BC Cancer Agency
CARE + RESEARCH
An agency of the Provincial Health Services Authority

Symptom Management Guidelines:
CANCER – RELATED DIARRHEA

Definition	
Cancer – Related Diarrhea (CRD): An abnormal increase in stool frequency, volume, and liquidity that is different from the usual patterns of bowel elimination; results from cancer or related treatment(s)	
Contributing Factors	
Cancer Related	• Neuroendocrine tumors (e.g. VIPomas, carcinoid, gastrinomas) • Lymphoma • Graft vs. host disease after bone marrow transplant
Chemotherapy Agents	• Capecitabine • 5 – fluorouracil • Irinotecan • Leucovorin • Most small molecule oral tyrosine kinase inhibitors • Monoclonal antibodies (e.g. Ipilimumab) • Biotherapy (e.g. high dose Interferon or Interleukin– 2)
Radiation Therapy	• Pelvis, abdomen, lumbar, para-aortic fields
Surgical History	• Celiac plexus block • Large or small bowel resection • Cholecystectomy • Pancreaticoduodenectomy (whipple procedure) • Vagotomy • Terminal ileal resection and loss of ileocecal valve
Medications	• Laxatives (e.g. stool softeners, stimulant bulk laxatives) • Antibiotics (e.g. cephaliexin, amoxicillin, clindamycin, clavulanic acid-amoxicillin) • Prokinetic agents (e.g. metoclopramide) • Narcotic withdrawal • Antihypertensives • Non- steroidal anti – inflammatory agents (NSAIDs) • Potassium supplements • Magnesium-containing antacids • Liquid medications containing sorbitol (e.g. acetaminophen elixir) • Hypertonic liquid medications • Other (e.g. misoprostol)
Relevant Medical History	• Partial bowel obstruction, fecal impaction with overflow • Obstruction of common bile duct • Inflammatory bowel disease (e.g. Crohn's disease, ulcerative colitis) • Irritable bowel syndrome, diverticulitis, iIschemic colitis • Diabetes • Hyperthyroidism • Hypoalbuminemia • Conditions that may require use of warfarin (e.g. venous thrombosis, cardiac surgeries)
Other	• Advanced age • Anxiety, stress • Recent travel • Infection- viral (e.g. norovirus), bacterial (e.g. C.difficile, E.coli), parasitic, sexually transmitted • Post-pyloric hyperosmolar feedings and/or high feeding rate • Lactose intolerance • Herbal supplements (e.g. milk thistle, aloe, cayenne, saw palmetto, ginseng)

Consequences

- Risk for severe dehydration and electrolyte imbalances, cardiovascular compromise
- Risk for infection, sepsis
- Chemotherapy dose delays, reductions, discontinuation of treatment
- Quality of life – distress, compromised role function, decreased functional status, exacerbation of other symptoms
- Diarrhea may result in increased INR, or increased risk of bleeding for patients on warfarin

Focused Health Assessment

GENERAL ASSESSMENT

Contact and General Information

- Physician name - oncologist, family physician
- Pharmacy
- Home health care
- Other healthcare providers
- Allergies

Consider Contributing Factors

- Cancer diagnosis and treatment(s) – note type and date of last treatment
- Medical history
- Medication profile (e.g. warfarin, antibiotics)
- Recent lab or diagnostic reports (if patient is on warfarin consider increasing frequency of INR monitoring)

SYMPTOM ASSESSMENT

Normal

- What are your normal bowel habits?
- Do you have an ostomy? If so, how many times do you normally empty/change the bag?
- Are you aware of any medications that you are taking that could cause diarrhea (e.g. antibiotics, warfarin)

Onset

- When did diarrhea begin?
- How many bowel movements in the last 24 hours?
- If ostomy, how many times did you empty/change bag?

Provoking / Palliating

- What brings on the diarrhea?
- Anything that makes the diarrhea better? Worse?

