction (obstruction).⁽¹⁾

Diarrhea is defined as 3 or more loose, watery stools per day. ^(1, 8)

Standard of Care

1. Assessment
2. Diagnosis
3. Education
4. Treatment: Non-pharmacological
5. Treatment: Pharmacological

Ongoing comprehensive assessment is the foundation of effective management of constipation, including interview, physical assessment (abdomen/bowel sounds/skin), medication review, medical and surgical review (x-ray of the abdomen may be indicated where obstruction is suspected), psychosocial review, review of physical environment and appropriate diagnostics (*see Table 1*). Assessment must determine the cause, effectiveness and impact on quality of life for the patient and their family.^(2, 7, 9-11) Complete a bowel assessment and consistently reevaluate.^(1, 12) An excellent resource for guidance on interview questions for Constipation⁽¹³⁾ and Diarrhea⁽¹⁴⁾ can be found on the BC Cancer Agency website (www.bccancer.bc.ca > Health Professionals Info > Nursing > References > TelConsultProtocols).

*Table 1: Constipation/Diarrhea Assessment using Acronym O, P, Q, R, S, T, U and V**

O Onset	When did it begin? How long does it last? How often does it occur? History of bowel habits and patterns, usual time of defecations? Date of last bowel movement?
P Provoking / Palliating	What brings it on? What makes it better? What makes it worse? What has your diet been like – solids and fluids? What makes the stools softer/harder/watery, more/less frequent?
Q Quality	What does it feel like? Can you describe it? What have the stools looked like? Do you have to strain? Flatulence?
R Region / Radiation	Does the feeling spread anywhere? Do you have any hemorrhoids, bleeding, pain?
S Severity	What is the intensity of this symptom (On a scale of 0 to 10 with 0 being none and 10 being worst possible)? Right Now? At Best? At Worst? On Average? How bothered are you by this symptom? Are there any other symptom(s) that accompany this symptom? For example, pain, nausea/vomiting, bloating, loss of appetite?
T Treatment	What medications and treatments are you currently using? If you are using laxatives, how effective are they? Do you have any side effects from the medications and treatments? What medications and treatments have you used in the past? What is your daily fluid and fibre intake?
U Understanding/ Impact on You	What do you believe is causing this symptom? How is this symptom affecting you and / or your family?

V Values	What is your goal for this symptom? What is your comfort goal or acceptable level for this symptom (On a scale of 0 to 10 with 0 being none and 10 being worst possible)? Are there any other views or feelings about this symptom that are important to you or your family?
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***also include a Physical Assessment (as appropriate for symptom)**

Recommendation 2

Diagnosis

Identifying the underlying etiology of constipation and diarrhea is essential in determining the interventions required (*see Tables 2 and 3*).^(6, 10, 11)

Constipation can be multifactorial in nature.^(10, 15, 16)

Table 2: Causes of Constipation in Advanced Cancer Patients^(1, 6, 7, 13)

Structural abnormalities	GI Obstruction Pelvic tumour mass Radiation fibrosis Painful anorectal conditions (anal fissure, hemorrhoids, perianal abscess)
Drugs	Opioids Drugs with anticholinergic action - anticholinergics, antispasmodics, antidepressants, phenothiazines, haloperidol, antacids Antiemetics – 5HT₃ antagonists Diuretics Anticonvulsants Iron Antihypertensives Chemotherapy agents –vinca alkaloids
Metabolic disturbances	Dehydration Hyperglycemia Hypokalemia or Hypercalcemia Uremia Hypothyroidism
Neurological disorders	Cerebral tumours Spinal cord involvement/compression Sacral nerve infiltration Autonomic failure
General	Advanced age Inactivity Depression Sedation Decreased intake Low fiber diet Poor fluid intake Physical or social impediments

Table 3: Causes of Diarrhea in Advanced Disease^(1, 6, 7, 14)

