

GUIDELINES & PROTOCOLS

ADVISORY COMMITTEE

Palliative Care for the Patient with Incurable Cancer or Advanced Disease Part 2: Pain and Symptom Management Nausea and Vomiting (N&V)

Effective Date: September 30, 2011

Scope

This section presents assessment and management strategies for dealing with nausea and vomiting occurring in patients with cancer or advanced disease.

Salient Principle in this Section:

- Select anti-nausea medication based on the etiology of the nausea and vomiting

Included in this Section:

- A – Nausea and vomiting management algorithm
- B – Hypodermoclysis protocol
- C – Anti-nausea medication reference tables

Nausea and Vomiting Management (Refer Appendix A - Nausea and Vomiting Management Algorithm)

Assessment

- Common, but can be controlled with antiemetics.
- Identify and discontinue medications that may be the cause.
- Further assessment may include lab tests and imaging to investigate, e.g., GI tract disturbance, electrolyte / calcium imbalance, intracranial disease, and sepsis.
- Good symptom control may require rehydration which can be carried out in the home, hospice, or residential care facility using hypodermoclysis, a simple, safe and effective technique that avoids venous access (refer Appendix B - Hypodermoclysis Protocol).

Management Strategies

- Non-pharmacological: modifications to diet (e.g., small bland meals) and environment (e.g., control smells and noise), relaxation and good oral hygiene, acupressure (for chemotherapy-induced acute nausea but not for delayed symptoms).
- Pharmacological: match treatment to cause, e.g., if opioid-induced, metoclopramide (sometimes IV or SC initially) and domperidone are most effective. Most drugs are covered by the BC Palliative Care Drug Plan except olanzapine and ondansetron (refer Appendix C – Medications Used in Palliative Care for Nausea and Vomiting).
- Consider pre-emptive use of anti-nauseates in opioid-naive patients.

Abbreviations

GI	gastrointestinal
IV	intravenous
N&V	nausea & vomiting
SC	subcutaneous

Palliative Care Part 1: Approach to Care is available at www.bcguidelines.ca/guideline_palliative1.html,
Palliative Care Part 3: Grief and Bereavement is available at www.bcguidelines.ca/guideline_palliative3.html

Appendices

Appendix A – Nausea and Vomiting Management Algorithm

Appendix B – Hypodermoclysis Protocol

Appendix C – Medications Used in Palliative Care for Nausea and Vomiting

This guideline is based on scientific evidence current as of the Effective Date.

The guideline was developed by the Family Practice Oncology Network and the Guidelines and Protocols Advisory Committee. The guideline was approved by the British Columbia Medical Association and adopted by the Medical Services Commission.

A mobile version of this and other guidelines is also available at www.BCGuidelines.ca

The principles of the Guidelines and Protocols Advisory Committee are to:

- encourage appropriate responses to common medical situations
- recommend actions that are sufficient and efficient, neither excessive nor deficient
- permit exceptions when justified by clinical circumstances

