DISCLAIMER

While the information contained in the Guide-to-Practice and Pocket Guide ("Guide") was considered to be accurate at the date of its publication, changes in available evidence after the time of publication may affect the accuracy of the information in the Guide. We suggest the Guide be used for educational and information purposes only.

Cancer Care Ontario's Symptom Management Guide-to-Practice: Bowel Care

April 2012

Preamble

Ontario Cancer Symptom Management Collaborative

An initiative of Cancer Care Ontario, the Ontario Cancer Symptom Management Collaborative (OCSMC) was undertaken as a joint initiative of the Palliative Care, Psychosocial Oncology and Nursing Oncology Programs. The overall goal of the OCSMC is to promote a model of care enabling earlier identification, communication and documentation of symptoms, optimal symptom management and coordinated palliative care.

The OCSMC employs common assessment and care management tools, including the Edmonton Symptom Assessment System (ESAS) screening tool, to allow patients to routinely report on any symptoms they are experiencing. Symptom Management Guides-to-Practice were developed to assist health care professionals in the assessment and appropriate management of a patient's cancer-related symptoms. In addition to the symptom specific Guides-to-Practice, quick-reference Pocket Guides and Algorithms were created. For a comprehensive management plan for patients with advanced disease, please refer to the Palliative Care Collaborative Care Plans.

Objective

The objective of this initiative was to produce Guides-to-Practice for the management of patients with cancer-related symptoms. These documents are clinical tools designed to assist health care practitioners in providing appropriate patient care and are not intended to serve as standards of care.

Scope

The scope of this initiative is to produce a Guide-to-Practice for the pharmacological and non-pharmacological management of constipation and diarrhea. It is outside the scope of this Guide-to-Practice to address in detail the management of patients experiencing adverse effects secondary to systemic or radiation therapy (please visit the Program in Evidence-Based Care for guidelines related to these topics). Additionally, the following circumstances will not be addressed: bowel obstruction, diarrhea associated with enteral tube feeding, short-bowel syndrome, ileostomy and pancreatic insufficiency. Consultation with appropriate health care providers is encouraged when a patient has bowel problems associated in these circumstances.

Target Population

The target population consists of adult patients who require symptom management related to cancer.

Target Users

The Guides-to-Practice will be of interest to health professionals who provide care to patients with cancer-related symptom management needs at various stages of the disease pathway.

Methodology

The Guides-to-Practice were developed by the interdisciplinary Symptom Management Group (SMG) which included regional representation from across the province (refer to Post-amble for details). As an alternative to de novo development, the Guides-to-Practice were developed using the ADAPTE guideline adaptation approach that includes identifying existing guidelines, appraising their quality, selecting recommendations for inclusion and obtaining expert feedback (refer to Appendix A and B for details).

Table of Contents

Considerations

The following guidelines were used as the basis for the development of this Guide-to-Practice: Fraser Health's *Symptom Guidelines: Bowel Care* (1); Oncology Nursing Society's (ONS) *Putting Evidence Into Practice: Evidence-Based Interventions to Prevent, Manage, and Treat Chemotherapy-and Radiotherapy-Induced Diarrhea* (2); Registered Nurses' Association of Ontario's (RNAO) *Prevention of Constipation in the Older Adult Population* (3); and National Comprehensive Cancer Network's (NCCN) *Palliative Care* (4). Additional articles, cited within the text, were also used to supplement the evidence base.

Key recommendations are highlighted in shaded boxes. Source documents for each recommendation are denoted according to the symbols shown in Table 1. For example, if a recommendation is derived verbatim from the ONS guideline, it is indicated by the symbol ONS. Recommendations that are derived from the ONS guideline but have been modified are designated as ONS *Modified*. Recommendations that have been derived based on the expert opinion of the bowel care SMG are designated as Bowel Care SMG.

Table 1. Symbol Legend

Symbol	Definition
Fraser Health **ONS** **RNAO** **NCCN**	Verbatim extract from the: - Fraser Health - Oncology Nursing Society (ONS) - Registered Nurses' Association of Ontario (RNAO) - National Comprehensive Cancer Network (NCCN)
Fraser Health *Modified* **ONS *Modified*** **RNAO *Modified*** **NCCN *Modified***	Sections extracted from guidelines and modified to better suit the Ontario context
Bowel Care SMG	Sections based on the expert opinion of the Bowel Care Symptom Management Group

While some references to specific articles are provided, this Guide is not intended to be a comprehensive overview of the primary evidence; for a more in depth review the reader is encouraged to seek out the original guidelines. For a quick reference tool on bowel care management, please refer to the Bowel Care Pocket Guide and Algorithm. For a comprehensive management plan for patients with advanced disease, please refer to the Cancer Care Ontario Collaborative Care Plans.

Definition of Terms

Constipation is a symptom of unsatisfactory defecation characterized by infrequent stools, difficult passage of stool, or both. Difficult passage can mean straining at stool, incomplete evacuation of the rectum, passing hard or lumpy stools, prolonged time to pass stool, or the need for manual maneuvers to pass stool (1,5).

Diarrhea is a patient-reported symptom of an abnormal increase in liquidity and/or frequency of fecal discharges (2,6).

Assessment

RNAO *Modified*

Obtaining a detailed history, including assessment of functional status and goals of care, is an important step in identifying etiologic factors and appropriate management strategies for constipation and diarrhea.

Fraser Health *Modified*

Ongoing comprehensive assessment is the foundation of effective bowel management. While assessing constipation and diarrhea, consider causes that may be specifically treatable (see diagnosis section below for more details).

Fraser Health *Modified*

The OPQRSTUV Acronym (Table 2 and 3) suggests questions for assessing constipation and diarrhea, which can be adapted to each patient's situation.

RNAO *Modified*

For patients with cognitive impairment, information regarding behavioural manifestations, indicating the patient's need to have a bowel movement, should be obtained from the primary care provider.

Table 2. Constipation Assessment Using OPQRSTUV Acronym (*Adapted from Fraser Health (1)).*

Onset	When did the constipation start? How often are you constipated? How often do your bowels move?
Provoking / **P**alliating	What makes it better? What makes it worse (e.g., medications, cancer treatments, diet changes, changes in amount of food or fluid eaten, decreased ability to walk or move around)?
Quality	How would you describe your stools (e.g., colour, hardness or softness, odour, amount)? Is there blood or mucous with the stool? *Refer to Appendix C for the Victoria Bowel Performance Scale and the Bristol Stool Chart*
Related Symptoms	Is there any discomfort associated with the constipation? Where do you feel this discomfort? Can you describe it? Any abdominal bloating? Do you have lots of gas? Do you feel like your rectum is not empty after a bowel movement? Do you have hemorrhoids? Do you have pain in your anal area? Do you have any drainage from your rectum when you are not having a bowel movement? Do you have any other symptoms (e.g., nausea, vomiting, loss of appetite, urinary symptoms such as leaking urine accidentally or trouble emptying your bladder)?
Severity	When was your last bowel movement? How often do you feel the urge to pass stool? Do you need to strain a lot with each bowel movement?
Treatment	What are you doing to manage your bowels? How effective is this? Do you have any side effects from the medications or treatments you use for your bowels? What have you tried? What tests have been done for the constipation?
Understanding / Impact on **You**	How does the constipation affect your life? How bothered are you by it?
Values	What are your normal bowel habits? What does the constipation mean to you? How has it affected you and your family or caregiver? What is your bowel care goal?