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Obstruction	Malignant tumour Fecal impaction Opioid bowel syndrome
Drugs	Laxatives Antacids Antibiotics Chemotherapy agents – 5-flourouracil, mitomycin NSAIDs – diclofenac, indomethacin Iron preparations Disaccharide containing elixirs
Malabsorption	Pancreatic carcinoma or insufficiency Gastrectomy Ileal resection Colectomy
Tumour	Cancer of the colon or rectum Pancreatic islet cell tumour Carcinoid tumour
Radiation	Abdominal or pelvic radiation with or without chemotherapy (RT induced enteritis)
Concurrent disease	Diabetes mellitus Hyperthyroidism Inflammatory bowel syndrome – Crohn’s Irritable bowel syndrome – Colitis Gastrointestinal infection – C. Difficile
Diet	Bran Fruit Hot spices Alcohol

Recommendation 3

Education

- Even in the absence of oral intake, the body continues to produce 1 to 2 ounces of stool per day.⁽¹⁷⁾
- It is not necessary to have a bowel movement every day. As long as stools are soft and easy to pass, every 2 to 3 days is acceptable.⁽¹²⁾
- “Normal” bowel movements vary from person to person.⁽¹³⁾
- If appetite is small, try to incorporate nutritious liquids such as milkshakes, cream soups, fruit juice.⁽¹³⁾
- Encourage use of a bowel record to evaluate the effectiveness of treatment strategies. ⁽²⁷⁾
- The desired outcomes of a treatment strategy is a comfortable bowel movement at least every several days with the minimum required use of laxatives as well as satisfaction of the patient and family. ⁽²⁷⁾

Constipation:

- Incorporate constipation prevention strategies for as long as possible and appropriate, including:
 - Encourage fluid intake of at least 5-6 eight ounce cups per day (unless medically contraindicated.)⁽²⁷⁾ Caffeinated and alcoholic beverages are not included in total daily fluid intake because of their diuretic effect.⁽²⁷⁾
 - Encourage daily intake of natural dietary fibre (12-25 grams per day)⁽²⁷⁾ by increasing fruit (prunes), other natural agents, and/or dietary fiber (only for those with adequate fluid and mobility).^(1, 3, 7, 11, 15, 18, 19) A fruit laxative can be made with prunes, dates, figs and raisins.^(10, 12) Fibre usually becomes effective after two to three days.⁽²⁷⁾
- Attempts at defecating should be made 30 to 60 minutes following ingestion of a meal to take advantage of the gastro colic reflex.^(1, 10, 11)
- Bowel action should be initiated when it is “normal and convenient” for the patient in a sitting position. It should be made easy to achieve quick access to a toilet when having the urge to defecate.⁽²⁷⁾ This can be facilitated by using; raised toilet seats, commodes and ensure adequate pain control for movement and comfort.^(1, 10)
- Provide privacy during toileting.^(1, 3, 10, 11, 15, 19, 20)
- Avoid excessive straining (this can complicate some medical conditions).^(1, 10) If possible, assist to allow leaning slightly forward on the toilet/commode with feet supported to reduce the need for straining.⁽²⁷⁾
- Encourage and assist with physical activity suited to the patient’s abilities.^(13,27)

Diarrhea:

- For most patients with diarrhea decreasing fiber intake is helpful, however if there is excessive liquid in the bowel an absorbent can be helpful (crackers). If over stimulation of the bowel is suspected reducing intake to sips of fluid for 24 to 48 hours can be helpful.^(1, 8)
- Limit consumption of high fiber foods, large meals, fatty foods, caffeine⁽¹⁴⁾ and dairy products.⁽⁶⁾
- Maintain hydration and electrolytes as appropriate (particularly in cases of severe diarrhea).^(1, 14) Ringers lactate is the preferred solution for parenteral hydration.⁽²¹⁾ Rehydration can also be done orally, if the dehydration is not severe, with the WHO rehydration fluid (2 gm salt plus 50 gm sugar to 1 litre of water).^(8, 21)
- A single liquid or loose stool usually does not require intervention.⁽¹⁾

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- Good hygiene and application of hydrocolloid dressings⁽²¹⁾ or barrier cream will help prevent excoriation with diarrhea.^(1, 8) If already inflamed or excoriated use a corticosteroid cream for 1 to 2 days.⁽⁸⁾
- Persisting diarrhea can have severe effects on image, mood and relationships, which will need support.⁽²¹⁾

Recommendation 5

Treatment: Pharmacological

Constipation:

- Constipation is a common side effect of all opioids.^(1, 12)
- Patients often stop opioid therapy because of opioid induced constipation.⁽²²⁾
- Opioid induced constipation is much easier to prevent than treat.⁽²³⁾
- Opioids cause decreased motility (by suppression of intestinal peristalsis) and increased water and electrolyte re-absorption in the small intestine and colon.^(1,4)
- Transdermal fentanyl⁽⁴⁾ and methadone^(16, 20) have been shown to produce less constipation. Consider opioid rotation for severe refractory constipation.^(16, 20)
- Tolerance will not develop to the constipating effects of opioids.^(15, 23)
- The constipating effect of opioids are not dose dependant.⁽²⁴⁾
- Laxatives are available under the *Palliative Benefit Program* but require a prescription.
- Consider patient preferences when determining bowel regime.⁽¹⁸⁾
- In randomized clinical trial comparing senna to lactulose – senna was preferred secondary to a favorable toxicity profile and cost advantage.⁽²⁵⁾ The sweet taste of lactulose can cause problems with compliance.⁽⁷⁾ Sorbitol has been found to be less nauseating.⁽⁶⁾
- Start laxatives on a regular basis for all patients taking opioids^(1, 12, 17, 19, 24) (*see Appendix A*).
- Based on the bowel pattern, time since last bowel movement and bowel medication previously being used, determine the level of the bowel protocol for medications.⁽¹²⁾
- Use a step wise approach, titrate the laxatives^(1, 12, 16, 24) according to the bowel protocol to ensure regular bowel movements. Aim for soft formed stool at least once every 2 to 3 days.⁽¹²⁾
- Three days without a bowel movement requires intervention.^(1, 12)
- The continued use of docusate in the palliative care setting is based on inadequate experimental evidence.^(22, 26)
- Rectal laxative should never accompany an inadequate prescription of oral laxative.⁽⁷⁾
- Avoid use of rectal enemas and suppositories while receiving chemotherapy.
- Avoid use of bulk forming agents (fiber) in patients with poor oral fluid intake. The patient must be able to tolerate 1.5 to 2 litres of fluid per day.^{(1,}

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- ^{3, 11} This makes bulk forming agents a poor choice in cancer patients.⁽⁷⁾
They may worsen with an incipient obstruction.⁽⁷⁾
- Osmotic laxatives should be accompanied by an increase in fluid intake.⁽⁷⁾
 - Metoclopramide inhibits dopamine centrally and peripherally, therefore increasing peristalsis in the digestive tract and decreasing nausea and vomiting.⁽³⁾
 - Metoclopramide 10 to 20 mg PO q6h.⁽¹⁰⁾
 - There is some evidence to support the use of polyethylene glycol as a laxative for opioid induced constipation.⁽²²⁾ Polyethylene glycol 10 to 30 g PO daily to b.i.d. or 60 to 240 g for evacuation.⁽¹⁾

Oral Laxatives:	Type :	Action :
Sodium docusate	Predominantly softening – surfactant	Detergent, increase water penetration
Lactulose	Predominantly softening – osmotic laxative	Retain water in small gut
Sorbitol	Predominantly softening – osmotic cathartic	Retain water in small gut
Methyl cellulose	Predominantly softening – bulk forming agent	Normalize stool volume
Magnesium sulphate	Predominantly softening – saline laxative	Retain water and strong purgative action
Polyethylene glycol	Predominantly softening – osmotic cathartic	Increases fluid and purgative action
Sennosides	Peristalsis stimulating – anthracenes	Reduces water and electrolyte absorption and purgative action
Bisacodyl	Peristalsis stimulating – polyphenolic	Reduces water and electrolyte absorption and purgative action
Rectal Laxatives:	Type :	Action :
Bisacodyl suppository	Peristalsis stimulating – polyphenolic	Evacuates stools from rectum or stoma: for colonic inertia
Glycerin suppository	Predominantly softening – osmotic laxative	Softens stools in rectum or stoma
Phosphate Enema	Peristalsis stimulating – saline laxative	Evacuates stool from lower bowel
Oil enema	Predominantly softening – lubricant laxative	Softens hard impacted stool

- Latency of action of docusate sodium is one to three days.⁽⁷⁾
- Latency of action of lactulose and sorbitol is one to two⁽⁶⁾ and up to three days.⁽⁷⁾