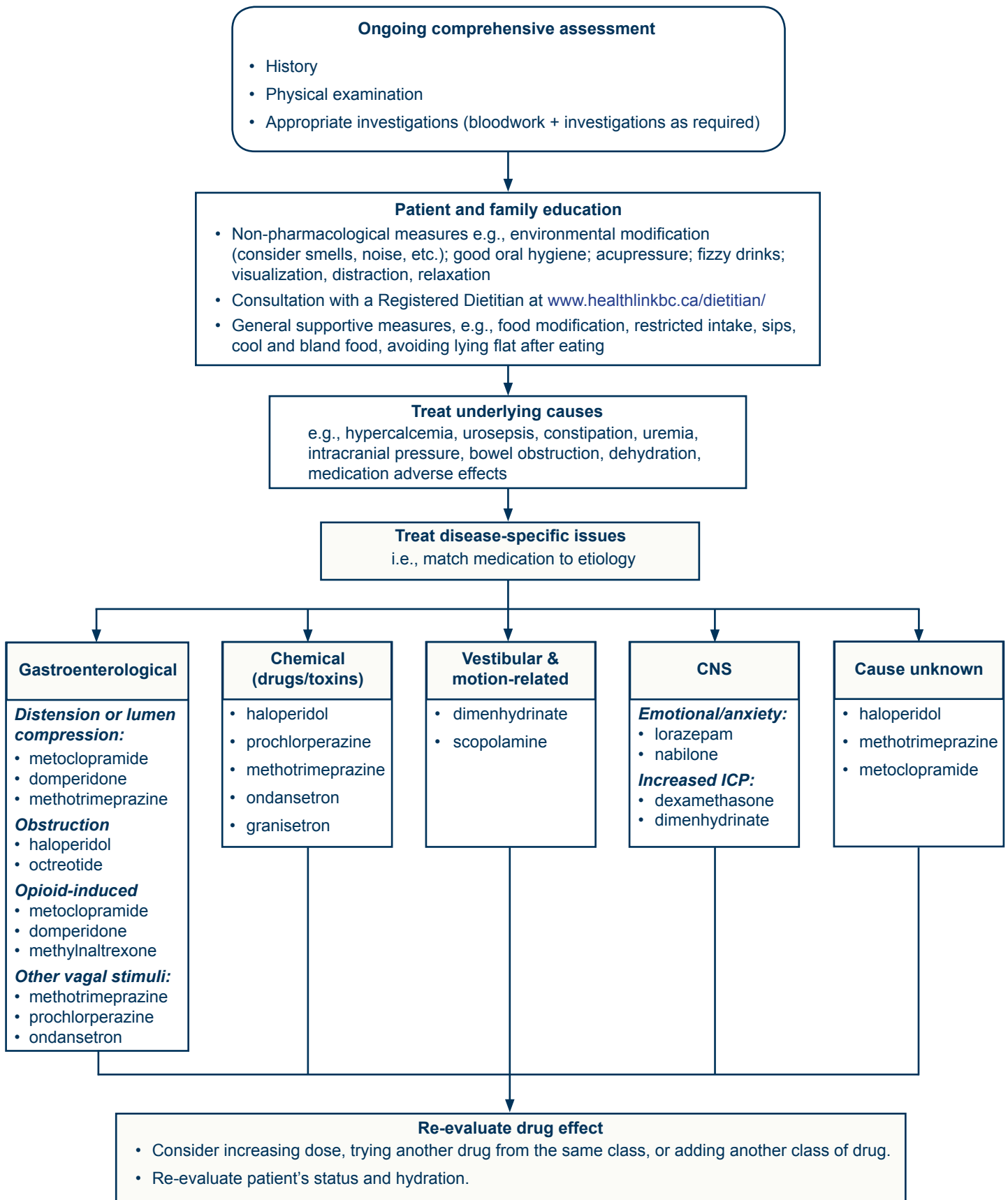
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DISCLAIMER

The Clinical Practice Guidelines (the "Guidelines") have been developed by the Guidelines and Protocols Advisory Committee on behalf of the Medical Services Commission. The Guidelines are intended to give an understanding of a clinical problem and outline one or more preferred approaches to the investigation and management of the problem. The Guidelines are not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of clinical problems. **We cannot respond to patients or patient advocates requesting advice on issues related to medical conditions. If you need medical advice, please contact a health care professional.**

Appendix A: Nausea and Vomiting Management Algorithm



Appendix B: Hypodermoclysis Protocol

Hypodermoclysis is a simple, safe and effective technique for subcutaneously administering fluids to a patient who requires hydration. It avoids the need for venous access in patients who, at the end of life, often have very poor veins. In the home/hospice/residential care facility settings, it can be carried out without the need for fully IV credentialed nursing staff. Refer to the local Home and Community Care office (refer Palliative Care Part 2 - Resources) for when and how to refer.

There are two critical considerations regarding initiating hypodermoclysis in palliative patients:

1. Objectives and timelines must be clear and agreed upon by the family and caregivers.
2. Will adding fluids to a patient whose organ function is failing precipitate cardiac failure and/or cause or worsen lung secretions?