Quality

- Describe your last bowel movement
  - Was there any blood or mucous?
  - Was it loose or watery?
  - Can you estimate the amount, large or small volume?
  - Can you describe the odour?

Region / Radiation- N/A

Severity / Other Symptoms

- How bothered are you by this symptom? (on a scale of 0 – 10, with 0 being not at all to 10 being the worst)
- Have you been experiencing any:
  - Abdominal cramping
  - Diarrhea overnight (nocturnal stools)
  - Incontinence of stool
  - Fever - possible infection
  - Dry mouth, thirst, dizziness, weakness, dark urine -possible dehydration
  - Severe abdominal pain, bloating, nausea, vomiting - possible bowel obstruction
  - Skin breakdown around your rectum/colostomy
- Are you able to keep fluids down? What are you drinking? How much? What is your dietary intake? Are you urinating normally?

PHYSICAL ASSESSMENT

Vital Signs

- As clinically indicated
- *HR and BP-supine and sitting, temperature

Weight

- Take current weight and compare to pre – treatment or last recorded weight

Hydration Status

- Assess skin turgor, capillary refill, mucous membranes
- Amount and character of urine

Abdominal Assessment

- Auscultate abdomen - assess presence and quality of bowel sounds
- Assess for abdominal pain, tenderness, distention

Stool Examination

- Inspect stool for colour (visible blood or mucous), consistency, volume, and odour

Skin Integrity

- Assess perineal or peristomal skin integrity
- Note any areas of erythema, edema, exudates, bleeding or skin breakdown

Mental Status

- Assess for confusion, alterations in level of consciousness

	Treatment • What medications or treatments have you tried? Has this been effective? **Understanding / Impact on You** • Is your diarrhea interfering with your normal daily activity (ADLs)? **Value -** What do you believe is causing your diarrhea?	

DIARRHEA GRADING SCALE Adapted NCI CTCAE (Version 4.03)				
NORMAL	**GRADE 1 (Mild)**	**GRADE 2 (Moderate)**	**GRADE 3 (Severe)**	**GRADE 4 (Life - threatening)**
Normal stools	Increase of <4 stools per day over baseline Mild increase in ostomy output compared to baseline	Increase of 4 - 6 stools per day over baseline Moderate increase in ostomy output compared to baseline	Increase of ≥7 stools per day over baseline Incontinence; Hospitalization indicated Severe increase in ostomy output compared to baseline; limiting self care ADL	Life-threatening consequences; urgent intervention indicated

***Step-Up Approach to Symptom Management:**
Interventions Should Be Based On Current Grade Level and Include Lower Level Grade Interventions As Appropriate

NORMAL	**GRADE 1 (First 24 hours of onset)**

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NON – URGENT: **Prevention, support, teaching, & follow-up as clinically indicated**	
Patient Care and Assessment	• Collaborate with physician to rule out other causes or concomitant causes of diarrhea and to determine if further investigation warranted
Dietary Management	• **Encourage:** - 10-12 cups of fluids throughout the day - Low fat, low fiber diet (e.g. white rice and bread, applesauce) - Soluble fiber to help build stool consistency (e.g. fruits and vegetables without skins, oat bran, barley) - Small, frequent meals • **Avoid:** - Spicy, fried foods - Insoluble fiber (e.g. skins of fruits and vegetables, wholegrain and multigrain foods) - Very hot or cold foods/fluids - Sorbitol-containing substances (e.g. sugar-free gums and candy) - Alcohol, caffeine