Table 3. Diarrhea Assessment Using OPQRSTUV Acronym (*Adapted from Fraser Health (1)*)

Onset	When did the diarrhea begin? How long does it last?
Provoking / **P**alliating	What may be causing the diarrhea? What makes it better? What makes it worse (e.g., medications, cancer treatments, diet changes, changes in amount of food or fluid eaten)?
Quality	How would you describe your stools (e.g., colour, hardness or softness, odour, amount)? Is there blood or mucous with the stool? Is the stool oily? Do you feel an urgency to go to the bathroom? *Refer to Appendix C for the Victoria Bowel Performance Scale and the Bristol Stool Chart*
Related Symptoms	Is there any discomfort associated with the diarrhea? Where do you feel this discomfort? Can you describe it? Do you have any abdominal bloating? Do you have lots of gas? Do you have any other symptoms (e.g., nausea, vomiting, loss of appetite, thirst, fatigue, weakness, fever, feeling like your rectum is not empty after a bowel movements, painful skin around the anus)?
Severity	How often do you have diarrhea? Does it come and go? When do you have diarrhea? Does it ever occur at night? Do you have accidents? How frequent are your bowel movements when you have diarrhea?
Treatment	What have you taken to treat the diarrhea? Do you have any side effects from the medications or treatments for the diarrhea? What have you tried in the past? What tests have been done for the diarrhea?
Understanding / Impact on **You**	How does the diarrhea affect your life? How bothered are you by it?
Values	What are your normal bowel habits? What does the diarrhea mean to you? How has it affected you and your family or caregiver? What is your bowel care goal?

Physical Assessment (as appropriate for symptom)

RNAO ***Modified***

- Check vital signs.
- Determine the patient's functional abilities related to mobility, eating and drinking.
- Assess for signs of dehydration (such as tachycardia, dry mouth, poor skin turgor, low blood pressure).
- Determine the patient's cognitive status related to ability to communicate needs and follow simple instructions.
- Examine the abdomen, checking for abdominal distension, visible peristalsis, increased or decreased bowel sounds, a palpable, distended bladder and other abdominal masses, including fecal masses (indentable, mobile, non-tender masses) (7).
- Conduct a rectal examination, checking for anal sphincter tone, amount of stool, stool consistency and color, presence of mucous, masses obstructing the rectum, hemorrhoids, anal fissures or abscesses. A dilated rectum may indicate impacted stool higher up in the sigmoid area (7).
- Privacy and cultural sensitivities should be taken into consideration before performing a rectal examination (7).
- Carry out a neurologic examination on the lower extremities if a spinal cord or cauda equina lesion is suspected.

Investigations

Consider abdominal x-rays (8,9):

Bowel Care SMG

- If bowel obstruction is suspected, consider 3-views of the abdomen to confirm the diagnosis
- If severe stool loading of the colon is suspected in a constipated patient or in a patient with diarrhea that may be due to stool loading/impaction (overflow diarrhea), a flat plate of the abdomen can be used to assess the amount and location of stool in the colon. This can help determine appropriate therapies.

Diagnosis

Fraser Health

Identifying the etiology of constipation and diarrhea is essential in determining the interventions required.

Bowel Care SMG

Sometimes bowel dysfunction can be anticipated from the patient's situation or treatments. At other times it may represent serious cancer complications (e.g., spinal cord compression, infection, bowel obstruction) that may require urgent, specific management beyond simply adjusting bowel medications. Diagnosing the underlying causes is important so these situations can be discussed with the patient and family and further investigations and treatments may be initiated, consistent with the patient's goals of care and preferences.

Causes of Constipation

Consider the following possible causes of constipation (Table 4) and diarrhea (Table 5). While the lists offer a number of potential causes, they are **not meant to be exhaustive**.

Table 4. Common Causes of Constipation (*Adapted from Fraser Health and RNAO (1,3).*

Causative Factors	
Drugs	• Opioids • Drugs with anticholinergic action ○ antispasmodics, antidepressants, phenothiazines, antihistamines • 5HT3 antagonists • Iron • Calcium salts • Chronic laxative use

Lifestyle	• Nutritional
	  ○ low fibre diet, decreased food intake, decreased fluid intake
	• Physical impediments
	  ○ decreased mobility, generalized weakness,
	• Ignoring defecation urge

Environmental impediments	• Lack of privacy - visual, auditory, olfactory • Using a bedpan • Limited resources • Caregiver apathy • Physical layout

Disease effects	• Mechanical
	  ○ bowel obstruction, pelvic tumour /mass
	• Endocrine and Metabolic
	  ○ hypercalcemia, hypokalemia, dehydration,
	• Neuro-muscular
	  ○ spinal cord compression, sacral nerve infiltration, myopathy, autonomic dysfunction (e.g. associated with diabetes mellitus)
	• Depression, sedation, pain, dyspnea

Treatment-related	• Chemotherapy
Demographics	• Advanced age
Concurrent Disease	• Irritable bowel syndrome • Painful anorectal conditions • Hypothyroidism

Table 5. Common Causes of Diarrhea (*Adapted from Fraser Health (1)*)

Causative Factors	
Drugs	• Laxatives • Antacids • Antibiotics • Chemotherapy • Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)

Disease effects	• Mechanical
	  ○ bowel obstruction (overflow diarrhea)
	• Infections
	• Neuro-muscular
	  ○ spinal cord compression, sacral nerve infiltration, autonomic dysfunction,
	• Primary large bowel cancer
	• Pancreatic insufficiency
	• Neuroendocrine tumour

Treatment-related	• Radiation enteritis • Surgical ○ gastrectomy, small bowel resection, colectomy • Fecal Impaction (overflow diarrhea)
Concurrent Disease	• Irritable bowel syndrome • Inflammatory bowel disease

Non-Pharmacological Treatments

Constipation

Bowel Care SMG

Consider performance status, fluid intake, diet, physical activity and lifestyle when managing constipation.

The Palliative Performance Scale (PPS), a reliable and valid tool used for assessing a patient's functional status, guides the recommendations in this section. The PPS tool can be found here.

General Education

Bowel Care SMG
- Patient education should emphasize fluid intake, diet, physical activity and lifestyle interventions, according to PPS level.
- It is not necessary to have a bowel movement every day. As long as stools are soft and easy to pass, every two days is generally adequate.

Fraser Health
- Avoid excessive straining.
- In absence of oral intake, the body continues to produce 1-2 ounces of stool per day.

PPS Stable, Transitional and End of Life (30-100%)

Fluid Intake

RNAO *Modified*
- Encourage intake of fluids throughout the day.
- Aim for fluid intake between 1500-2000 milliliters (ml) per day.