Procedure:

- A 23-25 gauge butterfly needle is inserted under the skin at a 30-45 degree angle. Ask patients which site is preferred of the following choices:
 - For ambulatory patients, consider using chest (subclavicular area), back (infrascapular area) and upper abdominal wall (avoiding waist).
 - For bed-bound patients, use medial or lateral thighs or upper abdomen.
 - Avoid previously irradiated skin, anterior or lateral thigh if edema is present, abdomen if ascites is present, breast tissue, lateral placement near the shoulder, arms, and perineum/groin.
- The fluids used are commonly normal saline (0.9%), normal saline/dextrose (2/3-1/3) and Ringer's Lactate. Dextrose cannot be used as a hypodermoclysis solution.
- The infusion rate can be up to 75 ml/hr. Solutions are infused by gravity, i.e., a pump is usually not necessary.
- Some patients may only require 1 litre 3-4 times per week, rather than daily administration. A smaller volume (1 liter per day) is often adequate to maintain hydration in terminally ill patients requiring hydration for symptom control.
- Potassium chloride up to 40 mEq per litre may be added to the solution. Do not mix hypodermoclysis solutions with other medications. If medications are being administered by the SC route, use separate site(s).
- Change the solution bag every 24 hours. Change the tubing every 72 hours. Change the SC site if painful, red, hard or leaking.

Subcutaneous hypodermoclysis sites may last up to 7 days. Daily assessment of client condition and insertion site is necessary.

Appendix C: Medications^a Used in Palliative Care for Nausea & Vomiting

^aRefer to guideline and/or algorithm for recommended order of use.

Tailor dose to each patient; those who are elderly, cachectic, debilitated or with renal or hepatic dysfunction may require reduced dosages ; consult most current product monograph for this information: <http://webprod.hc-sc.gc.ca/dpd-bdpp/index-eng.jsp>

ANTI-EMETICS						
Generic Name	Trade Name	Available Dosage Forms	Standard Adult Dose	Drug Plan Coverage ^B		Approx. cost per 30 days
				Palliative Care	Fair PharmaCare	
dexamethasone	G	Tabs: 0.5, 0.75, 2, 4 mg	2 mg PO/SC*/IV daily to 8 mg bid (AM & noon)	Yes, LCA	Yes, LCA	\$14-79 (G)
		Inj: 4, 10 mg per mL				\$55-83 (G)
dronabinol (D-9-T)	Marinol®	Caps: 2.5, 5, 10 mg	Chemotherapy related nausea and vomiting: 2.5 to 5 mg PO qid	No	Special Authority	\$256-511
dimenhydrinate	Gravol®, G	IR caps/tabs: 15, 50 mg	50 mg PO q6h to q4h	Yes, LCA	No	\$3-4 (G)
		L/A caplets: 100 mg	100 mg PO q12h to q8h	Yes	No	\$28-43
		Inj: 50 mg per mL	50 mg IM/IV/SC* q6h to q4h	Yes, LCA	No	\$93-140 (G) \$112-167
		Supps: 25, 50, 100 mg	50 to 100 mg PR q12h to q8h	Yes	No	\$28-44 (G) \$52-64
domperidone	G	Tab: 10 mg	10 to 20 mg PO tid to qid	Yes, LCA	Yes, LCA	\$12-31 (G)
granisetron	Kytril®, G	Tab: 1 mg	1 mg to 2 mg PO/IV/SC* daily or 1 mg bid	No	Special Authority, LCA	\$437-875 (G) \$583-1166
		Inj: 1 mg per mL		No	No	\$2268-4536
haloperidol [†]	G	Tabs: 0.5, 1, 2, 5, 10 mg	0.5 mg PO/SC*/IV bid to 2.5 mg q6h	Yes, LCA	Yes, LCA	\$2-18 (G)
		Inj: 5 mg per mL		Yes, LCA	Yes, LCA	\$257-513 (G)
methotrimeprazine	G	Tabs: 2, 5, 25, 50 mg	5 to 12.5 mg PO q4h to q24h	Yes, LCA	Yes, LCA	\$3-25
	Nozinan®	Inj: 25 mg per mL	6.25 to 25 mg SC* q4h to q24h	Yes	Yes	\$104-622
metoclopramide	G	Tab: 5, 10 mg	5 to 20 mg PO qid	Yes, LCA	Yes, LCA	\$7-15 (G)
		Inj: 5 mg per mL	10 to 20 mg SC*/IV q6h	Yes, LCA	Yes, LCA	\$320-640 (G)
nabilone	Cesamet®	Caps: 0.25, 0.5, 1 mg	1 to 2 mg PO bid	No	Yes	\$402-804