Pharmacological Management	• Avoid/discontinue any medications that may cause or exacerbate diarrhea (e.g. bulk laxatives, metoclopramide) in collaboration with physician and pharmacist • If patient is taking warfarin, in collaboration with physician: o Consider alternate anticoagulants such as dalteparin, o Consider increasing frequency of INR monitoring • Instruct patient to start or continue loperamide according to package directions or as indicated by physician: - Start with 4 mg, followed by 2 mg every 4hr or after each unformed stool (Max daily dose: 16 mg, unless directed otherwise by physician) - Continue loperamide until 12hr diarrhea-free (or as otherwise advised by physician) - Patients with RT-induced diarrhea may continue loperamide for duration of treatment *__See special considerations for patients on Irinotecan below__ * Certain medications may have unique management recommendations of diarrhea side effects (e.g. Ipilimub)
Skin Care Management	• Protect skin integrity and promote self care • Cleanse perianal skin with warm water (+/- mild soap) after each stool, pat dry, do not rub • Encourage sitz bath as tolerated with tepid water • Moisture barrier creams prn
Patient Education	• Record onset and number of loose stools per 24hr • Reinforce: - That diarrhea can be effectively managed with prompt intervention - Importance of accurately reporting diarrhea - To seek immediate medical attention if: ➢ T ≥ 38° C ➢ Bloody stools ➢ Severe cramping, acute abdominal pain (+/- nausea and vomiting) ➢ Dizziness, weakness, confusion, excessive thirst, dark urine ➢ Diarrhea not improving with recommended strategies • Inform patient that isolation precautions may be required if symptoms worsen or infection suspected, patient may need to be isolated as per Infection prevention and control manual
Follow-Up	• Patients to be reassessed within 24hr. If symptoms not resolved, provide further recommended strategies, potential stool analysis and repeat follow – up assessment within 24hr • Instruct patient/family to call back if symptoms worsen or do not improve • If indicated, arrange for nurse initiated telephone follow – up or physician follow – up

Persistent GRADE 1- GRADE 2 Diarrhea NOT resolving after 24 hours
(no fever, dehydration, neutropenia and/or blood in stool)

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URGENT:
Requires medical attention within 24 hours

Patient Care and Assessment	• Collaborate with physician: - To rule out other causes or concomitant causes of diarrhea or need for further assessment in outpatient setting If patient has Grade ≥ 2 diarrhea, treatment delays or reductions may be required - Refer to specific chemotherapy protocols for direction. ***See Chemotherapy Protocols in Resources Section*** - Lab tests that may be ordered: - Complete blood count (CBC), electrolyte profile, BUN/creatinine - Stool analysis – C. Difficile toxin assay, culture and sensitivity (Salmonella, E. Coli, Campylobacter, infectious colitis), ova and parasites, blood and leukocytes
Dietary Management	• Consider trial of limiting lactose-containing products to see if symptoms improve • If patient unable to tolerate adequate daily fluid intake, oral supplementation or IV hydration to

	replace lost fluid and electrolytes may be required
Pharmacological Management	• Avoid/discontinue any medications that may cause or exacerbate diarrhea in collaboration with physician and pharmacist • Medications that may be prescribed: - Loperamide: may be continued at a higher dose or frequency (i.e. 2mg every 2hr), or discontinued and replaced by another medication - Diphenoxylate-Atropine (Lomotil®) - Octreotide (subcutaneous) - Oral antibiotics (e.g. ciprofloxacin, metronidazole, vancomycin,)* not generally recommended for RT-induced diarrhea

GRADE 3 or 4 diarrhea

OR

Persistent Grade 1 or 2 diarrhea with one or more of the following symptoms: T ≥ 38° C, abdominal cramping, nausea and vomiting, sepsis, neutropenia, blood in stool, dehydration

EMERGENT:

Requires IMMEDIATE medical attention

Patient Care and Assessment	• Patients will generally require hospital admission. Notify physician of assessment, facilitate arrangements as necessary • Collaborate with physician: - To rule out other causes or concomitant causes of diarrhea - To hold chemotherapy until symptoms resolve. Chemotherapy may then be restarted at a reduced dose. Refer to specific chemotherapy protocols for direction. ***See Chemotherapy Protocols in Resources & Referrals Section below*** • Lab tests that may be ordered: - Complete blood count (CBC), electrolyte profile, BUN/creatinine - Stool analysis – C. Difficile toxin assay, culture and sensitivity (Salmonella, E. Coli, Campylobacter, infectious colitis), ova and parasites, blood and leukocytes • Nursing Support: - Monitor vital signs as clinically indicated - Record intake and output and daily weight - Pain and symptom assessment and management as appropriate
Dietary Management	• IV hydration to replace lost fluids and electrolytes • Patients may require bowel rest and be NPO • Enteral or parenteral nutrition (TPN) may be indicated
Pharmacological Management	• Avoid/discontinue any medications that may cause or exacerbate diarrhea in collaboration with physician and pharmacist • Medications that may be prescribed: - Octreotide (subcutaneous or IV) - Antibiotics (oral or intravenous route) - Systemic analgesia

SPECIAL CONSIDERATIONS FOR PATIENTS ON IRINOTECAN

Early Onset Diarrhea	• Occurs during or within 24hr of administration • Is a cholinergic response that may be accompanied with other symptoms such as abdominal cramping, diaphoresis watery eyes, salivation, and rhinitis. Manage symptoms with Atropine. • Instruct patient to contact healthcare providers (BCCA Nurse Telephone Line or Physician on call) to determine whether patient needs to come to cancer agency or go to emergency department for atropine treatment • Prophylactic atropine may be indicated for subsequent treatments
Late Onset/Delayed Diarrhea	• Occurs more than 24hr after administration • Can be prolonged and lead to potentially life–threatening dehydration and electrolyte

	imbalance if not proactively managed • Must be treated immediately with high dose loperamide • Patient Education: - Always keep supply of loperamide at home (available at pharmacy without a prescription) - Take two tablets (4mg) after 1st loose stool then one tablet (2mg) every 2hr until diarrhea-free for 12hr - Overnight may take 4mg every 4hr to allow longer sleep period - Loperamide daily dosage may exceed package recommendations. Reinforce importance of taking higher dosage to stop diarrhea - Contact healthcare providers (BCCA Nurse Telephone Line or Physician) if diarrhea does not improve within 24hr after starting loperamide or if diarrhea lasts more than 36hr (as antibiotics may be prescribed)

RESOURCES & REFFERALS	
Referrals	• Patient support center or telephone care management • Pain and Symptom Management/Palliative Care (PSMPC) • Oncology Nutrition Services (Dietitian) • Home Health Nursing
Management Guidelines	• BCCA Guidelines for Chemotherapy-Induced Diarrhea http://www.bccancer.bc.ca/NR/rdonlyres/4E7EF86A-EAA5-4F3C-B147-B2512799F6B3/7371/GuidelinesforManagementofCID.pdf
Patient Education	• Food Ideas to help Manage Diarrhea http://www.bccancer.bc.ca/NR/rdonlyres/01B68B82-61CD-45A4-B71D-37A5A1318453/55933/FOODIDEASTOHELPMANAGEDIARRHEA2011.pdf • C.difficile and VRE pamplets (H:\EVERYONE\Infection Control\PAMPHLETS)
Irinotecan Drug Index	• Professional: http://www.bccancer.bc.ca/HPI/DrugDatabase/DrugIndexPro/Irinotecan.htm • Patient: http://www.bccancer.bc.ca/NR/rdonlyres/6B890F97-443C-4BBA-90EC-88D44238ACB8/48938/Irinotecanhandout_1January2011.pdf
Related Online Resources	• E.g. Fair Pharmacare; BC Palliative Benefits http://www.bccancer.bc.ca/NR/rdonlyres/AA6B9B8C-C771-4F26-8CC8-47C48F6421BB/66566/SymptomManagementGuidelinesRelatedResources.pdf
Bibliography List	• http://www.bccancer.bc.ca/HPI/Nursing/References/SystemManagementGuidelines/Biblio.htm

Date of Print:
Revised: October, 2013
Created: January, 2010

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