Bowel Care SMG
- For patients who are not able to drink large volumes, encourage sips throughout the day, as tolerated.
- Limit intake of caffeinated and alcoholic beverages, as they may promote dehydration.

Physical Activity

- Physical activity should be tailored to the individual's physical ability, health condition and personal preference, to optimize adherence.

RNAO *Modified*

- Frequency, intensity and duration of exercise should be based on the patient's tolerance.
- For PPS 60% and above, walking is recommended (e.g., 15-20 minutes once or twice per day or 30-60 minutes daily, 3-5 times per week).
- For PPS 30-50% exercises such as low trunk rotation and single leg lifts, for up to 15 to 20 minutes per day, are encouraged, if able.
- Consult with a physiotherapist or occupational therapist for specific advice regarding mobility, positioning or other modalities to relieve constipation.

Personal Considerations

Fraser Health

- Provide privacy during toileting.
- Attempts at defecating should be made 30 to 60 minutes following ingestion of a meal, to take advantage of the gastro-colic reflex.

PPS Stable and Transitional (40-100%)

Diet

The following dietary recommendations are not applicable if bowel narrowing or obstruction is suspected.

RNAO *Modified*

- Dietary fibre intake should be gradually increased once the patient has a consistent fluid intake of at least 1500 ml per 24 hours.
- Aim for dietary fibre intake of at least 25 grams per day (See Food Sources of Fibre).

Bowel Care SMG

- To achieve 25 grams of fibre per day, based on Canada's Food Guide:
  - Choose 7-10 servings per day of whole fruits and vegetables, instead of juices.
  - Choose 6-8 servings of grain products per day, selecting 100% whole grain breads and high fibre cereals (>4 grams/serving).)
  - Include plant proteins daily as part of the 2-3 servings of meats and alternatives.
- A fruit laxative can be made as follows (BC Cancer Agency):
  - 125 ml pitted dates, 310 ml prune nectar, 125 ml figs, 200 ml raisins,125 ml pitted prunes

  Simmer dates and prune nectar until dates are soft. Put date mixture into a food processor, add figs, raisins and prunes. Blend to a smooth paste. Use on toast, crackers, ice cream. Store in refrigerator.
- Consult with a dietitian for specific nutritional advice regarding fibre intake.

Personal Considerations

Bowel Care SMG

- Walking to the toilet, if possible, is recommended. If walking is difficult, use a bedside commode.
- Assuming the squat position on the toilet can facilitate the defecation process.
  - Sitting with feet on a stool may help with defecation (10).

PPS End of Life (10-30%)

- Raising the head of the bed may facilitate the defecation process.

RNAO *Modified*

- Simulate the squat position by placing the patient in the left-lateral decubitus position, bending the knees and moving the legs toward the abdomen.

PPS End of Life (10-20%)

Bowel Care SMG

- For patients with PPS 10-20%, consider the burdens and benefits of regular bowel care, using good clinical judgment when making recommendations.

Diarrhea

Bowel Care SMG

Consider performance status, diet, fluid intake, quality of life and lifestyle when managing diarrhea.

PPS Stable, Transitional and End of Life (30-100%)

Diet

ONS
- Eat small frequent meals.

Fraser Health *Modified*
- Limit consumption of caffeine, fried, greasy foods and foods high in lactose.
- Avoid sorbitol containing foods (e.g., sugar-free gum and sugar-free candy).
- Limit/avoid foods high in insoluble fiber (e.g., wheat bran, fruit skins and root vegetable skins, nuts and seeds, dark leafy greens and legumes such as dried peas).

ONS *Modified*
- Include foods high in soluble fibre (barley, potatoes, bananas and applesauce).
- Avoid hyper-osmotic liquids (fruit drinks and sodas). Dilute fruit juices with water.

Fluid Intake

Bowel Care SMG
- Parenteral hydration may be required for severe diarrhea
- Provide fluids orally, if dehydration is not severe:
  - An oral rehydration solution can be prepared by mixing 1/2 teaspoon salt and 6 level teaspoons sugar in 1 litre of tap water.
  - Commercially available oral rehydration solutions containing appropriate amounts of sodium, potassium and glucose can be used.

PPS Stable, Transitional and End of Life (10-100%)

Quality of Life

Fraser Health *Modified*
- Persistent diarrhea can have severe effects on image, mood and relationships.
- Attention must be paid to understanding the emotional impact from the patient's perspective.
- Offer practical strategies to assist with coping:

Bowel Care SMG
  - Carefully plan all outings.
  - Carry a change of clothes.
  - Know the location of restrooms.
  - Use absorbent undergarments.

Life style

Fraser Health *Modified*
- Take steps to prevent skin excoriation
  - Good skin hygiene:
    - Use mild soap
    - Consider sitz bath
  - Apply a skin barrier product
- Hydrocolloid dressings may be used as a physical barrier to protect excoriated skin.

PPS End of Life (10-20%)

Fraser Health *Modified*
- Exercise good clinical judgment regarding the burden and benefits of parenteral fluids for the individual patient.

Pharmacological Treatments

There is little research examining the pharmacological management of constipation and diarrhea for cancer patients. The recommendations below are based on low level evidence and consensus.

Ask the patient whether he/she is using non-traditional or alternative therapies for bowel management to be aware of what they are using and to consider potential drug interactions and toxicities.

Consider the etiology of constipation or diarrhea before initiating any pharmacological treatment.

Constipation

Fraser Health *Modified*

Consider the patient's preferences and previous experiences with bowel management when determining a bowel regimen.

Bowel Care SMG

Consider the patient's recent bowel function and response to previous treatments to guide appropriate selection and sequence of pharmacological treatments. (Refer to the bowel care algorithm regarding decision-making with respect to choices between 1st, 2nd and 3rd line treatments).

Recommended first line agents (7,11)

- Oral colonic stimulant (sennosides or bisacodyl)
  and/or
- Oral colonic osmotic (lactulose or polyethylene glycol)

Recommended second line agents (7,11)

- Suppositories (glycerin or bisacodyl)
  or
- Enemas (phosphate enema)

Bowel Care SMG

Recommended third line (rescue) agents

- Picosulfate sodium-magnesium oxide-citric acid
  or
- Methylnaltrexone (if the patient is taking regular opioids) (7,11)

Fecal Impaction

NCCN *Modified*

- If stool is impacted in the rectum, use a glycerin suppository to soften the stool, followed 1 hour later by digital disimpaction, if necessary (after pretreatment with analgesic and sedative), and/or a phosphate enema.
- If stool is higher in the left colon, use an oil retention enema, followed by a large volume enema at least 1 hour later (12).

Table 6 lists some common oral laxatives, suppositories and enemas that are available in Canada. Many share common side effects, including cramping, flatulence, nausea and diarrhea, which can be reduced with dose adjustments. Generally avoid laxatives if bowel obstruction is suspected (13).

Table 6: Oral and Rectal Laxatives available in Canada.
(Adapted from 1,2,4,7,11-15). Refer to Appendix D for a list of the drug's trade names.