octreotide[†]	Sandostatin [®] , G	Inj: 50, 100, 200, 500 mcg per mL	50 to 200 mcg SC q8h	Yes, LCA	No	\$243-881 (G) \$485-1761
	Sandostatin LAR [®]	Inj LAR: 10, 20, 30 mg per vial	LAR: 10 to 30 mg IM every 4 weeks	No	No	\$1362-2258
ondansetron	Zofran [®] , G	IR tabs: 4, 8 mg	4 to 8 mg PO/SC q8h to q12h	No	Special Authority, LCA	\$434-994 (G) \$868-1987
		ODT: 4, 8 mg				\$848-1941
		Inj: 2mg per mL				\$857-2570 (G) \$1279-3838
prochlorperazine	G	Tabs: 5, 10 mg	5 to 10 mg PO/IM/IV/PR tid-qid	Yes, LCA	Yes, LCA	\$11-26 (G)
		Inj: 5 mg per mL				\$67-179 (G)
		Supp: 10 mg				\$81-108 (G)
scopolamine[†]	Transderm V [®]	Patch: 1.5 mg	1 to 2 [‡] patches applied to skin every 72 hours	Yes	No	\$46-91

Abbreviations: **caps** capsules; **D-9-T** Delta-9-Tetrahydrocannabinol; **G** generics; **inj** injection; **IM** intramuscular; **IR** immediate release; **IV** intravenous; **LCA** subject to low cost alternative program; **L/A** Long acting (combined immediate and sustained release); **LAR** slow release (injection); **PR** per rectum; **ODT** orally disintegrating tablet; **PO** by mouth; **SC** subcutaneous; **supps** suppositories (rectal); **tabs** tablets

^A PharmaCare coverage and cost as of November 2010 (subject to revision). Cost does not include dispensing fee. Generic and brand name cost separated as indicated by (G). Obtain coverage, eligibility, medication coverage information and explanations here: [Information on Provincial Drug Coverage](#)

[†] This indication (i.e. nausea and vomiting) used in practice, but not approved for marketing by Health Canada.

[‡] Dose of 2 patches of scopolamine transdermal patch (applied simultaneously) used in practice, but not approved for marketing by Health Canada.

* This route of administration commonly used in Palliative Care, but not approved by Health Canada

References

Cardario. Drug Information Reference. Vancouver: The BC Drug and Poison Information Centre, 2003.

Fraser Health [page on the internet]. Vancouver: Fraser Health; c2009 [cited 2010 Aug 11]. Hospice Palliative Care Symptom Guidelines. Available from: www.fraserhealth.ca/professionals/hospice_palliative_care/

Hospital Pharmacists' Special Interest Group in Palliative Care. Care Beyond Cure: Management of Pain and Other Symptoms. Montreal: Association des pharmaciens des établissements de santé du Québec, 2009.

Repchinsky C, editor. Compendium of Pharmaceuticals and Specialties. 2010. Toronto: Canadian Pharmacists Association, 2010.

Rostom A, Dube C, Wells GA, Tugwell P, Welch V, Jolicœur E, McGowan J, Lanas A. Prevention of NSAID-induced gastroduodenal ulcers.

Cochrane Database of Systematic Reviews 2002, Issue 4. Art. No.: CD002296. DOI: 10.1002/14651858.CD002296. [Content updated 2010].

Semla TP, Beizer JL, Higbee MD. Geriatric dosage handbook. 15th ed. Hudson(OH):Lexi-Comp, 2010.

Twycross R, Wilcock A, Dean M, et al. Palliative Care Formulary. Canadian Edition. Nottingham: Palliativedrug.com Ltd, 2010.