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- Latency of action of peristalsis stimulating laxatives is 6 to 12 hours.⁽⁷⁾
- Enemas may need to be repeated to clear the bowel of hard impacted stool.⁽⁷⁾
- Latency of action of suppositories and enemas is 15 to 60 minutes.⁽⁶⁾

Diarrhea:

Diarrhea can be caused by over use of laxatives or can be a side effect of radiation, chemotherapy or surgical treatments.^(1, 8, 21)

Symptomatic relief is generally achieved with non-specific antidiarrheal agents – loperamide PO up to 16 mg daily⁽⁸⁾ or codeine 10 to 60 mg PO q4h.⁽⁷⁾ Unlike constipation, where multiple drugs are used simultaneously, a single drug should be used for diarrhea and care should be taken to avoid sub-therapeutic doses.⁽⁷⁾

Metronidazole is recommended for C. Difficile diarrhea⁽⁶⁾ - metronidazole 500 mg PO t.i.d.⁽⁸⁾ Oral vancomycin is an alternative to metronidazole.

Octreotide is an effective therapy for severe refractory diarrhea.⁽²¹⁾ Octreotide 300 to 600 mcg per day S.C.⁽²¹⁾ in 2-3 divided doses.

References

Information was compiled using the CINAHL, Medline (1996 to April 2006) and Cochrane DSR, ACP Journal Club, DARE and CCTR databases, limiting to reviews/systematic reviews, clinical trials, case studies and guidelines/protocols using constipation/diarrhea terms in conjunction with palliative/hospice/end of life/dying. Palliative care textbooks mentioned in generated articles were hand searched. Articles not written in English were excluded.

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Appendix A Example of an End of Life Bowel Protocol

1. Complete Bowel Assessment.
2. Determine Level at which to start, based on bowel pattern, time since last bowel movement and bowel medication use prior to admission. Record Level on appropriate form/flowsheet.
3. Document all bowel medications administered and bowel movement information on the appropriate form/flowsheet and progress notes. Include frequency, character, and amount of bowel movements and laxative interventions.
4. Subsequent rectal and/or abdominal examinations are to be documented on the appropriate form/flowsheet and progress notes.

INDICATIONS	CONTRAINDICATIONS
<ul style="list-style-type: none"> • To prevent opioid-induced constipation. • To manage constipation where dietary measures have failed, or previous laxative treatment unsatisfactory. 	<p>Do not follow protocol for:</p> <ul style="list-style-type: none"> • Ileostomy. • Complete bowel obstruction. • Diarrhea. • Impaction if present, clear impaction prior to initiating protocol. • Short Bowel Syndrome. • If in doubt, contact MD.
<p>LEVEL 1 – PREVENTION ONCE DAILY (HS)</p>	<p>Meds: 1. Sennosides 12 mg tablets; 12 to 36 mg (1 to 3 tablets) PO HS</p>
<p>LEVEL 2 – PREVENTION TWICE DAILY (BID)</p>	<p>Meds: 1. Sennosides 12 mg tablets; 24 to 36 mg (2 to 3 tablets) PO BID 2. Lactulose 15-30 mL PO BID</p>
<p>LEVEL 3 – CONSTIPATION MANAGEMENT No BM for 3 days or more. Do rectal examination and document appropriate form/flowsheet/progress notes.</p>	<p>Continue previous medications PLUS: a, b or c (below)</p> <p>-----</p> <p>Meds: a) If soft stool in rectum Bisacodyl 10 mg supp PR. If not effective within 1 hour, give sodium citrate PR, e.g. Microlax®, or phosphate enema PR, e.g. Fleet®. b) If hard or impacted stool in rectum Oil Retention enema PR. If not effective within 1 hour, give sodium citrate or phosphate enema PR. Disimpact if indicated; considering analgesia prior to disimpaction. c) If no stool in rectum Perform abdominal examination and document on appropriate form. Assess abdomen for bowel sounds. If normal, give sodium citrate or phosphate enema PR +/- sodium phosphates oral. If abnormal, CALL MD or Hospice Palliative consultant (if available).</p>
<p>OUTCOME: After a BM, resume Level I or II (increasing dose(s) PRN) to maintain a BM at least q 3 days</p>	