Oral	Type	Action	Formulations	Doses	Latency	Notes	ODB coverage
Bisacodyl	Colonic stimulant	Stimulates colonic motility; reduces water and electrolyte absorption in colon	5 mg tablet	5-15 mg qhs; increase up to 15 mg tid	6-12 hours	PPS 30-100%	Yes
Cascara sagrada bark	Colonic stimulant	Stimulates colonic motility	Various capsule sizes	300-1000 mg daily	6-12 hours	PPS 30-100% Natural health product	No
Docusate (sodium; calcium)	Stool softener	Increases water penetration of stool	Sodium: 100, 200 mg capsule; 4 mg/ml syrup; 10 mg/ml drops Calcium: 240 mg capsule	Sodium: 100-200 mg daily	1-3 days	PPS 30-100% Use calcium salt for patients with sodium restrictions	Yes, except for 200 mg sodium capsule
Lactulose	Colonic osmotic, predominantly softening, secondarily stimulant	Disaccharide metabolized by bacteria in colon to produce osmotic effect; secondary peristalsis	667 mg/ml syrup	15 ml daily to 60 ml tid	1-3 days	PPS 30-100% Non absorbable sugar.	Yes
Magnesium salts (sulphate; hydroxide; citrate)	Osmotic, predominantly softening	Osmotic effect; secondary peristalsis	Sulphate: 99 gm/100 gm powder Hydroxide: 80 mg/ml suspension Citrate: 50 mg/ml liquid	Sulphate: 10-30 gm in 240 ml liquid daily Hydroxide:15-60 ml daily to bid Citrate: 75-150 ml daily	1-3 hours	PPS 30-100% Do not use if renal insufficiency, heart block or myasthenia gravis is present. May affect absorption of other medications – space by at least 2 hours	No
Picosulfate sodium-magnesium oxide-citric acid	Colonic stimulant and osmotic	Stimulates colonic peristalsis; osmotic	10 mg - 3.5 gm - 12 gm in each sachet	1 sachet in 250 ml water 1-2 times daily until good effect	3-6 hours or less	PPS 30-100% Not for use as a regular laxative. Do not use in renal insufficiency	Yes
Polyethylene glycol (PEG)	Colonic osmotic, predominantly	Osmotic effect in colon; secondary peristalsis	PEG 3350; PEG with electrolytes	17-34 gm powder in 125-250 ml non-	1-3 days	PPS 30-100% Do not use PEG with electrolytes in renal	Yes, but only with electrolyes (PegLyte)

	softening, secondarily stimulant			carbonated fluid 1-3 times daily		insufficiency	
Psyllium	Bulk forming	Normalizes stool volume	0.3-0.6 gm per gm powder; regular and sugar-free; 525, 550 mg capsule	3.4 gm daily to tid		PPS 30-100% Do not use if food and fluid intake is poor	No
Sennosides	Colonic stimulant	Stimulates myenteric plexus; reduces water and electrolyte absorption in colon	8.6 mg tablet; 1.7 mg/ml syrup	1-4 tablets or 5-20 ml qhs; increase up to 4 tablets or 20 ml bid	6-12 hours	PPS 30-100%	Yes
Sorbitol	Colonic osmotic, predominantly softening, secondarily stimulant	Osmotic effect in colon; secondary peristalsis	70% solution		1-3 days	PPS 30-100%	No
Rectal or Stomal	**Type**	**Action**	**Formulations**	**Doses**	**Latency**	**Notes**	**ODB coverage**
Bisacodyl suppository	Peristalsis stimulating	Evacuates stool from rectum	5, 10 mg	10 mg every 3 days prn	15-60 minutes	PPS 20-100% Avoid if neutropenic	Yes
Glycerin suppository	Osmotic - predominantly softening	Softens stool in rectum	Adult suppository Pediatric suppository	One daily prn	15-60 minutes	PPS 20-100% Avoid if neutropenic	No
Large volume enema (tap water or saline)	Colonic dilation and stimulation; lubrication	Evacuates stool from descending colon	Tap water Normal saline solution	750-1000 ml	10-15 minutes	PPS 30-100% Avoid if neutropenic	N/A
Oil retention enema	Softening and lubricating	Softens hard stool	Mineral oil	150-200 ml	30-60 minutes	PPS 30-100% Avoid if neutropenic	N/A
Phosphate enema	Osmotic and peristalsis stimulating	Evacuates stools from rectum and sigmoid colon	Sodium and potassium phosphate solution in pre-packed bottles	Every 3 days prn	15-60 minutes	PPS 20-100% Avoid if neutropenic Avoid in renal insufficiency	Yes

Notes: bid = twice daily; gm = grams; mg = milligrams; ml = milliliters; N/A= Not Applicable; ODB=Ontario Drug Benefit; PPS = Palliative Performance Scale; prn = as required; qhs = every night at bedtime; tid = three times a day.

Constipation Management in Special Circumstances

Patients with Opioid-Induced Constipation

Fraser Health *Modified*

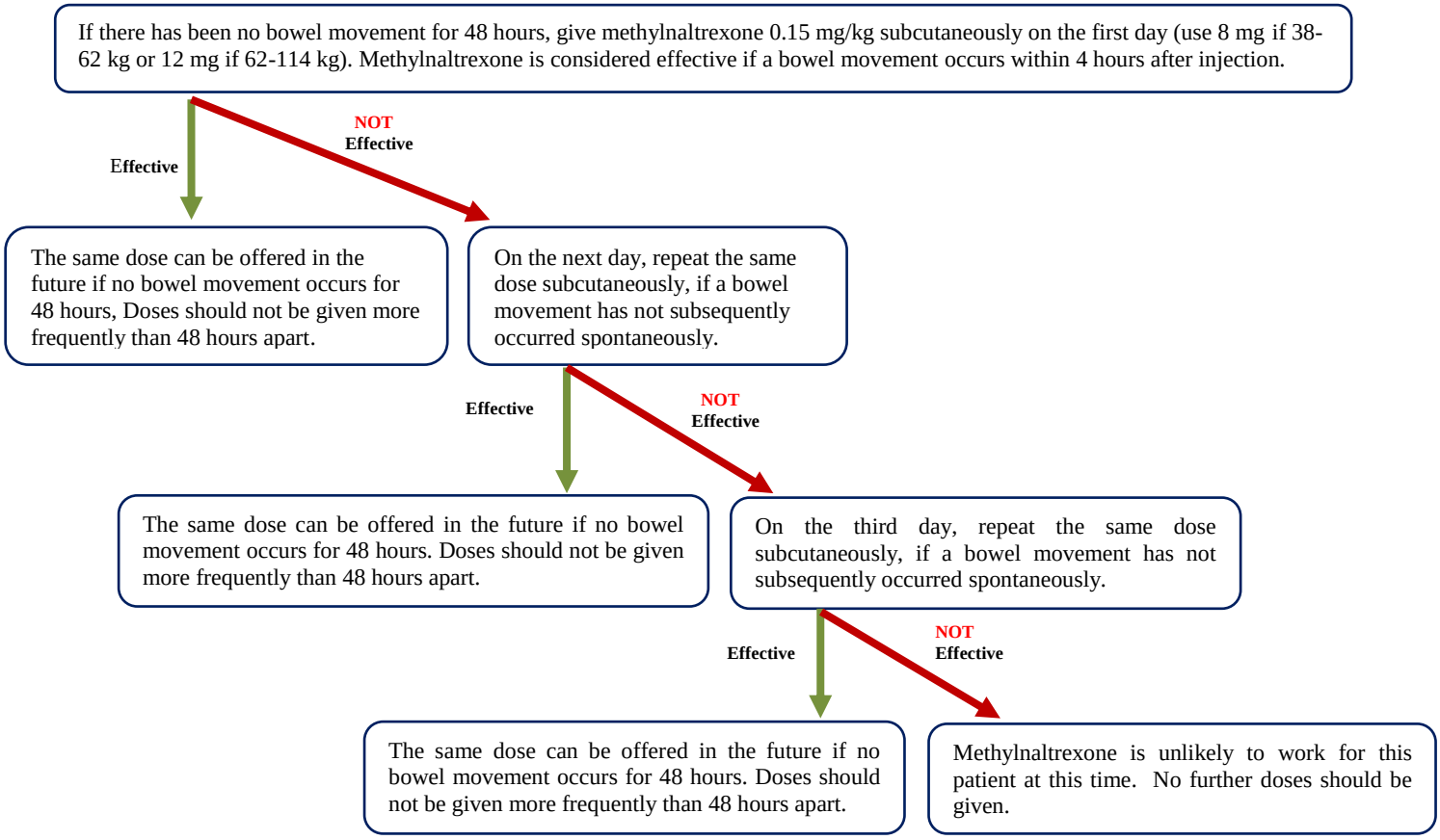
Opioid-induced constipation is much easier to prevent than to treat. Start a first line oral laxative on a regular basis for all patients taking opioids.

Bowel Care SMG

Methylnaltrexone is a peripheral mu-opioid receptor antagonist (16). On average, about 1-out-of-3 persons with probable opioid-induced constipation will have a bowel movement within 4 hours of dosing with methylnaltrexone that would not otherwise have occurred. Methylnaltrexone is administered as a subcutaneous injection every other day, if needed, and no more frequently than daily (4,13,16-25). **It should not be used if bowel obstruction is suspected** (17). Due to its cost, it should be considered only if the primary cause of constipation is considered to be systemic opioids and only after other methods have failed to produce satisfactory bowel movements, despite titration of oral and rectal laxatives to maximum tolerated doses. The patient's previous laxative regimen should be maintained. (Note: methylnaltrexone is not currently covered on the Ontario Drug Benefit (ODB) or in the special access program).

Bowel Care SMG

Figure 1. PROPOSED Initial 3-Day Trial of methylnaltrexone



Patients with a Colostomy

Bowel Care SMG
- Use the same approach to bowel care as for the patient without a colostomy.
- A patient with a very proximal colostomy may not benefit from colonic laxatives.
- There is no role for suppositories since they cannot be retained in a colostomy (26).
- Enemas may be useful for patients with a descending or sigmoid colostomy.

Paraplegic Patients

Bowel Care SMG
- A patient with paraplegia is unable to voluntarily evacuate the rectum.
- Passage of stool spontaneously may represent overflow only.
- As for patients without paraplegia, oral laxatives may be needed to move stool to the rectum, but the paraplegic patient needs help to empty the rectum.
  - Fraser Health *Modified*: Schedule a rectal exam daily or every 2 days, depending on the patient's preference, followed, if necessary, by assistance emptying the rectum using one or more of the following:
    - suppository
    - enema
    - digital emptying
- Develop an effective, regular protocol that is acceptable to the patient.

Diarrhea

Fraser Health

A single liquid or loose stool usually does not require intervention.

A single drug should be used for diarrhea and care should be taken to avoid sub-therapeutic doses.

Fraser Health *Modified* & *ONS Modified*
- Loperamide (2 mg tablets; 2 mg/15 ml solution) is the preferred first-line anti-diarrheal agent:
  - Initially, use 2 mg orally after each loose bowel movement, up to 16 mg per day.
  - For chronic diarrhea, a regular bid dose can be used, based on the 24-hour dose found to be effective, plus 2 mg after each loose bowel movement, up to 32 mg per day total (13, 15).
  - Covered by ODB (requires limited use code 113 – diarrhea associated with cancer)

  OR
- Diphenoxylate/atropine (2.5/0.025 mg tablets)
  - 1-2 tablets orally as needed, up to 4 times per day (maximum 20 mg diphenoxylate per day)
  - Titrate dose down once diarrhea control achieved, to determine the maintenance dose (15)
  - Covered by ODB (requires limited use code 113)

Bowel Care SMG
- Opioids – consider if the patient is not currently on an opioid for other indications.
- Metronidazole 500 mg orally tid for 2 weeks for Clostridium difficile diarrhea (13).
- Octreotide 50-600 mcg per day subcutaneously (dosed bid or tid) can be considered for severe, refractory diarrhea.In cases of severe diarrhea, parenteral rehydration may be required.

Fraser Health *Modified*
- If the perianal skin is already inflamed or excoriated, use a topical corticosteroid cream for 1 to 2 days.

Appendices

Appendix A: Methodology

The Standards, Guidelines and Indicators Sub-group of the Re-Balance Focus Action Group, established under the Canadian Cancer Control Strategy, performed a literature review and environmental scan.[i] This review was used by the SMG as a source from which to identify existing guidelines relative to the symptoms of interest. Additionally, SMG members reached out to regional cancer programs in Ontario, searched the Cancer Care Ontario Program in Evidence-based Care website and their own personal sources for any relevant guidelines.

The Re-Balanced Focus Action Group used the following search criteria in their review:

Inclusion Criteria

1. Standards focused on care delivered by cancer organizations; and/or processes of care; and/or professional practice standards specific to cancer.
2. Guidelines focused on clinical practice of practitioners relevant to psychosocial, supportive or palliative care provision to cancer patient populations.
3. Guidelines that were more generic in focus but relevant to supportive care aspects of cancer populations in areas such as prevention and screening were also included.

Exclusion Criteria

1. Guidelines that did not base the development of substantive statements/recommendations on a review of evidence from the literature and/or were not based on a source that used evidence to support the guideline development process.
2. Guidelines that were focused on providing direction to patients and families for which it was not clear that the guideline statements or recommendations were based on a review of evidence from the literature and/or were not based on a source that used evidence to support the guideline development process.

Databases Searched

Health Sciences literature databases used in this scan include HealthStar, Medline, CINAHL, Embase and PsycINFO. The internet search engine Google Scholar was utilized for the grey literature search for scientific and non-scientific sources. Databases for the following organizations were also reviewed:

a) All oncology professional associations and organizations for psychosocial oncology and palliative care inclusive of oncology social workers, clinical oncology;
b) All Canadian provincial cancer care organizations;
c) International organizations or agencies or associations whose mandate is focused on systematic reviews or guideline development.

The literature search and environmental scan was updated in December 2008 and again in January 2009.

[i] Re-Balance Focus Action Group. Literature Review and Environmental Scan: Psychosocial, Supportive and Palliative Care Standards and Guidelines. Updated 2009.

Results

Based on the literature review and environmental scan described above, the Bowel Care SMG identified eight bowel care related guidelines for inclusion in this Guide-to-Practice. Three guidelines (27-29) were rejected at the onset by the group because they fell outside of the scope of this Guide-to-Practice. The remaining five guidelines (1-4,30) were screened and assessed for quality, currency, content, consistency, and acceptability/applicability, using the Appraisal of Guidelines Research and Evaluation (AGREE) instrument (www.agreetrust.com). Taking into consideration the AGREE scores and expert consensus, the working groups chose the most applicable and relevant guidelines to be included in the Guide-to-Practice (Table 7). In 2012 one guideline (30) underwent an update, during which the section on constipation was removed, for this reason this guideline was excluded from the final Guide-to-Practice.

Table 7. AGREE Scores

AGREE Scores	Fraser Health (1)	ONS (2)	RNAO (3)	NCCN (4)	ICSI (30)
Scope & Purpose	62.96	44.44	96.30	85.19	70.37
Stakeholder Involvement	22.22	25.00	55.56	41.67	52.78
Rigour of Development	26.98	57.14	79.37	38.10	65.08
Clarity & Presentation	58.33	86.11	72.22	77.78	75.00
Acceptability	0.00	0.00	66.67	22.22	33.33
Editorial Independence	1.11	33.33	66.67	77.78	61.11
Overall Quality Assessment	Recommend with Provisos.	Recommend with Provisos.*	Recommend with Provisos.	Recommend with Provisos.	Recommend with Provisos.

*This guideline was included, despite dealing with chemotherapy and radiation induced diarrhea, due to the limited availability of guidelines on this topic.

The ADAPTE process (http://www.adapte.org/) was then used to systematically endorse or modify applicable components of the five guidelines (1-4). The guideline development process, utilizing ADAPTE, proceeds under the assumption that the original recommendations are reasonable and supported by the evidence. Confidence in this assumption is fostered by satisfactory AGREE scores. In situations where evidence was not available or not applicable to specific clinical situations, systems and contexts recommendations were modified based on the expert consensus of the working group. It is beyond the scope of the Guide-to-Practice development process and this document to make the connection between the recommendations and the original key evidence. For those who wish to do so, please refer to the Fraser Health (1), ONS (2), RNAO (3), NCCN (4), documents.

Appendix B: Peer Review Summary

Expert feedback was obtained through an internal and external review:

Internal Review

The internal review consisted of an anonymous appraisal of the Guides by members from each of the working groups. The intent of this review was to ensure that the Guide development process was methodologically rigorous; the recommendations are supported by the evidence in a transparent way; and that the Guides are clinically relevant and applicable to practice.

A total of 39 online surveys were collected during the internal review. Sixteen participants completed the Bowel Care Guide-to-Practice survey (Table 8). The survey feedback was thoroughly reviewed by each of the corresponding working groups and, where appropriate, changes were made to the Guides.

Table 8. Responses to 16 key questions on the Bowel Care Internal Review survey (16 respondents)

Question	**Strongly Agree** (Response count)	**Agree** (Response count)	**Disagree** (Response count)	**Strongly Disagree** (Response count)
The methodology used to search for evidence is clearly described.	50% (8)	50 % (8)	0%	0%
The methods for formulating the recommendations are clearly described.	50% (8)	50% (8)	0%	0%
The symptom definition(s) are clear and comprehensive.	37.5% (6)	50% (8)	12.5% (2)	0%
There is an explicit link between the supporting evidence and the recommendations.	43.8% (7)	56.2% (9)	0%	0%
Recommendations based on SMG expert consensus are clearly identified.	56.2% (9)	43.8% (7)	0%	0%
The source from which the recommendations are extracted is clearly identified.	50% (8)	50% (8)	0%	0%
The recommendations are in agreement with my understanding of the evidence.	25.0% (4)	68.8% (11)	6.2% (1)	0%
The recommendations are specific and unambiguous.	31.2% (5)	68.8% (11)	0%	0%
The recommendations are easily identifiable.	37.5% (6)	62.5% (10)	0%	
The recommendations are achievable.	43.8% (7)	50.0% (8)	6.3% (1)	0%
The different options for management of the condition are clearly presented.	31.2% (5)	68.8% (11)	0%	0%
The Guide-to-Practice is supported with tools for application.	31.2% (5)	66.8% (11)	0%	0%
The Guide-to-Practice is user friendly.	37.5% (6)	56.3% (9)	6.3% (1)	0%
The working group includes individuals from all the relevant professions.	37.5% (6)	56.3% (9)	6.3% (1)	0%

Question	**Very Likely** (Response count)	**Not Very Likely** (Response count)	**Not Applicable** (Response count)
How likely would you be able to apply these recommendations to the clinical care decisions for which you are professionally responsible?	68.8% (11)	6.3% (1)	25% (4)

Question	**Differ greatly** (Response count)	**Differ slightly** (Response count)	**In Line** (Response count)	**Not Applicable** (Response count)
How do the recommendations compare to your current clinical practice?	0%	6.3% (1)	75.0% (12)	18.7% (3)

External Review

The external review process consisted of 1) a Targeted Peer Review, intended to obtain direct feedback on the draft Guides from a small number of specified content experts and 2) a Professional Consultation, that intended to disseminate the draft guide as widely as possible to its intended readership, provide a forum for recipients to explain any disagreement with the recommendations, and to further ensure the quality and relevance of the document.

Targeted Review

Fourteen reviewers were invited to participate in the external target review for the Bowel Care Guide-to-Practice and six provided responses (Table 9 and 10).

Table 9. Overview of the Bowel Care targeted peer reviewers

Guide	Sample	Results
Bowel Care	**Invited Reviewers:** 2 Physicians 3 Nurses 2 Registered Dietitian 2 Pharmacists 3 Physiotherapists 2 Methodologists	**Obtained Responses:** 1 Family Medicine / Palliative Medicine Physician 2 Nurses 1 Registered Dietitian 2 Methodologists

Table 10. Responses to key questions on the Bowel Care target peer review survey (6 respondents)

Question	1 **Lowest Quality** % (Response count)	2 % (Response count)	3 % (Response count)	4 % (Response count)	5 **Highest Quality** % (Response count)
Rate the Guide-to-Practice development methods.	0%	0%	33% (2)	17% (1)	**50% (3)**
Rate the Guide-to-Practice presentation.	0%	17% (1)	0%	**50% (3)**	33% (2)
Rate the Guide-to-Practice recommendations.	0%	0%	0%	**50% (3)**	**50% (3)**
Rate the completeness of the reporting.	0%	0%	17% (1)	33% (2)	**50% (3)**
Rate the overall quality of the Guide-to-practice.	0%	0%	17% (1)	33% (2)	**50% (3)**
Question	**1 Strongly Disagree** % (Response count)	**2** % (Response count)	**3** % (Response count)	**4** % (Response count)	**5 Strongly Agree** % (Response count)
I would make use of this Guide-to-Practice in my professional decisions.	0%	0%	17% (1)	33% (2)	**50% (3)**
I would recommend this Guide-to-Practice for use in practice.	0%	0%	17% (1)	17% (1)	**66% (4)**

Professional Consultation

The Professional Consultation consisted of a sample of approximately 1000 health care practitioners, including palliative care physicians, family physicians, radiation oncologists, medical oncologists, surgeons, dental oncologists, nurses, pharmacists, dietitians, radiation therapists, physiotherapists and administrators. Participants were contacted by email and asked to read the guides and complete a brief corresponding electronic survey. One hundred and nineteen responses were received for all three guides (bowel care, oral care and loss of appetite) under evaluation. Forty-four respondents reviewed the Bowel Care Guide.

Table 8. Overview of the Professional Consultation Sample

Profession	Count
Family Physician	15
Medical Oncologist	4
Radiation Oncologist	3
General Surgeon	3
Nurse	11
Radiation Therapist	1
Physiotherapist	2
Dietitian	3
Administrator	2
Total:	**44**

Table 9. Responses to key questions on the Professional Consultation survey (44 respondents)

Question	1 Strongly Disagree % (Response count)	2 Percent (Response count)	3 Percent (Response count)	4 Percent (Response count)	5 Strongly Agree % (Response count)
I would make use of this Guide-to-Practice in my professional decisions.	0%	2% (1)	16% (7)	**46% (20)**	36% (16)
I would recommend this Guide-to-Practice for use in practice.	0%	2% (1)	11% (5)	**46% (20)**	41% (18)
Question	**1 Lowest Quality** % (Response count)	**2** Percent (Response count)	**3** Percent (Response count)	**4** Percent (Response count)	**5 Highest Quality** % (Response count)
Rate the overall quality of the Guide-to-Practice.	0%	0%	9% (4)	**50% (22)**	40.1% (18)

Appendix C: Assessment Tools

Victoria Bowel Performance Scale (Copyright Victoria Hospice Society, BC, Canada (2001) www.victoriahospice.org)

Victoria Bowel Performance Scale (BPS)

Victoria Hospice

-4	-3	-2	-1	BPS Score 0	+1	+2	+3	+4
← Constipation			Normal			Diarrhea →		
Impacted or Obstructed +/- small leakage 	Formed Hard with pellets 	Formed Hard 	Formed Solid 	Characteristics Formed Semi-solid 	Formed Soft 	Unformed Loose or paste-like 	Unformed Liquid ± mucous 	Unformed Liquid ± mucous 
No stool produced	Delayed ≥ 3 days	Delayed ≥ 3 days	Patient's Usual	Pattern Patient's Usual	Patient's Usual	Usual or Frequent	Frequent	Frequent
Unable to defecate despite maximum effort or straining	Major effort or straining required to defecate	Moderate effort or straining required to defecate	Minimal or no effort required to defecate	Control Minimal or no effort to defecate	Minimal or no effort required to control urgency	Moderate effort required to control urgency	Very difficult to control urgency and may be explosive	Incontinent or explosive; unable to control or unaware

Cohen's kappa 0.70; Abs Agree ICC 0.85 [95% CI] (p=0.0001)

Downing, Watson, Carter © Victoria Hospice Society

Instructions for Use

1. BPS is a 9-point numerical scale. It is a **single score**, based on the overall '**best vertical fit**' among the above three parameters [characteristics, pattern, control] and is recorded for example as: BPS +1, BPS -3 or BPS +2
2. Look vertically down each BPS level to become familiar with how the three parameters of **characteristics, pattern and control** change in gradation from constipation to diarrhea
3. The 'usual' bowel pattern for a patient may be in the 0, -1 or +1 columns. For any of these, the actual frequency of bowel movements may vary among patients from one or more times daily to once every 1-2 days but the patient states that this is their usual pattern
4. Patients with a surgical intervention (colostomy, ileostomy, short loop bowel) may have a more frequent 'usual' bowel pattern than above. BPS is still overall graded by combining all three parameters (e.g. +2 or +3 with ileostomy) to ascertain a 'best fit'
5. Patients may use different words than above to describe their bowel activity. One must use clinical judgment in deciding which boxes are most appropriate
6. In potential confounding cases, determination of the most appropriate BPS score is made using the following methods:
   - Two vertically similar parameters generally outweigh the third;
   - Single priority weighting among parameters is Characteristics > Pattern > Control

BPS Case Examples

Example One

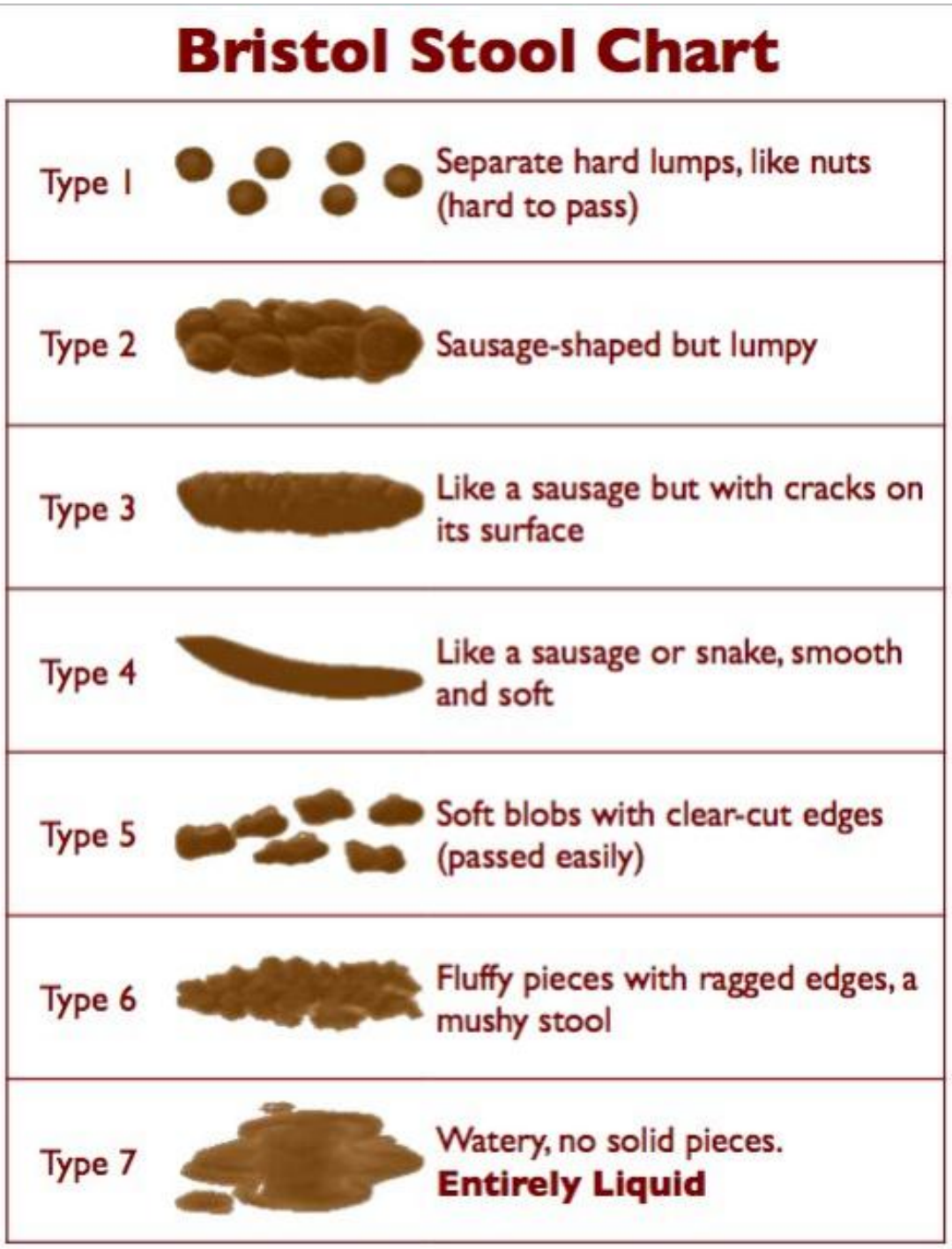
A 62-year-old male has metastatic Ca prostate. His PPS is 40% and ECOG performance status is 3. He currently takes hydromorphone, colace and senokot. His bowel movements have been regular, but today he states he had two "mushy" stools this morning and "I had to go right away."
His BPS is rated at **BPS +2**. Although his bowel **pattern** has been usual, today frequency increased to twice. Looking at the scale, this probably fits best with the 'usual or frequent' box. The stool **character** is "mushy" and most resembles the 'unformed, loose or paste-like' box. Finally, there was some effort required to **control** his bowels since he noted having to get to the bathroom 'right away.' This could indicate either the +1 box [minimal or no effort to control] or the +2 box [moderate effort required to control]. Taking all three parameters into account, the best overall vertical fit would fall at the BPS +2 rating.

Example Two

A 78-year-old female has metastatic Ca breast. She is quite active at PPS 70% and ECOG 2 but, with increasing pain in her back, she has required higher doses of long-acting morphine. This has caused bowel troubles for her and she has gone only twice in the last week. The stool was lumpy and hard and it sometimes hurts to pass a bm. She denies having hemorrhoids.
Her score is **BPS -2**. She notes a change from her usual pattern with decreased frequency since "twice per week" she calls 'trouble.' This pattern fits with either -2 or -3, but not -1 or -4. Also, the stool can be painful to pass which indicates some difficulty in control. It is not clear whether this difficulty requires mild or moderate effort but it does not appear to be a major problem. The stool is **characterized** as lumpy and hard which means it is both 'formed' and 'hard' and does not seem by the description to be broken up into pellets. The overall best 'vertical' fit is BPS -2.

Victoria Bowel Performance Scale. *Medical Care of the Dying, 4th ed.;* p. 345. ©Victoria Hospice Society, 2006.

Bristol Stool Chart
(Copyright Rome Foundation, Bristol Stool Form Scale developed by Dr. Ken Heaton, University of Bristol, UK)



Appendix D: Drug Trade Names

Generic Name	Trade Name
Bisacodyl	**Canada**: APO-Bisacodyl, Apo-Bisacodyl DR, Carters Little Pills, ratio-Bisacodyl. **US:** Alophen, Bisac-Evac , Bisacodyl Uniserts, Bisco-Lax, Caroid, Correctol, Ducodyl, Dulcolax, Durolax, Fleet, Feen-a-mint, Magic Bullet, Modane, Reliable Gentle Laxative, Women's Gentle Laxative
Cascara sagrada bark	Bassoran with Cascara, bearberry, Bicholax, Cas-Evac, California buckthorn, Casvlium, Kondremul with Cascara, rhamnus purshiana, sacred bark
Docusate	**Canada:** Apo-Docusate Sodium, Selax, Soflax, ratio-Docusate Sodium, Docusate Calcium (Dioctyl Calcium Sulfosuccinate), Sur-Q-Lax, Surfak, ratio-Docusate Calcium, **US:** Colace, Correctol Extra Gentle, Danthron, Diocto, Dioctyl Disodiumsulfosuccinate, Dioctyl Sodium Sulfosuccinate, Disonate, Docu, Docusil, DocuSol, Dorbanex, Mini-Enema, DOK, D.O.S., Dulcolax Stool Softener, Phillips' Liqui-Gels, Silace
Lactulose	**Canada:** Apo-Lactulose, PMS-Lactulose, ratio-Lactulose **US:** Cephulac, Cholac, Chronulac, Constilac, Constulose, Duphalac, Enulose, Evalose, Generlac, Heptalac, Kristalose
Magnesium salts (sulphate; hydroxide; citrate)	Chloromag, Epsom Salt, Citro-Mag, Phillips' Milk of Magnesia, **US:** Chloromag, Epsom Salt, Magnesium sulphate, **Canada:** Citro-Mag, Phillips' Milk of Magnesia
Methylnaltrexone	Relistor
Picosulfate sodium-magnesium oxide-citric acid	**Canada:** Pico-Salax, **US:** CitraFlee, Guttalax, Laxoberal, Picofast, Picolax, Purg-Odan, Sodipic
Polyethylene glycol (PEG)	**Canada:** PEG Lyte, Lax-A-Day, Klean-prep **US:** CoLyte, Carbowax, Dulcolax Balance, GlycoLax, MiraLax
Psyllium	**Canada:** Karacil, Natural Source Fibre Laxative, Prodiem, **US:** Alramucil, Cillium, Effer-Syllium, Fiber Eze, Fiberall, Fibrepur, Genfiber, Hydrocil, Konsyl, Laxative Natural, Laxmar, Maalox Daily Fiber Therapy, Metamucil, Modane Bulk, Mylanta Natural Fiber, Supplement, Naturacil Caramels, Natural Fiber Therapy, , Perdiem, Pro-Lax, Reguloid Natural, Serutan, Siblin, Syllact, Vitalax, V-Lax.
Sennosides	Black-Draught, Ex-Lax, Ex-Lax Chocolated, Fletchers' Castoria, Maximum Relief Ex-Lax, Sena-Gen, Senexon, Senokot, SenokotXTRA
Sorbitol	No trade name
Glycerin suppository	**US:** Colace, Fleet, Glycerin Suppositories Maximum Strength, Introl, Pedia-Lax, Sani-Supp

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Post-amble

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A wide variety of health professionals were invited to participate in the development of this Guide-to-Practice, as well as in the external review. Every effort was made to ensure as broad a professional and regional representation as possible.

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